EXHIBIT B

CLEANUP ACTION PLAN

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June 2011

CLEANUP ACTION PLAN HANSVILLE LANDFILL
KITSAP COUNTY, WASHINGTON

Ecology Facility Site Identification Number: 2605

DECLARATIVE STATEMENT

Consistent with the Model Toxics Control Act, Chapter 70.105D RCW, as implemented by the Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC, it is determined that the selected cleanup actions are protective of human health and the environment, attain federal and state requirements that are applicable or relevant and appropriate, comply with cleanup standards, provide for compliance monitoring, use permanent solutions to the maximum extent practicable, provide for a reasonable restoration timeframe, and consider public concerns raised during public comment.

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1. EXECUTIVE SUMMARY

The Hansville Landfill operated as a municipal landfill serving the northern portion of Kitsap County from about 1962 until June 1989. The landfill is divided into three separate areas: a 13-acre municipal solid waste landfill; a four-acre demolition landfill that accepted construction, demolition, and land clearing wastes; and a one-third acre septage lagoon that accepted septic tank pumping waste. The remaining landfill property consists of access roads, a soil borrow area and wooded land. All three landfill units are capped with a final cover system. In addition, the Potentially Liable Parties (PLPs) installed an active landfill gas extraction and flaring system within the municipal solid waste and demolition landfill units to control the migration of landfill gas (methane).

Currently a groundwater plume with elevated contaminant concentrations flows across the landfill boundary, and on to the adjacent Port Gamble S'Klallam Reservation. The preferred cleanup alternative is natural attenuation of groundwater contaminants with Enhanced Monitoring and Institutional Controls on landfill property and the adjacent tribal lands.

2. INTRODUCTION

2.1 Purpose

This Cleanup Action Plan (CAP) describes the cleanup action proposed by the Department of Ecology (Ecology) for the cleanup of contamination at the Hansville Landfill Site, which is located in the northern Kitsap Peninsula, south of the town of Hansville, Washington (Figure 1-1). The plan was developed using information presented in the final Remedial Investigation (RI) Report (Parametrix 2007) and the final Feasibility Study (FS) Report (Parametrix 2009), submitted by Waste Management of Washington, Inc. and Kitsap County, the PLPs for the Site. This document was prepared to satisfy the requirements of the Model Toxics Control Act (MTCA), Chapter 70.105D Revised Code of Washington (RCW), administered by Ecology under the MTCA Cleanup Regulation, Chapter 173-340 Washington Administrative Code (WAC).

The Final FS Report (Parametrix 2009) documents the details of the selected cleanup action presented in this CAP. This CAP meets the requirements specified in Chapter 173-340 WAC, the Model Toxics Control Act (MTCA). The State Environmental Policy Act (SEPA) checklist (Appendix A) was completed per the requirements of MTCA and Chapter 197-11 WAC the SEPA regulations. Kitsap County, the lead agency, issued a Determination of Non-Significance (DNS) for the actions selected in this CAP. The DNS is included as Appendix B.

3. SITE BACKGROUND

3.1 Site Description and History

The Hansville Landfill is a 73-acre parcel in the northeast quarter of Section 9, Township 27 North, Range 2 East. Bordering the Landfill to the south and west is land owned by the Port Gamble S'Klallam Tribe (Tribe). Surrounding areas to the north and south are zoned low-density residential, rural wooded or light industrial and are sparsely developed. The area directly east of the Landfill has been developed for light industrial use. The nearest permanent residence is located approximately 1,500 feet east of the solid waste disposal area of the Landfill. The Hansville Landfill background is summarized in Table 3-1.

Table 3-1. Hansville Landfill Background Summary

	Hansville Landfill	**Surrounding Area**
Size	73 acres. Three (former) Disposal Areas: Mixed solid waste (13 acres); construction/demolition/ septage waste (4 acres); and a domestic septage lagoon (1/3 acre). Remaining area is comprised of access roads, a recycling and garbage facility, a soil borrow area, and wooded land.	Sparsely populated, primarily forested land.
Ownership/ Operators	Kitsap County is the owner of the landfill. Multiple landfill operators managed the site under a lease from the County. These operators were Hudson Disposal Co., Inc.; North Sound Sanitation; and Kitsap County Sanitary Landfill, Inc. (KCSL). The name Kitsap County Sanitary Landfill, Inc. was changed to OVSL, Inc. which was merged into Waste Management of Washington, Inc. in 2001. Waste Management of Washington, Inc. did not operate the landfill. Kitsap County did not operate the landfill.	Bordering the landfill to the south and west is Port Gamble S'Klallam tribal land. Adjacent properties to the north and east are owned by private firms or individuals.
Past Use	1962 – Landfill began operation as an open dump under a lease from Kitsap County. 1973 – New state regulations led to improvements at the Landfill to comply with requirements for handling and disposal of mixed municipal solid wastes, construction/demolition waste, and domestic septage waste. Three disposal areas were designated for these waste categories. 1982 – Landfill ceased receiving domestic septage waste; groundwater monitoring began. 1989-90 – Landfill ceased all waste disposal activities and constructed final cover system on disposal areas. A transfer station was constructed. 1990 – Monitoring of downstream surface water stations began.	Residential and recreational uses. Management and utilization of forests on surrounding private and Port Gamble S'Klallam tribal lands.
Current Use	Since 1989, the Landfill has been closed to receipt of refuse. All disposal areas have been capped. An active gas extraction system operates to remove and destroy landfill gas generated from the refuse. Monthly and quarterly monitoring of groundwater and surface water has been conducted. Landfill gas and soil gas have	Primarily residential and recreational uses to the north, west, south, and northeast. New industrial development on the adjacent parcel east of the Landfill. Management and utilization of forests on surrounding private and tribal lands. Port Gamble S'Klallam Tribe finfish and shellfish harvesting in

	also been monitored. The transfer station continues to operate as a recycling and garbage facility for residential and business self-haulers.	Port Gamble Bay, located approximately 4,000 feet west of the Landfill.

When operating, the Landfill consisted of three separate disposal areas (Figure 3-1):

- A 13-acre municipal solid waste disposal area in the central portion of the Landfill which accepted mixed municipal solid waste.
- A 4-acre demolition disposal area in the northeast corner of the Landfill, which accepted construction, demolition, and land clearing wastes.
- A 1/3-acre septage lagoon located southwest of the demolition disposal area, which accepted residential septic tank waste from the north county area until 1982, when other disposal options became available.

A second septage disposal area was located in the northeast corner of the demolition disposal area. This area stopped receiving septage waste when the septage lagoon was opened. The remaining area of the Landfill is currently comprised of access roads, a Recycling and Garbage Facility (formerly a solid waste transfer station), a soil borrow area, and wooded land.

Concurrent with the closure of the disposal areas at the Landfill, Kitsap County constructed a solid waste transfer station adjacent to the Landfill to allow for continued service for north county residents. The transfer station accepted waste from self-haulers and commercial haulers in the North Kitsap County area. The facility continues to operate as a Recycling and Garbage Facility for North Kitsap County residential and business self-haulers.

3.2 Remedial Actions Completed to Date

The PLPs have closed the Landfill according to the requirements of Chapter 173-304 WAC. The following closure actions, which are considered interim remedial actions, were implemented at the Landfill:

- The final cover system, including a 50-mil HDPE (plastic) layer and a surface water management system, was completed in 1990 greatly reducing leachate generation and preventing stormwater ponding and infiltration.

- An active landfill gas extraction and flaring system was installed in November 1991. System upgrades completed in 1993 proved effective in controlling landfill gas migration from the solid waste disposal area and in removing landfill gas that had previously migrated into the surrounding soils.

These two systems have helped reduce concentrations of indicator parameters (arsenic, manganese, and vinyl chloride) in groundwater beneath and downgradient of the Landfill. Maintenance of the cover system and operation of the landfill gas collection and flaring system will continue until Ecology concludes that these measures are no longer necessary.

4. DESCRIPTION OF THE SELECTED CLEANUP ACTION

Natural Attenuation of Groundwater with Enhanced Monitoring and Institutional Controls was the cleanup action proposed in the Final FS Report (Parametrix 2009) and selected in this Cleanup Action Plan. This is the second of the nine cleanup alternative for this Site discussed in section 6 of this document. This alternative includes institutional controls on the Site to restrict access to affected groundwater and surface water. These legal restrictions will be implemented on both the Landfill Property and on the adjacent tribal property. Existing source control and natural attenuation processes will continue to reduce concentrations of indicator hazardous substances. The PLPs will implement monitoring to quantitatively measure the progress of natural attenuation, and to assure that cleanup standards are met within a reasonable timeframe.

4.1 Natural Attenuation of Groundwater Contaminants

The selected cleanup alternative relies upon natural attenuation processes to achieve Site cleanup levels. Over time, natural attenuation reduces the concentrations of chemicals introduced into the environment using natural biological and chemical processes. Natural attenuation has been shown to effectively reduce the concentrations of inorganic and organic contaminants in groundwater at landfills and other contaminant release sites.

Natural attenuation as a cleanup alternative is most appropriate for sites where the following criteria are met:

- Source control is concurrently and effectively applied;
- Human health and the environment are protected;
- Site-specific remediation objectives can be achieved in a reasonable timeframe;
- Migration of groundwater is limited;
- Transformation of contaminants into more mobile or more toxic substances is unlikely;
- Transformation processes are irreversible;
- Effectiveness of attenuation processes can be supported with site-specific data;
- Methods to monitor remediation progress are available; and
- Backup or contingency plans are available

The natural attenuation remedial alternative selected for the Hansville Landfill meets these criteria as described below in Table 4-1.

Table 4-1. How the Hansville Landfill Meets the Criteria Listed Above

Natural Attenuation Site Criteria	Hansville Landfill Site
Source control is concurrently and effectively applied.	The existing cap and gas control system provide source control, resulting in declining releases of indicator hazardous substances to groundwater over time.
Protects human health and the environment.	Institutional controls will prevent exposure to indicator hazardous substances in impacted groundwater and surface water.
Achieve cleanup standards in a reasonable timeframe.	Meets the remedial objectives for protectiveness. The restoration time frame is 23 years. The time required to achieve the cleanup standards is estimated to be up to

	23 years based on projections using historical data. Releases of indicator hazardous substances to groundwater may continue for several years, during which time the aquifer would remain unusable as a drinking water source.
Limit the migration of groundwater.	Migration of groundwater is limited by aquifer outcropping west of the site. Groundwater flow is well characterized.
Transformation of contaminants into more mobile or more toxic substances is unlikely.	Vinyl chloride degrades to ethene which is not considered hazardous. Mobility of both vinyl chloride and ethene are not expected to be significantly influenced by the sand matrix of the aquifer.
	Oxidation and precipitation processes for manganese and arsenic result in less mobile and less toxic substances, and hence lower concentrations in surface and groundwater.
Transformation processes are irreversible.	Attenuation processes for vinyl chloride are irreversible. Attenuation processes for arsenic and manganese are potentially reversible; however, oxidizing conditions in the upper aquifer off the Landfill Property favor irreversibility.
Effectiveness of attenuation processes can be thoroughly and adequately supported with site-specific data.	Effectiveness of existing source controls and natural attenuation are evident from RI data that show declining concentrations of indicator hazardous substances with time and lower concentrations of indicator hazardous substances in the Landfill Property wells, tribal property wells and tribal property surface water stations, relative to concentrations within Landfill Property boundaries.
Methods to monitor remediation progress are available.	A program for monitoring landfill gas, groundwater, and surface water can be established based on data collected in the 20 years since closure.
Backup or contingency plans are available.	Contingencies that trigger further remedial actions are described in Appendix D Section 4.4. Evaluation of the remedy will be conducted by Ecology at a minimum of every 5 years to assess the effectiveness of natural attenuation. Possible backup plans include using active treatment systems described in Table 6-1.

4.2 Institutional Controls

Institutional controls in the selected alternative have been implemented and incorporate property use restrictions (including restrictions on the use of groundwater and surface water) on the tribal lands, per the agreement of the Tribe and the PLP Group (Kitsap County and Waste Management of Washington, Inc.) executed on May 2, 2007. Institutional controls will remain in place until concentrations of indicator hazardous substances in groundwater beneath tribal property fall below Site cleanup levels. Using data from the ongoing groundwater monitoring program, property use restrictions will be reviewed at a minimum of at least 5-year intervals to determine whether additional restrictions are warranted, or whether previously enacted restrictions could be eliminated or reduced in the area.

Institutional controls already instituted on tribal property prohibit use of surface water in the upper reach of the northern tributary of Middle Creek as a source of drinking water. The existing and continuing surface water institutional controls do not affect existing water supply wells in the lower aquifer. Currently, surface water from the upper segments of Middle Creek and from the other streams on tribal property is not used as a source of drinking water. Surface water institutional controls will remain in place until concentrations of indicator hazardous substances in surface water fall below Site cleanup levels. Figure 4-1 illustrates the area to be protected by institutional controls.

4.3 Compliance Monitoring

The key components of the Compliance Monitoring Plan (groundwater and surface water monitoring station locations, water quality parameters to be tested, and monitoring frequency) to be implemented at the Site are described in Appendix C. These components will be incorporated into a Compliance Monitoring Plan (a requirement of the future Cleanup Action Consent Decree) that will include a Sampling and Analysis Plan (SAP with an integral Quality Assurance Plan that meets requirements specified in WAC 173-340-820 and -830), and an updated Health and Safety Plan.

A critical element of any remedial action is a groundwater and surface water monitoring program designed to assess the progress toward achievement of cleanup action objectives and cleanup standards. In order to demonstrate natural attenuation per regulatory requirements [WAC 173 340 370(7)(d)] and technical guidance in the literature pertaining to the indicator hazardous substances at the Site, the monitoring program for the selected cleanup alternative includes testing of groundwater and surface water samples for chemicals indicative of natural attenuation, and selection of existing groundwater and surface water sampling stations to provide optimal spatial coverage to monitor natural attenuation processes.

4.4 Evaluation of Monitoring Data

When natural attenuation (sometimes referred to as monitored natural attenuation), and institutional controls constitute the remedy for a site it is important to know whether the concentration of contamination is declining at a rate which will achieve cleanup levels within a reasonable restoration timeframe as provided by WAC 173-340-360(4). The approach to evaluation of monitoring data for the landfill uses several statistical methods to evaluate the effectiveness of natural attenuation as a remedial action (Appendix D). Ecology will conduct periodic reviews at a minimum of every five years in accordance with MTCA. If the data and statistical analysis demonstrate that the site cleanup levels will probably not be met within the remediation time frame, Ecology will evaluate possible additional remedial actions at the Site. Possible actions include those evaluated in the FS but not chosen. Other actions can also be considered.

5. SITE CLEANUP STANDARDS

5.1 Overview of Cleanup Standards

Cleanup standards for an environmental medium of concern (i.e., groundwater, surface water, and sediments) consist of the following components:

- Cleanup Levels: Hazardous substance concentrations that protect human health and the environment [WAC 173-340-700(2)]; and

- Points of Compliance: Locations where cleanup levels must be attained [WAC 173-340-720(8)(a)]. Point of compliance includes conditional points of compliance [WAC 173-340-720(8)(c), (d)].

5.2 Applicable or Relevant and Appropriate Requirements (ARARS)

ARARs are regulatory requirements that apply to a cleanup action because of the nature of the hazardous substances, the type of action, the location of the site, or other circumstances at the site. ARARs include legally applicable requirements promulgated under state or federal law, and relevant and appropriate requirements that, while not legally applicable, address problems or situations at the site. Table 5-1 is a summary of the ARARs for Hansville Landfill.

Table 5-1. ARARS

FEDERAL
Clean Air Act: New Source Performance Standards, National Emission Standards for Hazardous Air Pollutants, National Ambient Air Quality Standards • 42 USC 7401-7642 • 40 CFR Subpart 50, 60, 61, 63
Endangered Species Act: • 16 USC 1531 et seq. • 50 CFR 200, 402
Resource Conservation and Recovery Act (RCRA): Hazardous Waste Management Act (HWMA) • 42 USC 6902 et seq. • 40 CFR 241, 251, 261, 262, 263, 264, 268 • 49 CFR 171, 172, 173, 177
Safe Drinking Water Act: • 42 USC 300f et seq. • 40 CFR 141, 143
Water Pollution Control Act (a.k.a. Clean Water Act): National Pollutant Discharge Elimination System (NPDES) • 33 USC Sec. 303, 304, 320-330, 1251-1387 • 40 CFR Part 122, 125, 230
Water Pollution Control Act: Surface Water Quality Standards • 33 USC Sec. 303, 304 • 40 CFR 131. Quality Criteria for Water
U.S. Fish and Wildlife Coordination Act • 16 USC 661 et seq.

PORT GAMBLE S'KLALLAM TRIBE
Port Gamble S'Klallam Tribe Water Quality Standards for Surface Water

STATE OF WASHINGTON

Clean Air Act: Source Registration, Emissions Limits, Air Quality Standards RCW 70.94 WAC 173-400
Clean Air Act: Controls for Air Toxics RCW 70.94 WAC 173-460
Disposal Requirements and Land Disposal Restrictions, Solid Waste Disposal Facilities: WAC 446-50
Hazardous Waste Management Act: RCW 70.105 WAC 173-303
Hydraulics Act: RCW 75.20 WAC 220-110
Minimum Functional Standards for Solid Waste Handling: WAC 173-304
Criteria for Municipal Solid Waste Landfills WAC 173-351 – These regulations are relevant, but not applicable because of the date on which the landfill closed.
Model Toxics Control Act (MTCA) RCW 70.105D WAC 173-340
Puget Sound Clean Air Agency (PSCAA), Source Registration, Emission Limits, Air Quality Standards, Regulations I and III
Shoreline Management Act RCW 90.58 WAC 173-27
State Environmental Policy Act (SEPA) RCW 43.21C WAC 197-11
Transportation of Hazardous/Dangerous Waste WAC 446-50
Water Code and Water Rights RCW 90.03, 90.04 WAC 173-150, 173-154
Water Pollution Control Act: Water Quality Standards for Surface Waters of the State of Washington RCW 90.48 WAC 173-201A
Water Pollution Control Act: NPDES Regulations RCW 90.48 WAC 173-220
Water Pollution Control Act: Water Quality Standards for Groundwaters of the State of Washington RCW 90.48 WAC 173-200 These regulations are relevant, but not applicable see WAC 173–200–010(c)
Minimum Standards for Construction and Maintenance of Wells RCW 18.104 WAC 173-160

KITSAP COUNTY
Solid Waste Regulations Kitsap County Board of Health Ordinance 2004-2
Kitsap County Local Development Ordinances KCC Title 12

5.3 Cleanup Levels for Indicator Hazardous Substances

The Final FS Report (Parametrix 2009) describes the process for evaluating the indicator hazardous substances in the risk assessment, resulting in the identification of the following remaining indicator hazardous substances that must be addressed by the selected cleanup action at the Site:

- Arsenic in groundwater;
- Manganese in groundwater; and
- Vinyl chloride in groundwater.

The risk assessment in the Final FS Report did not identify any other indicator hazardous substances in any of the three media (groundwater, surface water, or sediments) for further consideration in evaluation of the proposed cleanup action.

The Final FS Report also included development of Site cleanup levels. The Site cleanup levels and their origins are shown in Table 5-2.

Table 5-2. Site Cleanup Levels

Chemical	Media	Site Cleanup Level (µg/ℓ)	Origin of cleanup level
Vinyl Chloride	Groundwater	0.025	EPA Human Health 2004
Arsenic	Groundwater	5	Background
Manganese	Groundwater	2240	Method B Formula Value
Vinyl Chloride	Surface Water	0.025	EPA Human Health 2004
Arsenic	Surface Water	5	Background

5.4 Points of Compliance

The following are the conditional points of compliance (CPOC) for the Hansville Site:

1. The Upper Aquifer at the Landfill Property boundary;
2. The Upper Aquifer downgradient of the Landfill Property boundary and upgradient of the creek headwaters on tribal property; and
3. Groundwater discharge to surface water at the headwaters of Creek A, Creek B, and Middle Creek on tribal property.

CPOC #1 is established per WAC 173-340-720(8)(c). Points of Compliance #2 and #3 are off property conditional CPOCs, per WAC 173-340-720(8)(d)(ii). The Tribe has accepted the CPOCs.

6. Summary of Alternatives Considered

A total of nine cleanup alternatives were evaluated in the Final FS Report (Parametrix 2009). Descriptions and rating results for these cleanup alternatives are summarized in Table 6-1, along with the results of the disproportionate cost analysis from Section 10.2 of the Final FS Report. The cost-benefit relationship of the selected alternative (Alternative 2) and the other cleanup alternatives are illustrated by Figure 6-1.

Table 6-1. Summary of Alternatives

#	Alternative Description	Estimated Capital Cost	Estimated Annual O&M Cost	Estimated Present Worth Cost	~Time yr[a]	Cost/ Benefit[b]
1	**NO ADDITIONAL ACTION WITH NATURAL ATTENUATION** (except compliance with state landfill regulations)	$5,000	$51,000	$638,000	23	1.0
2	**NATURAL ATTENUATION OF GROUNDWATER WITH ENHANSED MONITORING AND INSTITUTIONAL CONTROLS** Reductions in concentrations of indicator hazardous substances through natural processes. Prohibition on use of affected groundwater and surface water as drinking water.	$5,000	$64,000	$1,180,000	23	1.3
3	**GAS EXTRACTION SYSTEM ENHANCEMENTS** implemented at the Landfill to control releases of vinyl chloride to groundwater.[c]	$637,000	$148,000	$2,909,000	23	3.6
4	**AIR SPARGING SYSTEM** implemented along the west Landfill Property boundary to extract vinyl chloride from groundwater and oxygenate the aquifer to precipitate arsenic and manganese.[c]	$1,985,000	$202,000	$5,094,000	23	6.1
5	**GROUNDWATER PUMP AND TREAT SYSTEM** implemented at the west Landfill Property boundary to extract contaminants from groundwater, with treatment by greens and filtration for arsenic and manganese, and air stripping for vinyl chloride. Discharge of treated water to surface water (Middle Creek).[c]	$1,687,000	$298,000	$6,269,000	23	5.9
5 + RTA	**GROUNDWATER PUMP AND TREAT SYSTEM** at the Landfill. Same as Alternative 5, except with return of treated water to the aquifer upgradient of the Landfill rather than discharge to surface water.[c]	$1,714,000	$325,000	$6,705,000	23	8.1
6	**GROUNDWATER PUMP AND TREAT SYSTEM** implemented at the west Landfill Property boundary (as per Alternative 5) and downgradient of the Landfill to extract contaminants from groundwater. Groundwater treatment would be as described for Alternative 5. Discharge of treated water to surface water would occur at several creek locations to prevent flow reductions caused by groundwater extraction.[c]	$2,694,000	$332,000	$7,799,000	18	6.6
6 + RTA	**GROUNDWATER PUMP AND TREAT SYSTEM** at the Landfill and downgradient. Same as Alternative 6, except with return of treated water to the aquifer upgradient of the Landfill rather than discharge to surface water.[c]	$2,527,000	$286,000	$6,925,000	18	7.4
7	**WASTE EXCAVATION AND OFF THE LANDFILL PROPERTY DISPOSAL**. Excavation would remove waste for transport by truck and rail to an existing landfill in southern Washington or northern Oregon.	$62,532,000	—	$62,532,000	2 (waste only)	75.7

[a] Estimated time for remedial alternative to meet cleanup levels; includes time of remedial system operation (where pertinent) plus time for monitoring to confirm attainment of cleanup levels at the Landfill Boundary conditional point of compliance.

[b] See Final FS Report (Parametrix 2009), Sec. 10.2, and attached Figure 6-1.

[c] Includes Alternative 2 (Natural Attenuation of Groundwater Contaminants with Monitoring).

7. JUSTIFICATION OF THE SELECTED CLEANUP ACTION

7.1 Compliance with MTCA Requirements

The Site cleanup levels will be met at the specified CPOCs by the selected cleanup action protecting human health and the environment. The following discussion summarizes the analysis and evaluations presented in detail in Section 8 (Chemical Screening) of the Final RI Report (Parametrix 2007) and Section 10 (Detailed Evaluation of Remedial Alternatives), Table 10-1, of the Final FS Report (Parametrix 2009) required by WAC 173-340-360.

7.1.1 Threshold Requirements

- Protect human health and the environment
  The selected cleanup action provides for protection of human health through institutional controls to prevent use of groundwater and surface water as water supplies and future attainment of cleanup standards that are based on protection of human health. None of the completed off-Landfill Property exposure pathways evaluated for the environmental risk (e.g., drinking surface water, sediment ingestion, dietary) poses a risk to exposed receptors.

- Comply With Cleanup Standards
  The selected cleanup action complies with the cleanup standards presented in Table 5-2 of this CAP.

- Comply with State and Federal Laws
  The selected cleanup action complies with all applicable State and Federal Laws. *See* Table 5-1.

- Provide Compliance Monitoring
  The compliance monitoring program is discussed in Section 4.3 of this CAP, and described in Appendix C.

7.1.2 Compliance with Other MTCA Requirements

The selected cleanup action complies with other requirements listed in WAC 173-340-360(2)(b) as follows:

- Use Permanent Solutions to the Maximum Extent Possible
  The selected cleanup action provides a permanent solution; at the end of the restoration timeframe the contamination will be attenuated to below cleanup levels.

- Provide a Reasonable Restoration Timeframe
  The estimated restoration timeframe for the selected cleanup action is 23 years. This timeframe is considered reasonable by Ecology for former landfills using natural attenuation, and considering the institutional controls in place.

- Consider Public Concerns
  The draft CAP was subjected to a 30-day public comment period, per the requirements of WAC 173 340-600(14). Comments will be reviewed and incorporated into the final CAP. The draft CAP public comment period was conducted in conjunction with the public comment period for

the SEPA Mitigated Determination of Non-significance (MDNS), which is a companion document to the CAP.

7.2 Compliance Monitoring

WAC 173-340-410 specifies the following types of compliance monitoring regarding cleanup actions:

Protection Monitoring: Confirm that human health and the environment are adequately protected during construction, operation, and maintenance of the cleanup action.

Performance Monitoring: Confirm that the cleanup action has attained cleanup standards and other appropriate performance standards.

Confirmational Monitoring: Confirm the long-term effectiveness of the cleanup action once cleanup standards and other appropriate performance standards have been attained.

Ecology considers monitoring at sites that use natural attenuation to be of first importance. These sites require a monitoring network that covers the areal extent of possible contamination. The monitoring wells must be sampled frequently enough to develop the robust data set needed for the statistical analysis needed to determine if natural attenuation is working.

The key components of the Compliance Monitoring Plan (groundwater and surface water monitoring station locations, water quality parameters to be tested, and monitoring frequency) to be implemented at the Site are included in Appendix C. The monitoring plan meets these compliance monitoring requirements. These components will be incorporated into a Compliance Monitoring Plan that will include a Sampling and Analysis Plan (SAP) with an integral Quality Assurance Plan that meet requirements as specified in WAC 173-340-820, -830, and -840.

Data sent to Ecology will also be sent to the Tribe and the Kitsap County Health District.

8. IMPLEMENTATION OF THE SELECTED CLEANUP ACTION

8.1 SEPA Checklist and Determination of Non-Significance

The SEPA checklist for the selected cleanup action at the Hansville Landfill site is attached as Appendix A to this CAP. This checklist was prepared in accordance with Chapter 197-11 WAC. The Determination of Non-Significance associated with the SEPA checklist is attached as Appendix B to this CAP.

8.2 Public Participation

The Public Participation Plan for Hansville Landfill is included as Appendix E, to show that this CAP meets the requirements of WAC 173-340-600(9).

8.3 Monitoring Program

Monitoring of the selected cleanup action will be conducted per the Compliance Monitoring Plan, as described above in Section 4.3 and Appendix C.

8.4 Preliminary Schedule

The preliminary project schedule for implementation of the selection cleanup action at the Hansville Landfill is presented in Appendix F.

9 REFERENCES

Parametrix, Inc. 2007. Final remedial investigation report, Hansville Landfill remedial investigation/feasibility study. Prepared for Kitsap County, Washington and Waste Management of Washington, Inc. July 13, 2007.

Parametrix, Inc. 2009. Final feasibility study report, Hansville Landfill remedial investigation/feasibility study. Prepared for Kitsap County, Washington and Waste Management of Washington, Inc. June 15, 2009.

FIGURES

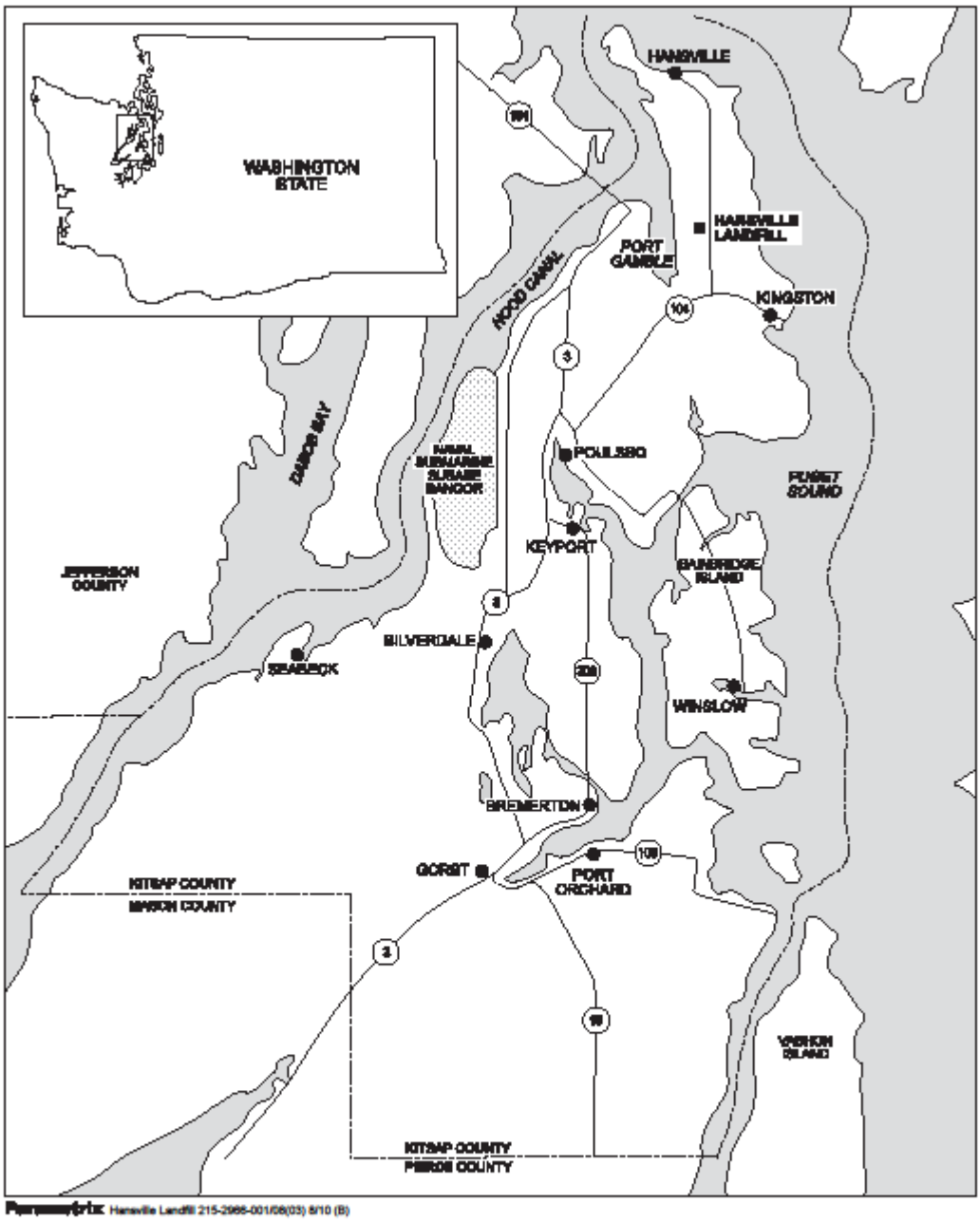


Figure 1-1
Vicinity Map
Hansville Landfill
Cleanup Action Plan

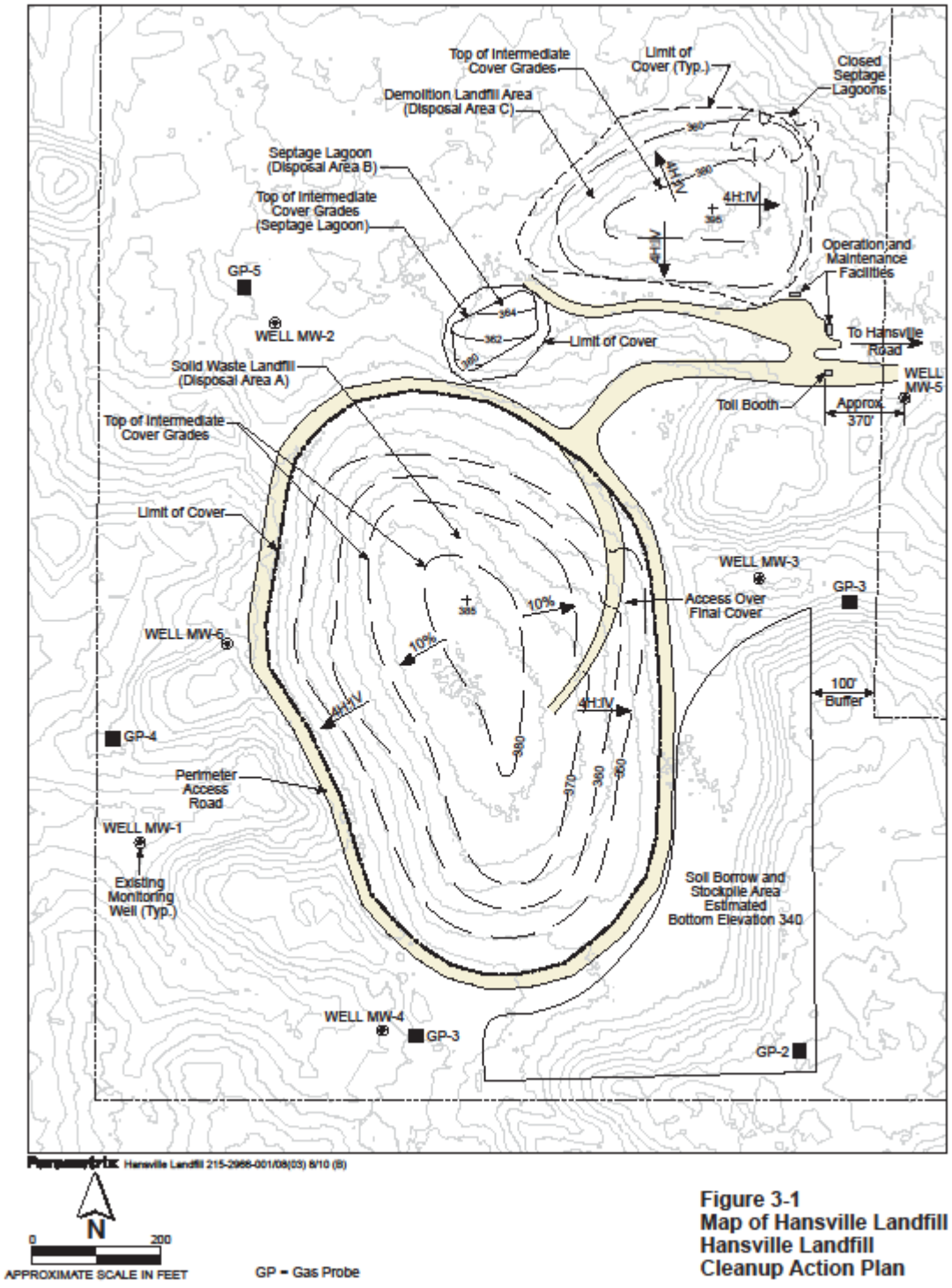


Figure 3-1
Map of Hansville Landfill
Hansville Landfill
Cleanup Action Plan

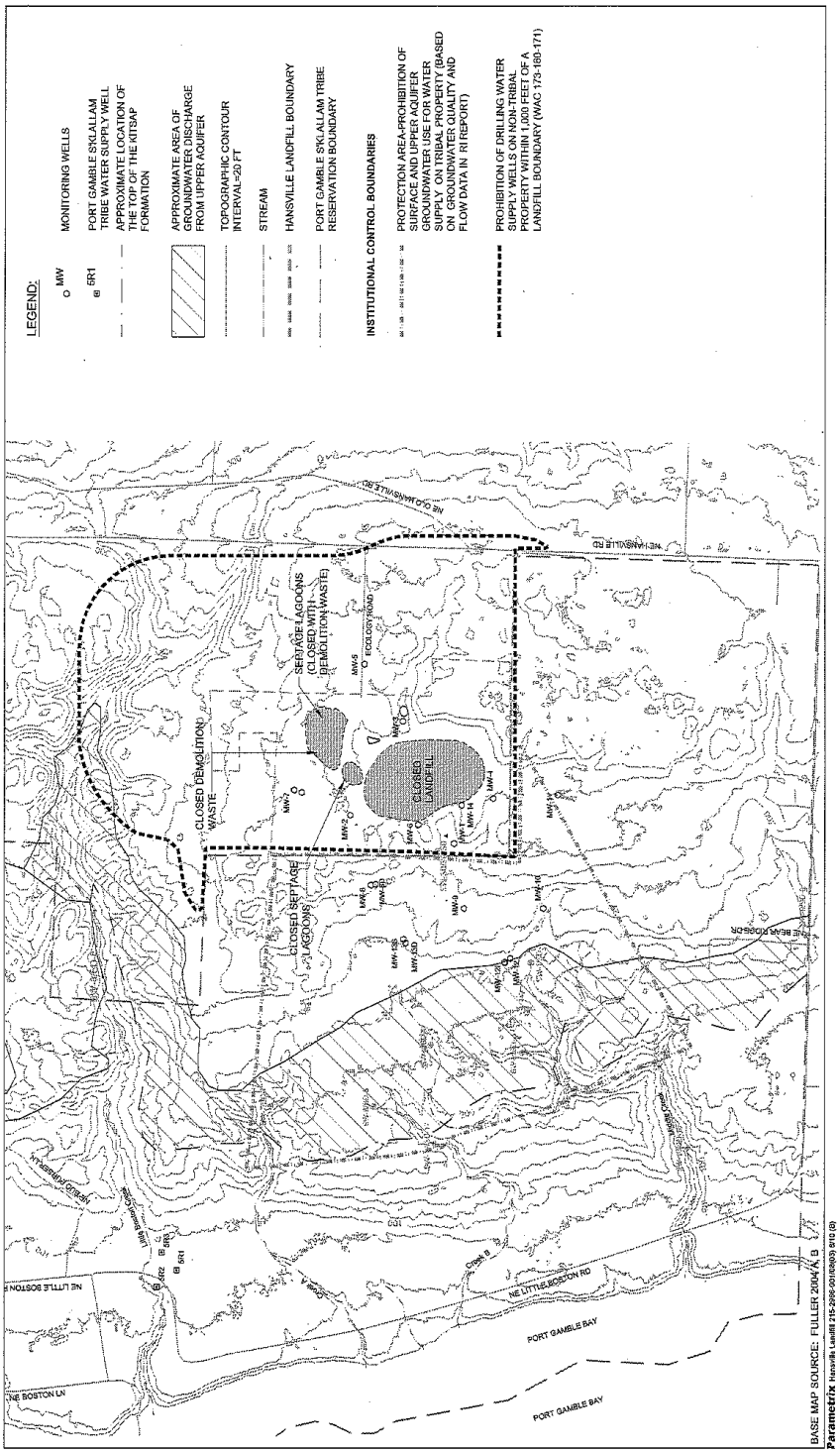


Figure 4-1
Institutional Controls
Hansville Landfill
Cleanup Action Plan

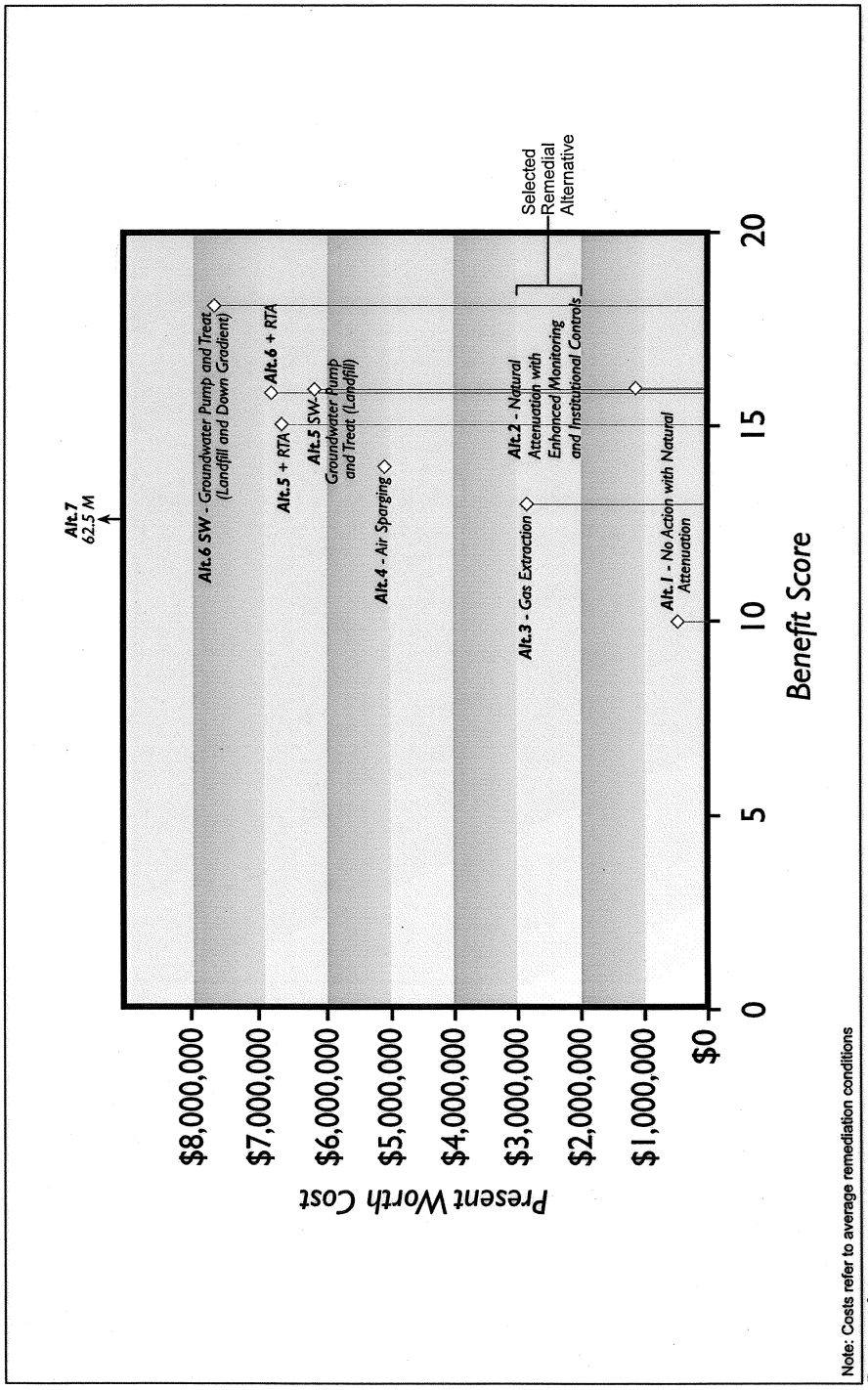


Figure 6-1
Cost Benefit Relationship of the Cleanup Alternatives
Hansville Landfill
Cleanup Action Plan

APPENDIX A

SEPA CHECKLIST – HANSVILLE LANDFILL

HANSVILLE LANDFILL - CLEANUP ACTION PLAN

SEPA CHECKLIST

Prepared by:

Kitsap County

September 2010

ENVIRONMENTAL (SEPA) CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), Chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An Environmental Impact Statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you, other agencies, and the Department of Community Development (DCD) identify impacts from your proposal and to reduce or avoid impacts from the proposal, if it can be done, and to help the lead agency decide whether an EIS is required.

Instructions for Applicants:

This Environmental Checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases you should be able to answer the questions from your own observations or project plan without the need to hire experts. If you really do not know the answer or if a question does not apply to your proposal, write "do not know" or "does not apply". Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. If you have problems answering these questions, please contact the appropriate governmental agencies for assistance.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your answers or provide additional information reasonably related to determining if there may be any significant adverse impact.

Supplemental Sheet for Non-project Proposal:

Complete the supplemental sheet for Non-project proposals only, even though questions may be answered "does not apply." Please contact DCD, ER Division (360) 337-7181, for the Supplemental Questions for Non-project Activities (Part D).

For Non-project actions, the references in the checklist to the words "project," "applicant," and "property or site" should be reads as "proposal," "proposer," and "affected geographic area," respectively.

EVALUATION FOR AGENCY USE ONLY

FOR OFFICIAL USE ONLY

Received by: _____

Receipt #: _____

ENVIRONMENTAL (SEPA) CHECKLIST

A. BACKGROUND

1. **Name of proposed project, if applicable:**
   Hansville Landfill Remedial Action Project under the Model Toxics Control Act (MTCA)

2. **Name of applicant:**
   Kitsap County

3. **Address and phone number of applicant and contact person:**
   614 Division Street MS-27
   Port Orchard, WA 98367
   Contact: Pat Campbell – (360) 337-4626
   Keli McKay-Means – (360) 337-5665

4. **Date checklist prepared:**
   September 27, 2010

5. **Agency requesting checklist:**
   Kitsap County

6. **Proposed timing or schedule (including phasing, if applicable):**

   The project consists of the implementation of the approved remedial action at the closed Hansville Landfill (Landfill). The remedial action for the Landfill is scheduled to commence upon issuance of the Final Cleanup Action Plan by the Washington State Department of Ecology and continue until the site has been stabilized. The exact timeframe for the approved remedial action to be completely effective and for stabilization of the Landfill is unknown at this point in the project. The approved Final Feasibility Study (FS) Report conducted for the Landfill estimated that the remedial action may take on the order of 23 years.

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**
No.

   Kitsap County intends to fulfill the remediation requirements set by the Department of Ecology. When the requirements have been met, other uses for the property may be considered. Appropriate permit applications would be submitted for each proposed activity. Deed restrictions and land conveyances will remain in effect for the property.

8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

   Kitsap County and Waste Management of Washington, Inc. are the potentially liable parties for the remedial action of the Hansville Landfill. Documents that have been prepared on behalf of Kitsap County and Waste Management of Washington, Inc. are required under the State Model Toxics Control Act (MTCA) (Chapter 70.105D Revised Code of Washington [RCW]) and include: Consent Decree Number No. 952030051, the Final Remedial Investigation Report, and the Final Feasibility Study Report. All of these documents have been reviewed and approved by the Department of Ecology and have gone through a public review process. The Department of Ecology has prepared the Cleanup Action Plan. In conjunction with the Cleanup Action Plan, a Consent Decree will direct the implementation of the Cleanup Action Plan and approved remedial action. This SEPA Checklist addresses implementation of the selected remedial action chosen in the Final Feasibility Study and Cleanup Action Plan.

9. **Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

   No other applications are known to be pending.

10. **List any government approvals or permits that will be needed for your proposal, if known.**

    While this project is exempt from the administrative requirements of obtaining permits for activities under the remedial action (RCW

70.105D.090), all activities will be conducted in accordance with the substantive requirements of all applicable or relevant and appropriate requirements (ARARs) and federal, state, or local standards, requirements, criteria, or limitations. The ARARs are identified in the approved Final Feasibility Study Report and the Cleanup Action Plan.

11. **Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat these answers on this page. (Lead agencies may modify this form to include additional specific information on project description).**

The closed Hansville Landfill is located in northern Kitsap County east of Port Gamble Bay approximately 4 ½ miles south of the community of Hansville (Figure 1). The property is situated on a 73-acre parcel owned by Kitsap County (Figure 2). Three separate waste disposal areas were formerly operated within the property. The disposal areas consist of a closed 13-acre municipal solid waste disposal area, which accepted mixed municipal solid waste, located in the central portion of the property; a closed 4-acre demolition disposal area which accepted construction, demolition, and land clearing waste; and a closed 1/3-acre septage lagoon which accepted residential septic tank waste from the north County area until 1982 (Figure 3). The Landfill was closed and stopped accepting waste in 1989.

As part of the closure activities, a final cover was constructed in accordance with the Minimum Functional Standards for Solid Waste Handling Chapter 173-304 Washington Administrative Code (WAC). All three disposal areas are capped with a cover system that is compliant with Chapter 173-304 WAC. In addition to the cover system, an active landfill gas extraction system currently operates to remove refuse-generated landfill gas from the Landfill. Part of the existing closure systems includes a stormwater management and conveyance system and a groundwater and surface water monitoring network. The monitoring networks are used to characterize water quality conditions at the Landfill and adjacent property owned by the Port Gamble S'Klallam Tribe (Tribe).

The proposed project implements the approved remedial action at the Hansville Landfill in accordance with the Ecology-approved Final Feasibility Study Report and the Ecology-issued Cleanup Action Plan. In addition to the existing closure systems, the remedial action consists of:

- Natural attenuation
- Monitoring of groundwater and surface water
- Institutional controls

Natural Attenuation

Natural attenuation is the process by which concentrations of chemicals introduced into the environment are reduced over time by natural insitu physical, biological, and chemical processes. Natural attenuation has been shown to effectively reduce the concentrations of inorganic and organic contaminants in groundwater. Natural attenuation does not include any active remediation such as moving soils or grading activities. The remedial action consists of the monitoring and institutional controls discussed below.

Monitoring of Groundwater and Surface Water

Monitoring consists of a groundwater and surface water monitoring program designed to assess the progress toward achievement of cleanup action objectives and cleanup standards. In order to demonstrate natural attenuation, the monitoring program for the remedial action will include analysis of groundwater and surface water for chemicals indicative of natural attenuation processes. Existing groundwater monitoring wells and surface water monitoring stations will be utilized to provide optimal coverage to monitor natural attenuation processes.

Institutional Controls

Institutional controls will incorporate property use restrictions, including restrictions on the use of groundwater and surface water on Port Gamble S'Klallam Tribe property located adjacent to the County property. Institutional controls on Tribal land were established per the agreement executed on May 2, 2007 between the Port Gamble S'Klallam Tribe, Kitsap County, and Waste Management of Washington, Inc. Institutional controls will remain in place until concentrations of indicator hazardous substances in groundwater beneath Tribal property fall below the designated site cleanup levels established in the Cleanup Action Plan.

Site use restrictions will be reviewed at approximately 5-year intervals to determine if additional restrictions are warranted, or if previously enacted restrictions should be eliminated or reduced in the area.

12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The Landfill property is located approximately 4½ miles south of the community of Hansville in northern Kitsap County, WA (Figure 1). Located approximately 1,500 feet west of Hansville Road NE, the Landfill is accessed through the Kitsap County Hansville Recycling and Garbage Facility located at 7791 NE Ecology Road, Hansville, WA.

The Landfill property consists of a 73-acre parcel bordered on the south and west by land owned by the Port Gamble S'Klallam Tribe. Approximately 17-1/3 acres of the parcel were used for waste disposal. The property is comprised of the waste disposal areas, access roads, the Kitsap County Hansville Recycling and Garbage Facility, and wooded land.

The areas located to the north and south of the Landfill property are zoned low-density residential, rural-wooded, or light industrial. The area directly east of the property is currently being used for light industrial use. The area is sparsely developed. The Landfill property is located approximately 4,000 feet east of Port Gamble Bay (Figure 2).

The legal description for the parcel as listed in the Kitsap County Auditors records is:

> The South ½ of the N.W. ¼ of the N.E. ¼, together with the North ½, of the S.W. ¼, of the N.E. ¼, all located in

Section 9, Township 27 North, Range 2 East, Western Meridian, Kitsap County, Washington.

The parcel tax account number is: 092702-1-005-2007.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

flat √ *rolling* hilly
steep slopes mountainous
other:_____

b. What is the steepest slope on the site (approximate percent slope)? 25% – 30%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

According to the Soil Survey of Kitsap County Area, Washington (United States Department of Agriculture, 1980), the soils in the area consist predominantly of fine sand loam of the Poulsbo-Ragnar complex. This soil is typically found on terraces and broad uplands and is deep and well drained and formed from glacial outwash.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.
No.

e. Describe the purpose, type, and appropriate quantities of any filling or grading proposed. Indicate source of fill.
Does not apply as there will be no filling or grading with the remedial action.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
Does not apply.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or building)?

None.

By way of background, as part of the remedial action, an impermeable cap was placed over the solid waste disposal area, demolition waste disposal area, and septage disposal area. The final cover system consists of a cover for the refuse, overlain by a subgrade layer that provides a base for a geomembrane liner. The geomembrane liner consists of a 60 mil HDPE geomembrane that is overlain by a geosynthetic drainage net to provide soil stability to the geomembrane layer. A low permeability sand layer protects the geomembrane layer. A top soil layer amended with biosolids overlays the cap to facilitate vegetation growth.

h. **Proposed measures to reduce or control erosion, or other impacts to the earth, if any.**
Does not apply.

2. **Air**

a. **What types of emissions to the air would result from the proposal (i.e., dust, automobile odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.**

The proposed project will not result in emissions to the air. A landfill gas collection and extraction system is currently operating at the Landfill property. The existing system controls the gas reservoir within the Landfill and offsite migration of landfill gas. The facility operates continuously under current landfill conditions and ensures combustion of the landfill gas. The landfill gas system will continue to operate until gas is no longer being extracted from the disposal area.

b. **Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.**
None.

c. **Proposed measures to reduce or control emissions or other impacts to air, if any.**
Does not apply.

3. **Water**

a. **Surface:**

1) **Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal**

streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The Landfill is located near the crest of the ridge that bisects the Kitsap Peninsula, on the western side of the drainage divide. Several small creeks originate as springs and seeps downgradient of, but not on, the Landfill property. The springs and seeps are formed from the upper aquifer where this formation outcrops at its contact with the underlying Kitsap Formation.

The headwaters of streams located to the north, west, and south of the Landfill occur at approximate elevations of 160 to 290 feet above sea level. The known perennial streams are Middle Creek and Little Boston Creek (Figure 4). Intermittent streams are unnamed and were designated in the Remedial Investigation Report as Creeks A, B, and C. Middle Creek, Creek A and Creek B originate at seeps and springs west of the Landfill property and flow west into Port Gamble Bay.

Three small creeks, Middle Creek, Creek A, and Creek B originate at seeps and springs west of the Landfill property and flow west into Port Gamble Bay. The headwaters of these creeks are formed between approximately 160 and 225 feet above sea level. These headwater areas remain wet all year. Since the creeks are primarily fed by groundwater rather than surface water, flows appear to be relatively constant.

2) **Will the project require any work over, in, or adjacent to (within 200 feet) of the described waterways? If yes, please describe and attach available plans.**
No.

3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**
None.

4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**
No.

5) **Does the proposal lie within a 100-year floodplain? If so note location on the site plan.**
No.

6) **Does the proposal involve any discharges or waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

The Landfill closure system was designed to promote drainage away from the capped waste disposal areas. Runoff from the closed solid waste disposal area is collected in a perimeter ditch, located inside the perimeter access road and is discharged into a siltation basin where it evaporates or infiltrates at the western boundary of the Landfill property. During large storm events, surface water is discharged to a channel west of the basin where it infiltrates into native soils. Surface water entering the Landfill property from the east is routed to a siltation basin located east of the Landfill.

Because surface water runoff from the property infiltrates to the ground, there is no direct overland flow connection between the waste disposal areas and the downgradient streams.

b. Ground

1) **Will ground water be withdrawn, or will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**
No.

2) **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals…; agricultural; etc.) Describe the general size of the system, the number of such systems, the number of houses to be served if applicable), or the number of animals or humans the system(s) are expected to serve.**

The Landfill property currently contains three closed waste disposal areas designated as the Landfill. The remedial action is being implemented to address the potential for contamination due to the presence of the Landfill. The Landfill contains closure control measures installed to minimize potential environmental or public health impacts due to the presence of the Landfill. The closure systems will remain in place throughout the duration of the remedial action.

c. Water Runoff (including storm water):

1) **Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

Because surface water runoff from the property infiltrates to the ground, there is no direct overland flow connection between the waste disposal areas and the downgradient streams. See also Section B(3)(a)(6) above.

2) **Could waste materials enter ground or surface waters? If so, generally describe.**

The remedial action is being implemented to address the presence of a landfill at the County property. Closure systems already existing at the property were designed to minimize leachate production and to mitigate potential negative environmental and public health impacts associated with a closed solid waste landfill. Implementation of the remedial action will further reduce the potential for contamination to enter ground or surface waters.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
None. The existing controls will remain in place throughout the implementation of the remedial action.

4. Plants

a. Check types of vegetation found on the site:

deciduous trees: √ alder √ maple
aspen other_____

evergreen trees: √ fir √ cedar
pine other_____

√ shrubs
√ grass
pasture
crop or grain

wet soil plants: cattail buttercup
bullrush skunk cabbage
other_____

water plants: water lily eelgrass
milfoil other_____

other types of vegetation: _____

b. What kind and amount of vegetation will be removed or altered?
None.

c. List threatened or endangered species known to be on or near the site.

There are no known threatened or endangered plant species on or near the property.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.
Does not apply.

5. Animals

a. Check box for any birds and animals which have been observed on or near the site or are known to be on or near the site:

Birds: √ hawk heron √ eagle
√ songbirds
√ other: osprey

Mammals: √ deer √ bear elk
beaver

√ other: coyote

Fish: bass salmon bull trout
shellfish herring
other:_____

b. List any threatened or endangered species known to be on or near the site.

The only endangered, threatened, or State species of concern in the Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species Database known to occur within 1 mile of the Landfill property is an osprey nest approximately 0.9 mile southwest of the property boundary near the shoreline of Port Gamble Bay. The nearest bald eagle nesting territory is approximately 2 miles from the Landfill property and should not be affected by the remedial action.

Chinook salmon and bull trout, both listed species, do not occur in any of the downgradient streams. Listed winter steelhead may occur in the downstream reaches of Creek C. Creek C, which is also downgradient from the property, is reported to support resident and anadromous fish downstream of Little Boston Road NE. The marine waters of Port Gamble Bay support spawning sand lance, surface smelt, and herring as well as hardshell clams.

c. Is the site part of a migration route? If so, explain:
No.

d. Proposed measures to preserve or enhance wildlife, if any.
Does not apply.

6. Energy and Natural Resources

a. What kinds or energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

No energy sources are required for the implementation of the remedial action. Electricity is currently supplied onsite to operate the existing landfill gas system motor blowers. Operation of the landfill gas system will continue until gas is no longer being extracted from the disposal area.

b. **Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**
No.

c. **What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.**
Does not apply.

7. **Environmental Health**

a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so describe.**

Historically, groundwater and surface water contamination has been detected at the Landfill property and downgradient on the adjacent Port Gamble S'Klallam Tribe property. Contamination detected on Tribal property has been limited to groundwater immediately downgradient of the Landfill, short reaches of streams discharging from the groundwater, and sediment at the stream headwaters.

Implementation of the remedial action will address groundwater and surface water contamination on the property and adjacent property over the long term. Groundwater and surface water are monitored on a regular basis to assess water quality conditions and determine potential environmental and public health risks. Institutional controls are in place to minimize potential risks on and off the Landfill property. A landfill gas system currently operates to collect landfill gas generated by decomposing refuse. Continued monitoring and institutional controls will continue as part of the remedial action to be implemented. Operation of existing control systems will continue until gas is no longer being extracted from the disposal area.

1) **Describe special emergency services that might be required.**
Does not apply.

2) **Proposed measures to reduce or control environmental health hazards, if any:**
Does not apply.

b. Noise

1) **What types of noise exist in the area which may effect your project (for example: traffic, equipment, operation, other)?**
None.

2) **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

The landfill gas extraction and flaring system contains a motor blower/flare facility that combusts the collected landfill gas. Two 7.5-horsepower blowers alternate in service to induce a vacuum on the system and draw landfill gas to the open flare where combustion takes place. Currently, the system operates continuously. The system will continue to operate until gas is no longer being extracted from the disposal area.

Vehicle use will be minimal. The monitoring consists of use of one vehicle for two days during each quarter.

3) **Proposed measures to reduce or control noise impacts, if any:**
Does not apply.

8. **Land and Shoreline Use**

a. **What is the current use of the site and adjacent properties?**
The property contains a closed landfill. The closed landfill is located on approximately 17 1/3 acres of the 73 acre parcel. A portion of the property currently is used as the Kitsap County Hansville Recycling and Garbage Facility. The property is currently zoned rural protection (1 dwelling unit/10 acres), but no residential use exists on the property. The remainder of the property is undeveloped.

Adjacent land zoning includes rural protection to the northeast, interim rural forest to the north and northeast, and industrial to the east. The industrial land to the east includes an industrial park and inert landfill approved by the Kitsap County Health District (KCHD). Lands adjacent to the Landfill property are generally

used for forestry with some residential and light industrial land use to the east."

Property to the west and southeast is owned by the Port Gamble S'Klallam Tribe. No County zoning regulations are in effect for Tribal lands. The Tribe has indicated that this land is currently used for forestry.

b. **Has the site been used for agriculture? If so describe.**
No.

c. **Describe any structures on the site.**
A small toll booth is located on the property for the operation of the Kitsap County Hansville Recycling and Garbage Facility.

The Landfill contains a landfill gas system that includes extraction wells and trenches in the refuse, a motor blower/flare facility that extracts and combust the collected landfill gas, and a condensate collection system. The trenches and pipes are located primarily located underground. The motor blower/flare facility is located above ground east of the solid waste disposal area in a fenced off compound.

d. **Will any structures be demolished? If so, what?**
No.

e. **What is the current zoning classification of the site?**
Rural Protection (1 dwelling unit/10 acres).

f. **What is the current comprehensive plan designation of the site?**
Public Facility.

g. **If applicable, what is the current shoreline master program designation of the site?**
Does not apply.

h. **Has any part of the site been classified as "environmentally sensitive" area? If so, specify.**
No.

i. **Approximately how many people would reside or work in the completed project?**

None. There are on the Landfill Property, however, existing personnel employed by Kitsap County at the Hansville Recycling and Garbage Facility.

j. **Approximately how many people would the completed project displace?**
None.

k. **Proposed measures to avoid or reduce displacement impacts, if any:**
Does not apply.

l. **Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any;**

There are currently no plans to change the existing land use. Changes in land use would require approval from the Department of Ecology. Existing covenants and institutional controls assigned to the property would continue to be implemented.

9. **Housing**
   a. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**
   None.

   b. **Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**
   None.

   d. **Proposed measures to reduce or control housing impacts, if any:**
   Does not apply.

10. **Aesthetics**
   a. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**
   Does not apply.

   b. **What views in the immediate vicinity would be altered or obstructed?**
   None.

c. **Proposed measures to reduce or control aesthetic impacts, if any:**
Does not apply.

11. Light and Glare

a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**
None.

b. **Could light or glare from the finished project be a safety hazard or interfere with views?**
Does not apply.

c. **What existing off-site sources of light or glare may affect your proposal?**
None.

d. **Proposed measures to reduce or control light and glare impacts, if any:**
Does not apply.

12. Recreation

a. **What designated and informal recreational opportunities are in the immediate vicinity?**

There are no designated or informal recreational opportunities in the immediate vicinity of the Landfill property.

b. **Would the proposed project displace any existing recreational uses? If so, describe.**
No.

c. **Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**
Does not apply.

13. Historic and Cultural Preservation

a. **Are there any places or objects listed on, or proposed for, national, state or local preservation registers known to be on or next to the site? If so generally describe.**

There are no known places or objects listed on or proposed on or next to the Landfill property. The property is bordered on the west

and southeast by property owned by the Port Gamble S'Klallam Tribe (Tribe). The Tribe has indicated this land is currently used for forestry.

b. **Generally describe any landmarks or evidence of historic archaeological, scientific, or cultural importance known to be on or next to the site.**

There are no known landmarks or evidence of historic archaeological, scientific, or cultural important known to be on or next to the Landfill property. The property is bordered on the west and southeast by property owned by the Port Gamble S'Klallam Tribe.

c. **Proposed measures to reduce or control impacts, if any:**
Does not apply.

14. Transportation

a. **Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**

The Landfill property is served by NE Ecology Road to the east of the property. NE Ecology Road is served by Hansville Road. No additional access is proposed for the property.

b. **Is site currently served by public transit? If no, what is the approximate distance to the nearest transit stop?**
Does not apply.

c. **How many parking spaces would the completed project have? How many would the project eliminate?**
Does not apply.

d. **Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).**
No.

e. **Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so generally describe.**
No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.
Does not apply.

g. Proposed measures to reduce or control transportation impacts, if any:
Does not apply.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.
No.

b. Proposed measures to reduce or control direct impacts on public services, if any.
Does not apply.

16. Utilities

Check utilities currently available at the site:

√	Electricity		Natural gas	√	Water
√	Refuse system	√	Telephone		Sanitary sewer
√	Septic system		other_____		

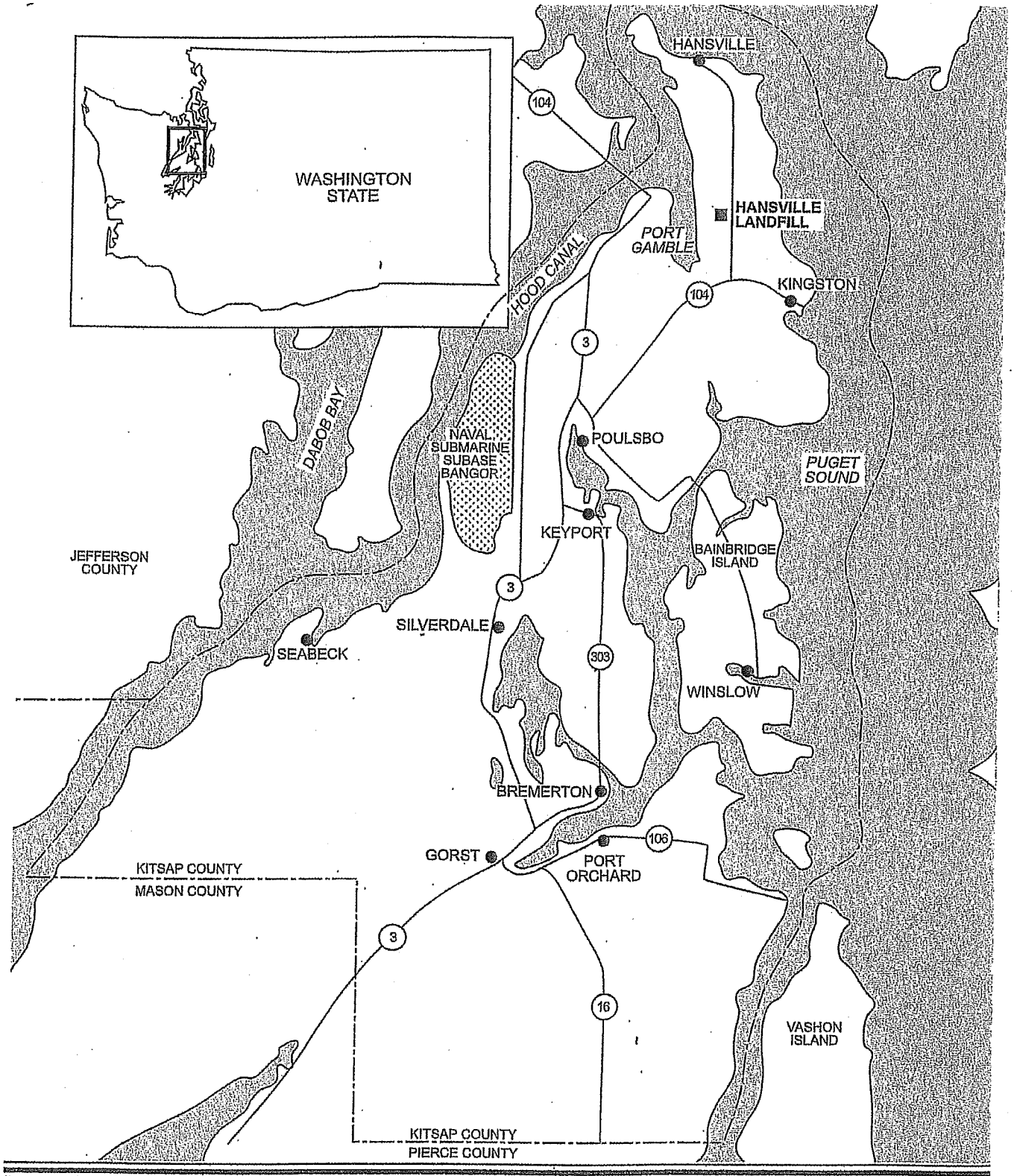
Electricity, water, refuse, telephone, and septic system utilities are available at the Kitsap County Hansville Recycling and Garbage Facility located on the east side of the property. Electricity is provided to the landfill gas blower/flare system adjacent to the waste disposal areas. The remaining portion of the Landfill property does not have utilities available.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Patricia A. Campbell

Date Submitted: 9/27/10



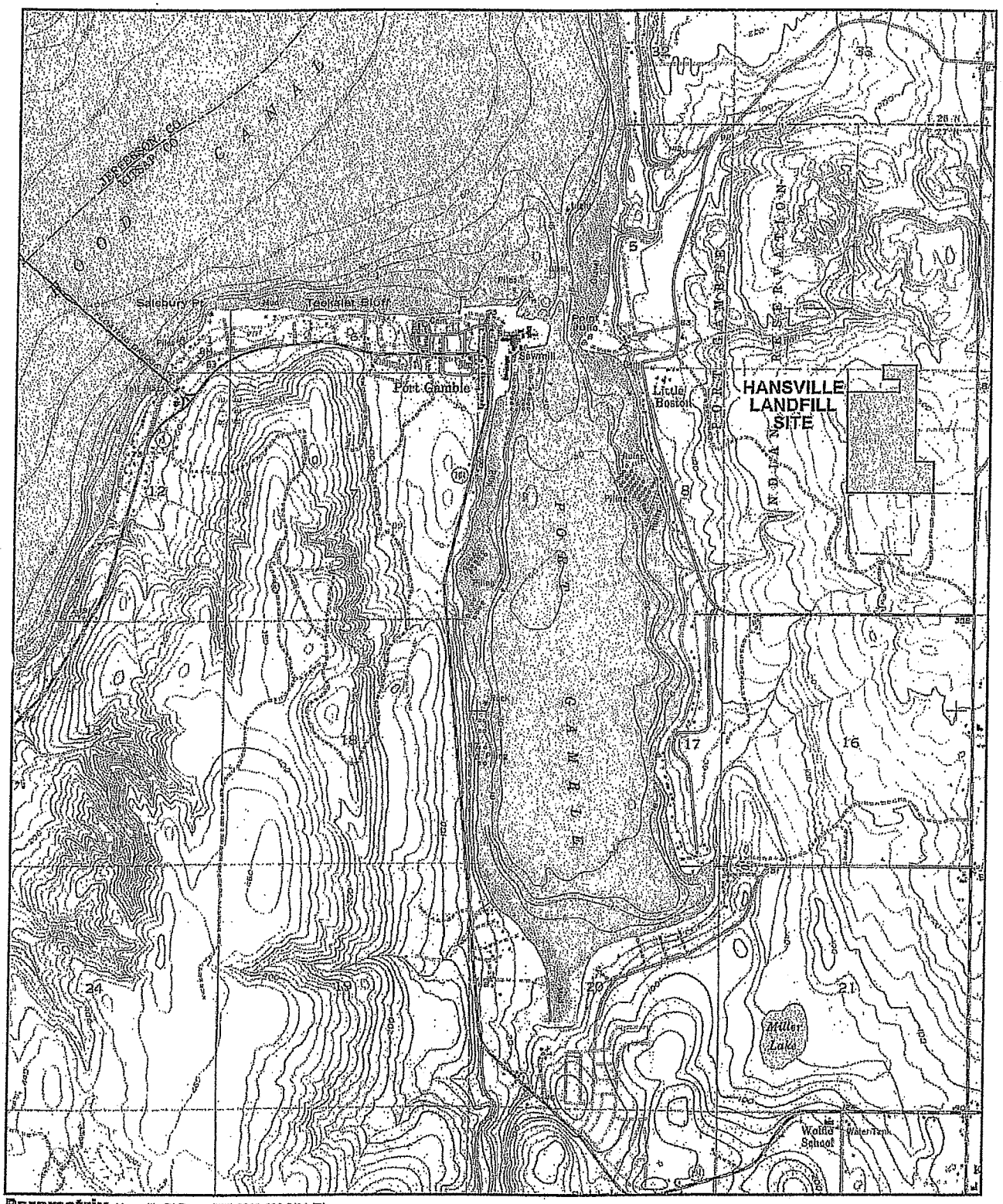
Parametrix Hansville Landfill RI Report 555-2966-002/01(03A) 6/05 (B)

N

SCALE IN FEET

0 5,000 10,000

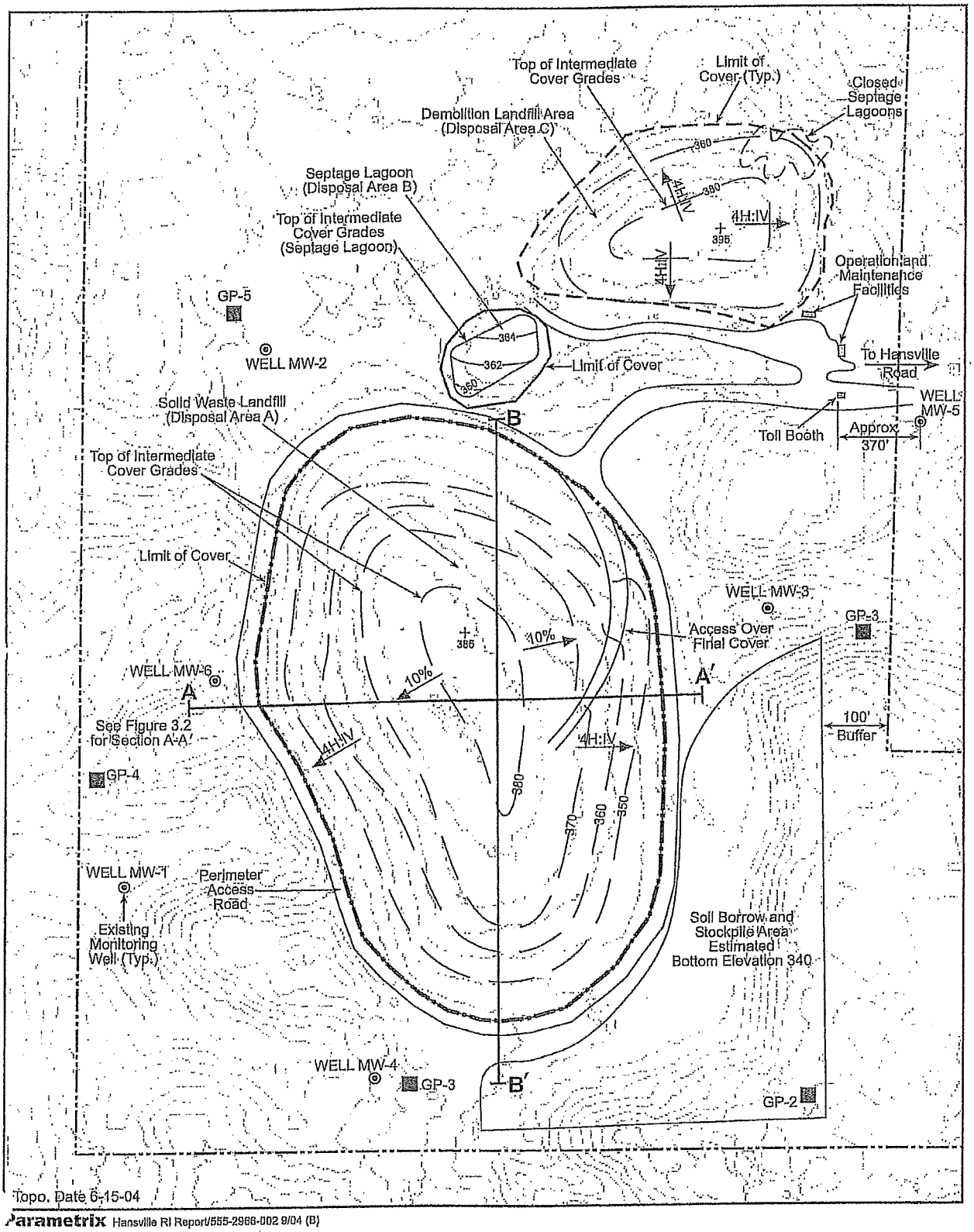
Figure 1
Site Location Map
Hansville Landfill RI/FS



Parametrix Hansville RI Report/555-2966-002 9/04 (B)

N

Figure 2
Site Vicinity Map
Hansville Landfill RI/FS



Parametrix Hansville RI Report/555-2966-002 9/04 (B)

N

0 200'

APPROXIMATE SCALE IN FEET

GP = Gas Probe

Figure 3
Landfill Site Plan
Hansville Landfill RI/FS

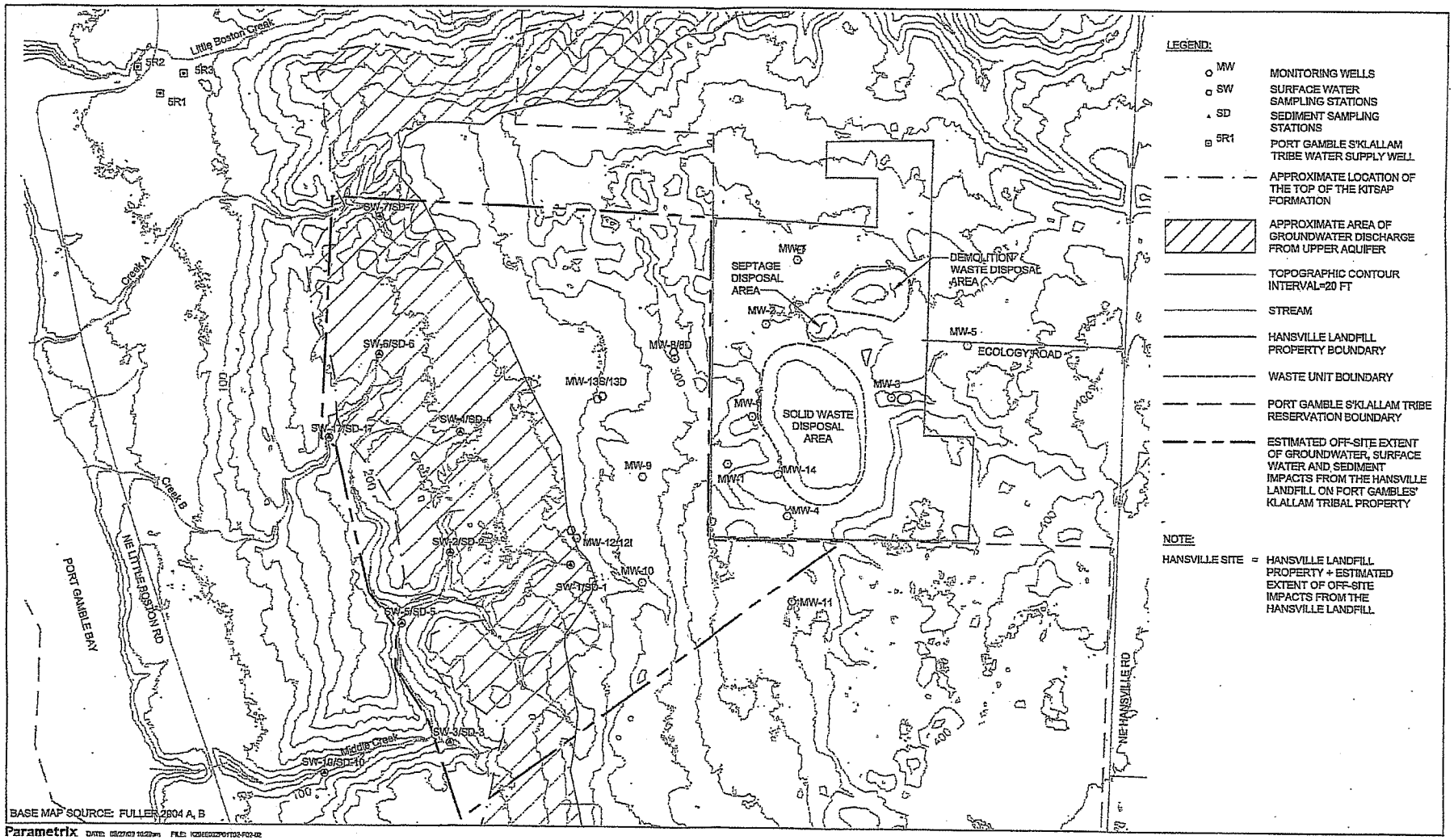


Figure 4
Hansville Landfill Site Boundary
Hansville Landfill FS Report

APPENDIX B

SEPA DETERMINATION OF NON-SIGNIFICANCE – HANSVILLE LANDFILL

KITSAP COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT
614 DIVISION STREET MS-36, PORT ORCHARD WASHINGTON 98366-4682 LARRY KEETON, DIRECTOR
(360) 337-5777 FAX (360) 337-4925 HOME PAGE - www.kitsapgov.com/dcd/

MITIGATED DETERMINATION OF NONSIGNIFICANCE

Description of Proposal: **Hansville Landfill Remedial Action Project –** The project consists of the implementation of a Department of Ecology approved remedial action plan at the closed Hansville Landfill site pursuant to the Model Toxics Control Act. The cleanup work is occurring on a 73 acre parcel owned by Kitsap County and is anticipated to take approximately 23 years to complete.

Proponent: Kitsap County

Lead Agency: KITSAP COUNTY

Location of proposal, including street address, if any: The site is 1,500 feet west of Hansville Road, and is accessed via the Hansville Recycling and Garbage Facility at 7791 NE Ecology Road, Hansville, North Kitsap County.

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

☒ This DNS is issued under 197-11-340(2). At the request of the Department of Ecology, Kitsap County is extending the typical 14 day SEPA comment period to 30 days. Comments must be submitted by: **June 13, 2011**.

COMMENTS:
The former disposal areas consisted of a 13-acre municipal solid waste disposal area, a 4-acre demolition disposal area, and a 1/3-acre septage lagoon which accepted septic waste until 1982. The landfill was closed and stopped accepting waste in 1989. A final cover was constructed in accordance with the Minimum Functional Standards for Solid Waste Handling Chapter of the Washington Administrative Code (WAC 173-304). A landfill gas extraction system, a stormwater conveyance system, and a groundwater and surface water monitoring network are currently in operation at the remediation site.

MITIGATION:
The proposed project implements the approved remedial action at the landfill in accordance with the Ecology approved Final Feasibility Study Report and the Ecology issued Cleanup Action Plan. In combination with the existing systems described above, implementation of the approved plans is anticipated to mitigate both short-term and long-term adverse impacts resulting from prior landfill activities.

Responsible Official / Contact Person: Steve Heacock
Position/Title: SEPA Administrator, Dept. of Community Dev. Phone: (360) 337-5777
Address: 614 Division Street, Port Orchard, WA 98366

DATE: **May 13, 2011** Signature: Steve Heacock

You may appeal this determination to the Dept. of Community Development, at 614 Division Street, MS-36, Port Orchard WA 98366, no later than (date) **6/13/2011** in writing, with a $500.00 appeal fee.

You should be prepared to make specific factual objections. Contact Steve Heacock to read or ask about the procedures for SEPA appeals.

APPENDIX C

KEY ELEMENTS OF THE COMPLIANCE MONITORING PLAN

As described in Section 4.3 of this Cleanup Action Plan, a post-CAP Compliance Monitoring Plan will be prepared per the requirements of the future Cleanup Action Consent Decree, and will include all of the elements required by WAC 173-340-820 and -830. The following key elements of the Compliance Monitoring Plan for the selected cleanup action (Natural Attenuation of Groundwater with Enhanced Monitoring and Enhanced Institutional Controls) are included as follows for monitoring of groundwater and surface water:

- Monitoring locations,
- Monitoring frequency, and
- Monitoring parameters.

Monitoring locations and frequency are described in Table C-1 and monitoring parameters are listed in Table C-2. Monitoring locations are shown on Figure C-1.

Monitoring locations and frequency were chosen to provide areal coverage, and to provide the robust data set needed to determine if natural attenuation continues to be an effective remediation strategy. Parameters were chosen based on the list of indicator hazardous substances and on the list of monitoring parameters in Chapter 173-304 WAC an applicable regulation.

All test methods will be sufficient to measure the analyte of interest at the lowest regulated concentration in the matrix of interest.

Table C-1. Compliance Monitoring Network

Station	Function	Frequency	Description
Groundwater Monitoring Wells			
MW-5	Upgradient	Quarterly	Adjacent to the Recycling and Garbage Facility
MW-6	Downgradient	Quarterly	Adjacent to Landfill
MW-7	Downgradient	Quarterly	Adjacent to septage area
MW-12I	Downgradient	Quarterly	On Tribal Property
MW-13D	Downgradient	Quarterly	On Tribal Property
MW-14	Downgradient	Quarterly	Adjacent to Landfill
Surface Water Stations			
SW-1	Downgradient	Quarterly	On Tribal Property
SW-4	Downgradient	Quarterly	On Tribal Property
SW-6	Downgradient	Quarterly	On Tribal Property
SW-7	Downgradient	Quarterly	On Tribal Property

Table C-2. Surface Water and Groundwater Sampling Parameters

Field Parameters (all events):

Quarterly:

Groundwater levels

Oxidation-Reduction Potential (REDOX)*

Dissolved Oxygen (DO)*
pH
Specific Conductance
Temperature

Laboratory Parameters:

Quarterly:

Arsenic
Manganese
Chloride
Ammonia
Nitrate
Nitrite
Bicarbonate
Carbonate
Alkalinity
Sulfate*
Orthophosphate*
Volatile Organics:
Vinyl Chloride by SIM** (all events)
Other (all events):
Total Organic Carbon (TOC)*

Annually:

All Method 8260 compounds

* Parameters indicative of natural attenuation processes
** The three indicator chemicals identified in the FS Report (Parametrix 2009)

Table C-3. Landfill Gas Monitoring:

Quarterly:

Gas Probe temperature
Pressure
% Methane
% Oxygen
% CO_2

Data from gas extraction well balancing will be provided, including Blower CFM, temperature, pressure, methane, oxygen, and CO_2.

Data supplied to Ecology will also be sent to Kitsap County Health, and the Port Gamble S'Klallam Tribe.

APPENDIX D
EVALUATION OF MONITORING DATA

1. Statistical Analysis Methods

The purpose of this procedure is to determine by statistical methods whether the groundwater monitoring data from the Hansville Landfill are falling within limits that show progress towards achieving site cleanup levels specified in the Cleanup Action Plan (CAP). The procedures outlined below generally employ a weight of evidence approach that considers the following:

1) statistically derived trend analysis which helps identify and maintain downward trends,

2) statistical curve fitting which enables a projection of hypothetical clean-up time frames, and

3) confidence limit comparison which ultimately determines the end of corrective action. Each of these procedures is described below.

Chemical Parameters to be Evaluated Statistically

Two of the indicator chemicals from the Feasibility Study (FS), vinyl chloride and arsenic, will be evaluated by the statistical methods described below. Manganese, the third indicator chemical, has a secondary maximum contaminant level (MCL), and does not impact cleanup decisions at the Hansville Landfill site (Ecology 2004). Therefore, manganese will not be evaluated by these statistical methods.

Comparison to Standards (Quarterly/Annually)

- Compare each data value to the corresponding site cleanup level (Table 5-2) to check for exceedances.

- If the groundwater monitoring data exceeds the site cleanup levels, apply trend analysis methods to the data to determine if current downward trends in concentrations are continuing.

Trend Analysis and Time Series Plots (Quarterly/Annually)

The data for vinyl chloride and arsenic for each downgradient monitoring well will be plotted versus time. Statistical trend analysis methods (Mann-Kendall and Sen's Slope tests) will be applied to determine if there is a statistically significant trend and to verify that current downward trends in concentrations are continuing. Significant downward slopes confirm that the chemicals' concentration trends continue to decrease over time.

Trend Projection (Quarterly/Annual)

An exponential decay or attenuation curve will be fit to each set of groundwater data with a significant downward trend to qualitatively evaluate the convergence of the data towards the cleanup level. This procedure involves least squares regression methods and the resulting trend lines will be extended forward in time (several years) as far as is feasible given the data.

Calculation of Upper and Lower Confidence Limits (Annually)

On an annual basis, chemical data from the quarterly groundwater sampling for the two indicator chemicals (vinyl chloride and arsenic) will be statistically evaluated in accordance with ASTM D7048 – 04, Standard Guide for Applying Statistical Methods for Assessment and Corrective Action Environmental Monitoring Programs (ASTM 2004). The purpose of this analysis is to quantitatively verify that current downward trends in concentrations are continuing. The steps in this process are summarized as follows:

- Sample size (N) decision – Since the number of samples (N) will be less than 7 (the last year of data will be used, so N = 4), the path on the flow chart to the left is followed to compute the 95% Normal Upper Confidence Limits (UCLs) and Lower Confidence Limits (LCLs). Note that there are two pathways starting with "Comparison to Standards" but both follow the same steps until the final calculation of UCL or LCL.

- Adjustment for non-detections – Set non-detects to one-half the minimum detection limit (MDL).

- Compute means, UCLs, and LCLs – Calculate the mean, 95% UCL and LCL from the last year (4 quarters) of sampling data.

- Compare to Site Cleanup Levels (SCL) – The UCL and LCL are then compared to the SCLs to determine the position of the UCL and LCL relative to the SCL (above or below) and whether the confidence limits are still converging and approaching the SCL. If a downward trend in the groundwater data is present, the mean, UCL and LCL will trend downward.

2. Chemical Methods (Quarterly/Annually)

The water quality parameters indicative of natural attenuation given in Appendix C will be evaluated to provide evidence of natural attenuation processes. The relative magnitude and trends of such parameters as dissolved oxygen, total organic carbon, and sulfate will provide insights into mechanisms of natural attenuation that are occurring in groundwater at the site.

3. References

American Society for Testing and Materials [ASTM]. 2004. Standard Guide for Applying Statistical Methods for Assessment and Corrective Action Environmental Monitoring Programs. ASTM Designation: D 7048 04. Philadelphia, PA.

Ecology (Washington State Department of Ecology). 1991. Technical Information Memorandum 91-1, Interim Implementation Policy, Chapter 173-200 WAC. From Thomas Eaton, Program Manager, Solid and Hazardous Waste Program, to All Health Districts and Ecology Staff. July 31, 1991.

Ecology. 2000. Proposed Revisions to Groundwater and Surface Water Monitoring Program, Hansville Landfill RI/FS. Letter from Brian Sato, Ecology, to Mike Warfel, Parametrix, Inc. April 3, 2000.

Ecology. 2004. Response to Proposed Approach for Completion of the RI Report, Hansville Landfill RI/FS. Letter from Brian Sato, Ecology, to Mike Warfel, Parametrix, Inc. April 27, 2004.

Parametrix, Inc. 1998. June 1998 – Quarterly Monitoring, Hansville Landfill RI/FS. Letter from Mike Warfel, Parametrix, Inc. to Brian Sato, Ecology. June 15, 1998.

Parametrix, Inc. 1999. Proposed Revisions to Post-Closure Groundwater and Surface Water Monitoring Program, Hansville Landfill. Letter from Mike Warfel, Parametrix, Inc. to Brian Sato, Ecology. November 29, 1999.

Parametrix, Inc. 2007. Final Remedial Investigation Study Report, Hansville Landfill Remedial Investigation/Feasibility Study. Prepared for Kitsap County, Washington and Waste Management of Washington, Inc. July 13, 2007.

Parametrix, Inc. 2009. Final Feasibility Study Report, Hansville Landfill Remedial Investigation/Feasibility Study. Prepared for Kitsap County, Washington and Waste Management of Washington, Inc. June 15, 2009.

United States Environmental Protection Agency (USEPA). 1998. Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water. EPA/600/R-98/128. Washington D.C. September 1998.

USEPA. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance. EPA 530-R-09-007. Washington D.C. March 2009.

APPENDIX E

PUBLIC PARTICIPATION PLAN

DEPARTMENT OF ECOLOGY
State of Washington

Public Participation Plan

Hansville Landfill Site
Hansville, Washington
May 2011



Prepared by:
Washington State Department of Ecology
3190 160th Avenue SE., Bellevue, WA 98008

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INTRODUCTION

The Washington State Department of Ecology (Ecology) is committed to providing public participation opportunities during the investigation and cleanup of hazardous waste sites. The Public Participation Plan is intended to promote understanding of Ecology's responsibilities, planning activities, and remedial activities at hazardous waste sites under the Washington State Model Toxics Control Act (MTCA) (Chapter 70.105D RCW and Chapter 173-340-WAC); the regulations that guide site cleanup. This plan outlines and describes the tools that Ecology uses to inform the public about site activities and identifies opportunities for the community to become involved.

This Document is the Public Participation Plan for the following three actions concerning the Hansville Landfill:

1. The Hansville Landfill Amended Consent Decree.
2. The Hansville Landfill Cleanup Action Plan (CAP).
3. The Mitigated Determination of Nonsignificance (MDNS) under the State Environmental Policy Act (SEPA).

SITE BACKGROUND



Hansville Landfill is 4½ miles south of the community of Hansville,WA on the northernmost reach of the Kitsap Peninsula. The Hansville Landfill is a 73-acre parcel in the northeast quarter of Section 9, Township 27 North, Range 2 East. Bordering the Landfill to the south and west is land owned by the Port Gamble S'Klallam Tribe (Tribe). Surrounding areas to the north and south are zoned low-density residential, rural wooded or light industrial and are sparsely developed. The area directly east of the Landfill has been developed for light industrial use. The nearest permanent residence is located approximately 1,500 feet east and upgradient of the solid waste disposal area of the Landfill.

The Hansville Landfill operated as a municipal landfill serving the northern portion of Kitsap County from about 1962 to 1989. The landfill is divided into three separate units: a 13-acre municipal solid waste landfill; a four-acre demolition

landfill that accepted construction, demolition, and land clearing wastes; and a one-third acre septage lagoon that accepted septic tank pumping waste. The remaining landfill property consists of access roads, a soil borrow area and wooded land. All three landfill units are capped with a final cover system. In addition, an active landfill gas extraction and flaring system was installed within the municipal solid waste and demolition landfill units to control the migration of landfill gas (methane).

CURRENT ACTIVITY AND SITE STATUS



The Hansville Landfill is currently closed and capped. The landfill gas flaring system is in operation. Unlike the practice at most cleanup sites, the Remedial Investigation (RI) and the Feasibility Study (FS) are separate documents. The Potentially Liable Parties, Kitsap County and Waste Management of Washington, Inc., were responsible for the RI and the FS. The RI was completed in May 2007 and the FS was completed in February 2009. Both the RI and the FS are available on line at:
http://www.ecy.wa.gov/programs/tcp/sites/hansville/hansville_hp.htm

ENVIRONMENTAL CONCERNS

Currently contaminated groundwater is flowing westward from the landfill property beneath the adjacent Port Gamble S'Klallam Tribe Reservation. The groundwater in the shallow aquifer contains vinyl chloride and arsenic in excess of the cleanup standards. The cleanup standards for vinyl chloride and arsenic are below Drinking Water Standards. The highest concentration of these hazardous substances appear next to the waste disposal areas with decreasing concentrations at increasing distances from the Landfill. The engineered cover system and active landfill gas extraction and flaring system continue to function as designed as documented by ongoing monitoring. The concentrations of these hazardous substances on site and offsite are stable or declining over time.

PROPOSED CLEANUP ACTION PLAN

As part of the draft Consent Decree, the Cleanup Action Plan describes the remedial actions that will be undertaken by Kitsap County and Waste Management of Washington, Inc. These actions are proposed as part of the

groundwater and surface water cleanup activities to protect human health and the environment.

The results of the RI and FS indicate the primary concern at the site is contamination in groundwater, which flows west and southwest from the Site.

PROPOSED CONSENT DECREE AMENDMENT

In order to implement the Cleanup Action Plan the Department of Ecology is entering into a legally binding agreement called a Consent Decree, with Waste Management of Washington, Inc. and Kitsap County. The Cleanup Action Plan is an appendix of that document.

DRAFT STATE ENVIRONMENTAL POLICY ACT (SEPA) AND MITIGATED DETERMINATION OF NONSIGNIFICANCE (MDNS)

A Draft DNS has been issued by Kitsap County, the lead agency for SEPA for this proposed cleanup action. Kitsap County will combine the comment period for this document with the comment period for the draft Cleanup Action Plan and draft Amended Consent Decree. This means that Kitsap County has determined, under Chapter 43.21C RCW and Chapter 197-11 WAC, that with mitigation the proposed cleanup action will not have a probable significant, adverse environmental impact.

OFF SITE POINT OF COMPLIANCE

Ecology has chosen an offsite conditional point of compliance on Tribal property with the Tribe's consent as specified in WAC 173-340-720.

PUBLIC PARTICIPATION ACTIVITIES AND RESPONSIBILITIES

The purpose of this Public Participation Plan is to promote public understanding and participation in the Model Toxics Control Act (MTCA) cleanup activities planned for this site. This section of the plan addresses how Ecology will share information and receive public comments and community input on the site activities.

Ecology urges the public to become involved in the remedial action process. Throughout the course of the cleanup action, Ecology will provide information regularly to offer many opportunities to review materials and provide comments. This plan is intended to be a flexible working document that will be updated as community input is received and/or more information becomes available during the cleanup process. To arrange for a briefing with project staff, ask questions or provide comments on the plan or other aspects of the cleanup, please contact one of the persons listed below.

John Keeling, Site Manager
Washington State Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008
Tel: (425) 649-7052
Email: john.keeling@ecy.wa.gov

Nancy Lui, Community Outreach Coordinator
Washington State Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008
Tel: (425) 649-7117
Email: nancy.lui@ecy.wa.gov

Public Involvement Activities

Ecology uses a variety of activities to facilitate public participation in the investigation and cleanup of state cleanup sites. Ecology will take into consideration input provided by the community.

The public involvement activities that Ecology will use are:

- Formal Public Comment Periods
- Public Meetings and Hearings (if necessary)
- Information Repositories
- Ecology's website for the Hansville Landfill Site
- Site Register
- Fact Sheet
- Mailing List
- Newspaper Display Notification

Their purposes and descriptions of when and how they will be used during this site cleanup are described below.

Formal Public Comment Periods

Comment periods are the primary method Ecology uses to get feedback from the public on proposed cleanup decisions. Comment periods usually last 30 days and are required at key points during the investigation and evaluation of proposed cleanup process before final decisions are made.

During a comment period, the public can comment in writing. After the comment period ends, Ecology reviews all comments. Ecology will respond to all comments received during the comment period and may respond in a document called a Responsiveness Summary.

Ecology considers the need for changes or revisions based on input from the public. If significant changes are made, then a second comment period may be held. If no significant changes are made, then the draft document(s) will be finalized.

Public Meetings and Hearings

Public meetings may be held at key points during the cleanup process. Ecology may also offer public meetings for actions expected to be of particular interest to the community. Also, if ten or more people request a public meeting or hearing during the 30 day comment period. Ecology will hold a public meeting for the purpose of taking written comments on draft documents.

Information Repositories

Information repositories are convenient places where the public can go to read and review site information. The information repositories are often at libraries or community sites to which the public has access. During the comment period, the site documents will be available for review at each repository that is listed below. For special accommodations or translation assistance, please contact Nancy Lui at nancy.lui@ecy.wa.gov or at (425) 649-7117, please indicate you would like assistance with the "**Hansville Landfill Site**".

The information repositories for this site are:

Little Boston Library
Port Gamble S'Klallam Tribe
31980 Little Boston Road NE., Kingston, WA 98346
(360) 297-2670

Kitsap County Public Works Annex
8600 SW Imperial Way, Bremerton WA 98312
(360) 337-5777 Call for an appointment

Washington State Department of Ecology, Northwest Regional Office
3190 160th Avenue SE, Bellevue, WA 98008
(425) 649 7190 Call for an appointment

Ecology's web site for the Hansville Landfill Site:
http://www.ecy.wa.gov/programs/tcp/sites/hansville/hansville_hp.htm

Please note that this website address may change in the future. If you need assistance, please contact Nancy Lui at nancy.lui@ecy.wa.gov or call (425) 649-7117).

Site Register and Public Events Calendar

Ecology's Toxics Cleanup Program uses the Site Register and web-based Public Involvement Calendar to announce all of its public meetings and comment periods as well as additional site activities.

To receive the Site Register in electronic or hard copy format, please call (360) 407-6000. The Site Register is available on Ecology's website at: http://www.ecy.wa.gov/programs/tcp/pub_inv/pub_inv2.html

The Public Involvement Calendar is available on Ecology's website at: http://apps.ecy.wa.gov/pubcalendar/calendar.asp

Fact Sheet

Ecology will mail fact sheets to persons and organizations interested in the Hansville Landfill cleanup project to inform them of public meetings and comment opportunities and important site activities. Ecology may also mail fact sheets about progress of site activities.

Mailing List

Ecology has compiled and maintained a list of interested parties, organizations and residents living near the cleanup site. This list will be used to disseminate information via mail (fact sheets, site updates, public notices, etc.). If you are not on the mailing list for this site and wish to be added, please contact Nancy Lui at nancy.lui@ecy.wa.gov or at 425-649-7117. In the subject line, please indicate "**Hansville Landfill Site**" mailing list.

Newspaper Display Notification

Ecology will place a notification in the newspaper to announce public comment periods, public meetings or hearings for the site.

PUBLIC PARTICIPATION GRANTS AND TECHNICAL ASSISTANCE

Additionally, citizen groups living near contaminated sites may apply for public participation grants during open application periods. These grants help citizens receive technical assistance in understanding the cleanup process and create additional public participation avenues. For more information about the public participation grant, please go to Ecology's website at: http://www.ecy.wa.gov/programs/swfa/grants/ppg.html

Ecology currently does not have a citizen technical advisor for providing technical assistance to citizens on issues related to the investigation and cleanup of the Site.

GLOSSARY

Cleanup: Actions taken to deal with a release, or threatened release of hazardous substances that could affect public health and/or the environment. The term "cleanup" is often used broadly to describe various response actions or phases of remedial responses such as the remedial investigation/feasibility study.

Cleanup Action Plan (CAP): A document that explains which cleanup alternative(s) will be used at sites for the cleanup. The cleanup action plan is based on information and technical analysis generated during the remedial investigation/feasibility study and consideration of public comments and community concerns.

Comment Period: A time period during which the public can review and comment on various documents and proposed actions. For example, a comment period may be provided to allow community members to review and comment on proposed cleanup action alternatives and proposed plans.

Information Repository: A file containing current information, technical reports, and reference documents available for public review. The information repository is usually located in a public building that is convenient for local residents such as a public school, city hall, or library.

Interim Action: Any remedial action that partially addresses the cleanup of a site.

Model Toxics Control Act (MTCA): Refers to Chapter 70.105D RCW, first approved by voters in the state of Washington in November 1988 general election as Initiative 97 and as since amended by the legislature.

Public Notice: At a minimum, adequate notice mailed to all persons who have made a timely request of Ecology and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the local (city and county) newspaper of largest circulation; and the opportunity for the interested persons to comment.

Public Participation Plan: A plan prepared under the authority of WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

Remedial Investigation/Feasibility Study: An in-depth study conducted to:

- Determine detailed site characteristics and define the extent and magnitude of contamination at a site;
- Evaluate potential impacts on human health & the environment and establish cleanup criteria; and
- Evaluate cleanup alternatives.

Responsiveness Summary: A summary of oral and/or written public comments received by Ecology during a comment period on key documents, and Ecology's responses to those comments.

Site: Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located.

Site Register: Publication issued every two weeks of major activities conducted statewide related to the study and cleanup of hazardous waste sites under the Model Toxics Control Act. To receive this publication, please call (360) 407-7200. It is also available on Ecology's web site at: http://www.ecy.wa.gov/programs/tcp/pub_inv/pub_inv2.html

APPENDIX F
PRELIMINARY PROJECT SCHEDULE

CAP Implementation	
Begin quarterly monitoring and other activities required by the Consent Decree	Within six months of execution of the consent decree; current monitoring activities to remain in effect until that time
Quarterly Monitoring	Ongoing
Quarterly and Annual Reporting	Ongoing

Periodic Review	Every 5 years

APPENDIX G
ACRONYMS AND GLOSSARY

ARARS	Applicable or Relevant and Appropriate Requirements
CAP	Cleanup Action Plan
DNS	Determination of Non-Significance
FS	Feasibility Study
HWMA	Hazardous Waste Management Act
KCSL	Kitsap County Sanitary Landfill, Inc.
MTCA	Model Toxics Control Act
PCLs	preliminary cleanup levels
POC	points of compliance
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
SAP	Sampling and Analysis Plan
SEPA	State Environmental Policy Act
Tribe	Port Gamble S'Klallam Tribe
WAC	Washington Administrative Code

Hansville Landfill (also referred to as "the Landfill"): Refers to the solid waste disposal area, the demolition waste disposal area, and the septage disposal area.

Hansville Landfill Property (also referred to as "the Property"): Refers to the area encompassed by the Landfill Property boundary, which includes the closed disposal areas (solid waste disposal area, demolition waste disposal area, and septage disposal area), the transfer station, and all other facilities and features within the Property boundary. The closed disposal areas are generally defined by the limits of the final cover system constructed in 1989.

Hansville Landfill Site (also referred to as "the Site"): Refers to the Hansville Landfill Property plus the estimated off-site extent of groundwater, surface water, and sediment impacts from the Hansville Landfill on Port Gamble S'Klallam Tribal property. This definition is consistent with the definition of "Site" in the Consent Decree and WAC 173 340.

Study Area: Refers to the Site and areas beyond the Site that were examined as part of the RI, generally including areas north of Little Boston Road NE and west of Hansville Road NE.

"On-site" and "off-site": Refers to areas on the Landfill Property and off the Landfill Property, respectively, as convenient references to areas of Landfill impacts. These terms should not be confused with "Site" as previously defined above.