

# **FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-5370**

## **ASOTIN COUNTY REGIONAL LANDFILL**

### **SUMMARY**

#### **PURPOSE of this Fact Sheet**

This fact sheet explains and documents the decisions Ecology made in drafting the proposed State Waste Discharge Permit for Asotin County Regional Landfill that will allow the discharge of wastewater to the City of Clarkston's POTW.

State law requires any industrial facility to obtain a permit before discharging waste or chemicals to waters of the state. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into waters of the state.

A State Waste Discharge Permit limits the types and amounts of pollution the facility may discharge. Ecology bases those limits either on (1) the pollution control or wastewater treatment technology available to the industry, or on (2) the effects of the pollutants to the POTW (local limits).

#### **PUBLIC ROLE in the Permit**

Ecology makes the draft permit and fact sheet available for public review and comment at least thirty (30) days before we issue the final permit to the facility operator. Copies of the fact sheet and draft permit for Asotin County Regional Landfill, State Waste Discharge Permit ST-5370 are available for public review and comment from March 8, 2010 until the close of business April 8, 2010. For more details on preparing and filing comments about these documents, please see **Appendix A - Public Involvement**.

Before Ecology published the draft State Waste Discharge Permit, Asotin County Regional Landfill reviewed it for factual accuracy. Ecology corrected any errors or omissions about the facility's location, product type or production rate, discharges or receiving water, or its history.

After the public comment period closes, Ecology will summarize substantive comments and our responses to them. Ecology will include our summary and responses to comments to this Fact Sheet as **Appendix D - Response to Comments**, and publish it when we issue the final State Waste Discharge Permit. Ecology will not revise the rest of the fact sheet, but the full document will become part of the legal history contained in the facility's permit file.

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## I. INTRODUCTION

The legislature defined Ecology's authority and obligations for the wastewater discharge permit program in 90.48 RCW (Revised Code of Washington).

Ecology adopted rules describing how it exercises its authority:

- State Waste Discharge Program (Chapter 173-216 WAC)
- Submission of Plans and Reports for Construction of Wastewater Facilities (Chapter 173-240 WAC)

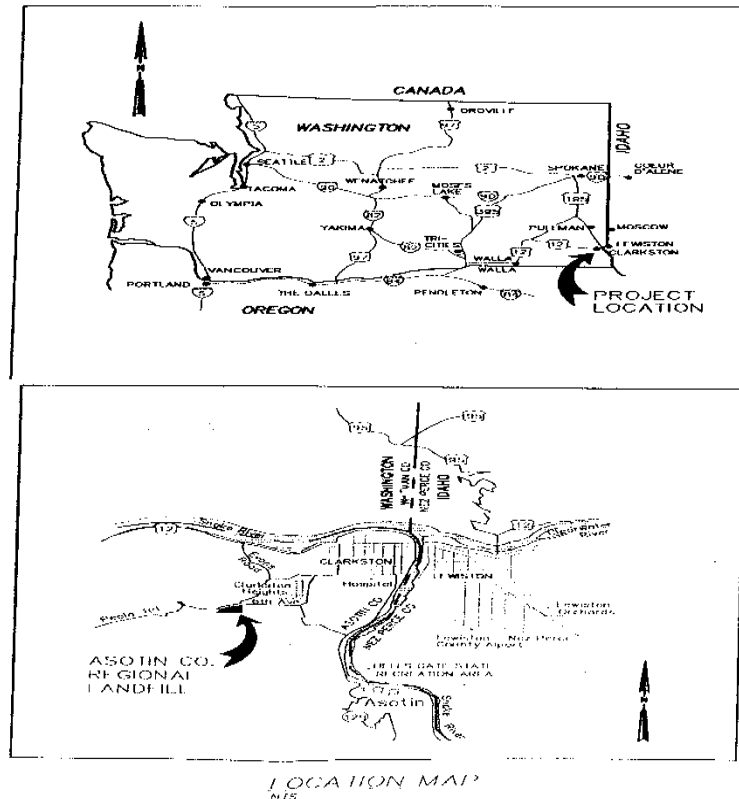
These rules require any industrial facility operator to obtain a State Waste Discharge Permit before discharging wastewater to state waters. This rule includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. They also help define the basis for limits on each discharge and for other performance requirements imposed by the permit.

Under the State Waste Discharge permit program and in response to a complete and accepted permit application, Ecology must prepare a draft permit and accompanying fact sheet, and make it available for public review before final issuance. Ecology must also publish an announcement (public notice) telling people where they can read the draft permit, and where to send their comments, during a period of thirty days. (See **Appendix A--Public Involvement** for more detail about the Public Notice and Comment procedures). After the Public Comment Period ends, Ecology may make changes to the draft State Waste Discharge Permit in response to comment. Ecology will summarize the responses to comments and any changes to the permit in **Appendix D**.

**Table 1 - General Facility Information**

Applicant:	Asotin County Regional Landfill
Facility Name and Address:	Asotin County Regional Landfill 2901 6 <sup>th</sup> Avenue, Clarkston, WA 99403
Type of Facility:	Municipal Landfill
SIC Code:	4953
Discharge Location:	Latitude: 46.385278 Longitude: 117.110278
Treatment Plant Receiving Discharge:	City of Clarkston's Wastewater Treatment Plant (Clarkston, Washington)
Contact at Facility:	Name: Stephen L. Becker Telephone #: (509) 758-1965
Responsible Official:	Name: Stephen L. Becker Title: Solid Waste Supervisor Address: 2901 6 <sup>th</sup> Avenue, Clarkston, WA 99403 Telephone #: (509) 758-1965 FAX #: (509) 758-1977

Figure 1. Facility Location Maps



## II. BACKGROUND INFORMATION

### A. Facility Description

#### History

The Department of Natural Resources (DNR) first permitted the Asotin County Landfill in 1972. Asotin County originally leased the parcel, on which the landfill is located, from DNR but has since purchased it. Currently, the Asotin County Landfill is permitted by Department of Ecology's Water Quality (for wastewater discharge to the City of Clarkston POTW) and Waste 2 Resources (for Municipal Solid Waste Landfill) Programs.

The landfill, located in Clarkston Height and south of 6<sup>th</sup> Avenue, comprises approximately 76 acres. The landfill began operations in 1975 on the western half of the landfill site. The County

closed this approximately 46 acre portion in 1993 as Municipal Solid Waste regulations changed, requiring a liner system, leachate and gas collection system.

The County constructed 3 lined areas in the eastern portion of the site per the new regulations (referred to as Cells A, B and C). Cell A began filling in 1991 and is temporarily covered. Cells B & C opened in 1997. A fourth Cell, Cell D, is reserved for future landfill expansion. The County is currently filling Cells A, B and C together. The current filling rate is approximately 48,000 tons per year and the County expects to begin Cell D construction sometime during 2015 to 2017.

In addition to the waste generated in Asotin County, the landfill accepts waste from Clarkston, Asotin, Lewiston (Idaho), and Nez Perce County (Idaho).

Development of the landfill has proceed from west to east using a shallow trench method, with trench orientation along an alignment generally parallel to the northward down slope characteristic of this site. Figure #2 shows the layout of Asotin County landfill. The County intends to operate the landfill until permitted capacity is exhausted.

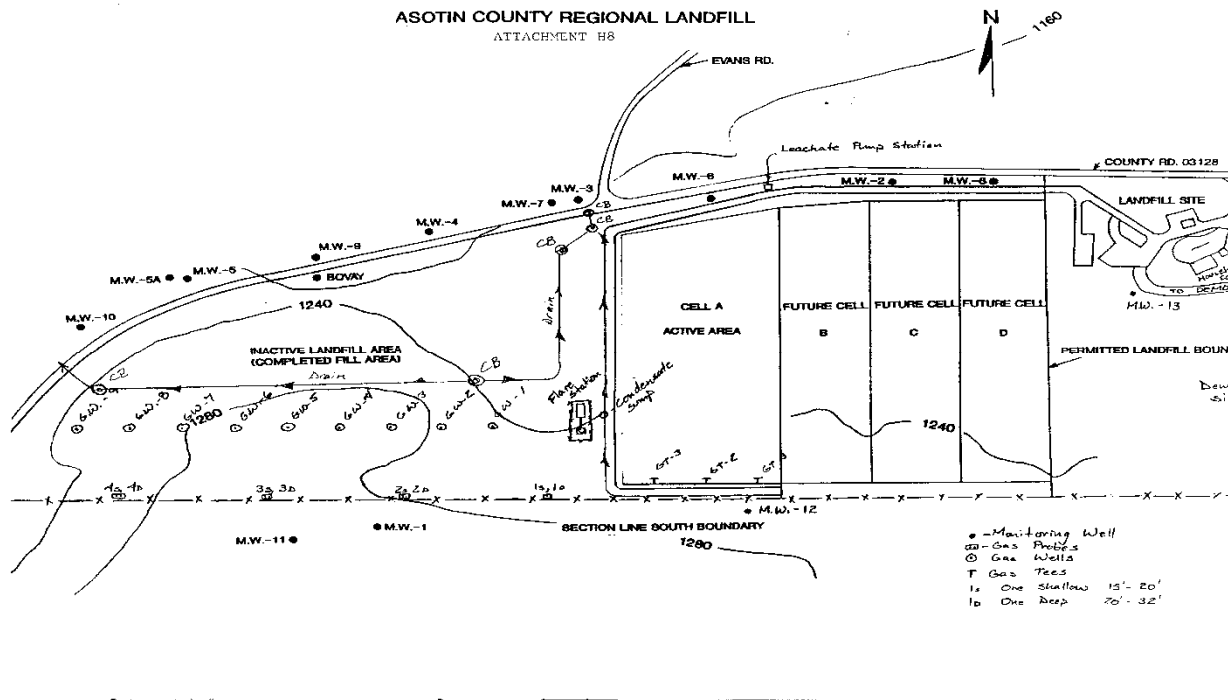
The County remodeled the hazardous waste building per state regulations and opened it with normal hours in December 2008. The entire building is enclosed and has heat, lights, heated water and a ventilation system to extract vapors.

A new entrance into the landfill from 6<sup>th</sup> Avenue is being redesigned to alleviate traffic and potential safety issues from congested traffic at the entrance gate.

The facility in the future hopes to produce energy using the waste generated methane gas and turbines. Currently the landfill's methane BTU content is too low to support this type of system. The County hopes that as the landfill nears or reaches filling capacity, the methane BTU value will produce electricity for the landfill site.

The facility also added a backflow system in 2009 to their force main to the City of Clarkton. This alleviated backflow issues to its pump station and flow meter due to a subdivision sewer line connection.

Figure 2. Layout of Asotin County Regional Landfill



### Industrial Process-Leachate Collection System

The Asotin County Regional Landfill collects solid waste and places the waste in several cells at the site. The facility is open every week of the year from Monday to Saturday except for holidays. The facility is considered a significant industry user due to the type of wastewater (leachate) that is discharged to the City of Clarkston's Wastewater Treatment plant. This wastewater has the potential to cause interference and/or pass through at the treatment plant.

The leachate collection system, constructed in 1992, collects leachate generated from the landfill's bottom 60 mil HDPE member liner. Cells B & C are active and generating leachate. A diagram (Figure 2-Leachate Collection System Plan) of the leachate collection system is located in Appendix C. The leachate is generated as the 13.1 inches of annual rainfall flows through the waste. Over the last year (2009), the landfill's highest monthly wastewater discharge flow was 15,100 gallons and the highest calculated daily wastewater discharge flow was 504 gallons per day. For more information on wastewater discharge flow, see Appendix C-Total Monthly Flows and Daily Calculated Discharge flows.

The leachate collection system consists of a perforated 6" HDPE collector pipe located at the North end of Cell A adjacent to 6<sup>th</sup> Avenue. The leachate pump station consists of a large sump (approximately 3,000 gallons sump) and two WG20 Myers Sewage Grinder Pumps. When the level of wastewater reaches approximately 14,809 gallons the pumps discharge to the force main sanitary sewer. The leachate flows through the County and the Clarkston's sewer systems to the Clarkston's Wastewater Treatment Plant. The wastewater discharge is monitored by an 800 Series Magnetic Flow Tubes System. This is located approximately at station 18 just outside the administration building under 6<sup>th</sup> Avenue. A diagram (Figure 4 - Leachate Management System Flow Diagram) of this system is located in Appendix C.

## **Wastewater Pretreatment**

The County does not currently pretreat the leachate at the Asotin County Regional Landfill prior to discharge. At this time the wastewater discharge does not appear to violate any of the Clarkston's Local Limits. Additionally, Clarkston's Wastewater Treatment Plant can currently accept the daily discharge flows and wastewater parameters. Asotin County has an agreement with the City of Clarkston for taking the leachate wastewater. According to the engineering report (leachate Discharge Plan for the Asotin County Regional Landfill) dated August 2007, the facility meets AKART without providing any pretreatment process.

## **Discharge Location to the City of Clarkston's POTW**

The facility collects grab samples of the leachate at the leachate pump station.

A 6-inch diameter force main from the pump station runs east along 6<sup>th</sup> Avenue north of the landfill. The domestic sewage from the administration building ties into the force main with a 1-1/4 inch diameter pressurized line. A magnetic flow meter, located immediately downstream of this connection (Station 18), records the combined flows of the leachate pump station and domestic sewage from the administration building. The combined flow then connects to a sanitary sewer manhole (MH 11) from which it eventually discharges to the Clarkston Wastewater Treatment Plant. A diagram (Figure 4 - Leachate Management System Flow Diagram) of this system is located in Appendix C.

## **Ground Water**

The landfill is underlain by a large regional aquifer located in the basalt rock hundreds of feet below the surface. This aquifer and other local aquifers, renamed the Lewiston Basin Aquifer, represent the primary source of ground water for the Lewiston-Clarkston area. The US Environmental Protection Agency has designated it as a sole-source aquifer under the Safe Drinking Water Act.

A clay layer with a perched water table lies at a shallower depth beneath the landfill and acts as an aquiclude. The top of this clay layer lies between 88 and 159 feet beneath the ground surface. This layer, if laterally extensive beneath the landfill, could inhibit or prevent any leachate or landfill contaminants from reaching the Lewiston Basin Aquifer. The network of monitoring wells around the landfill monitors the perched water table above the clay layer. Ecology has concluded that the direction of the groundwater flow is from the south to the northeast and northwest. The County constructed monitoring well MW-8 in an aquifer below the perched water table, in areas where the clay aquiclude is missing. Also, as an added protection and as described in the Leachate Collection system, the County constructed the landfill with a 60 mil HPDE membrane liner.

## **Solid Waste Permit**

The Department of Ecology's Waste 2 Resources Program permitted the landfill under the requirements of WAC 173-351, Criteria for Municipal Solid Waste Landfills.

## **B. Permit Status**

Asotin County Regional Landfill submitted an application for permit renewal on October 15, 2009. Ecology accepted it as complete on October 29, 2009.

Ecology issued the previous permit for this facility on **June 30, 2005**. The previous permit placed effluent limits on Flow, pH, BOD<sub>5</sub>, TSS, Oil & Grease (or fats, oil and grease (FOG)), Arsenic, Chromium, Copper, Lead, Mercury, Nickel, Silver, and Zinc.

### **C. Summary of Compliance with Previous Permit Issued**

Ecology staff last conducted a non- sampling compliance inspection on April 23, 2009.

Asotin County Regional Landfill has complied with the effluent limits and permit conditions throughout the duration of the permit issued on June 30, 2005. Ecology assessed facility compliance based on its inspections and its review of the facility's Discharge Monitoring Reports (DMRs). The charts in Appendix C show how the effluent limits compared with the sampling data.

### **D. Wastewater Characterization**

Asotin County Regional Landfill reported the concentration of pollutants in the State Waste Discharge application and in discharge monitoring reports. The tabulated data represents the quality of the effluent discharged from July 2005 to September 2009. The effluent is characterized as follows:

**Table 2: Wastewater Characterization**

<b>Parameter</b>	<b>Average Concentration</b>	<b>Maximum Concentration</b>
Biochemical Oxygen Demand (5-day)	48 mg/l	75 mg/l
Total Suspended Solids	113 mg/l	190 mg/l
Oil & Grease (Fat, Oil, and Grease (FOG))	5 mg/l	5 mg/l
Arsenic, Total	0.0192 mg/l	0.0226 mg/l
Cadmium, Total	0.00167 mg/l	0.0114 mg/l
Chromium, Total	0.0119 mg/l	0.0288 mg/l
Copper, Total	0.0385 mg/l	0.0926 mg/l
Lead, Total	0.0385 mg/l	.0136 mg/l
Mercury, Total	0.002 mg/l	0.002 mg/l
Nickel, Total	0.124 mg/l	0.150 mg/l
Silver, Total	0.0178 mg/l	0.085 mg/l
Zinc, Total	0.0574 mg/l	.0749 mg/l
pH	6.6 standard units (s.u.)	6.6 s.u.
Flow	262 gallons per day	536 gallons per day

Appendix C includes the detailed data for these parameters as well as data for the other monitored parameters.

## **E. SEPA Compliance**

Regulation exempts reissuance or modification of any wastewater discharge permit from the SEPA process as long as the permit contains conditions that are no less stringent than state rules and regulations. The exemption applies only to existing discharges, not to new discharges.

## **III. PROPOSED PERMIT CONDITIONS**

State regulations require that Ecology base permit discharge limits on the:

- Technology and treatment methods available to treat specific pollutants (technology-based). Technology-based limits are set by the EPA and published as a regulation, or Ecology develops limits on a case-by-case basis (40 CFR 125.3, and RCW 90.48). Dischargers must treat wastewater using all known, available, reasonable methods of prevention, control, and treatment (AKART).
- Effects of the pollutants to the POTW (local limits). Wastewater must not interfere with the operation of the POTW.
- Applicable requirements of other local, state and federal laws.

Ecology applies the most stringent of these limits to each parameter of concern and further describes the proposed limits below.

The limits in this permit reflect information received in the application and from supporting reports (engineering, hydrogeology, monitoring, etc.). Ecology evaluated the permit application and determined the limits needed to comply with the rules adopted by the State of Washington. Ecology does not develop effluent limits for all reported pollutants. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, and are not listed in regulation.

Ecology does not usually develop permit limits for pollutants that were not reported in the permit application but that may be present in the discharge. The permit does not authorize the discharge of the non-reported pollutants. During the five-year permit term, the facility's effluent discharge conditions may change from those conditions reported in the permit application. The facility must notify Ecology if significant changes occur in any constituent. Industries may be in violation of their permit until the permit is modified to reflect additional discharge of pollutants.

### **A. Technology-Based Effluent Limits**

All waste discharge permits issued by Ecology must specify conditions requiring available and reasonable methods of prevention, control, and treatment (AKART) of discharges to waters of the state (RCW 90.48).

Ecology approved the engineering report for the Asotin County Regional Landfill wastewater facility titled Asotin County Regional Landfill Leachate Discharge Plan dated August 2007, and prepared by Travis Pyle, P.E. with CH2M Hill.

Ecology determined that the facility meets the minimum requirements demonstrating compliance with the AKART standard if the Asotin County Regional Landfill operates the system as described in the approved engineering report and any subsequent Ecology approved reports.

Ecology based the maximum daily permitted flow of 2,500 gallons per day from the engineering report.

## **B. Effluent Limits Based On Local Limits**

To protect the City of Clarkston's Wastewater Treatment Plant from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, Ecology believes it necessary to impose limits for certain parameters. Ecology based these limits on local limits established by the City of Clarkston's Wastewater Treatment Plant and codified in ordinance. Applicable limits for this discharge include the following:

**Table 3: Limits Based on Local Limits**

	<b>EFFLUENT LIMITS</b>
<b>Parameter</b>	<b>Maximum Daily</b>
BOD <sub>5</sub>	300 mg/l
TSS	300 mg/l
Fat, Oil, and Grease (FOG)	100 mg/l
Arsenic, Total	0.2 mg/l
Cadmium, Total	0.2 mg/l
Chromium, Total	1.0 mg/l
Copper, Total	0.5 mg/l
Lead, Total	0.4 mg/l
Mercury, Total	0.05 mg/l
Nickel, Total	0.05 mg/l
Silver, Total	0.2 mg/l
Zinc, Total	1.0 mg/l
pH	Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 9.0.

Pollutant concentrations in the proposed discharge with technology-based controls in place will not cause problems at the receiving POTW such as interference, pass-through or hazardous exposure conditions to POTW workers nor will it result in unacceptable pollutant levels in the POTW's sludge.

**C. Comparison of Effluent Limits with Limits of the Previous Permit Issued on June 30, 2005**

Table 5 shows the comparison. The effluent limits are the same as the previous requirements. However, Ecology added a limit for Cadmium because it is required in the City of Clarkston's Local Limits and to protect the quality of the City's Biosolids.

**Table 4: Comparison of Effluent Limits**

	<b>Basis of Limit</b>	<b>Previous Effluent Limits: Leachate pump station</b>	<b>Proposed Effluent Limits: Leachate pump station</b>
<b>Parameter</b>		<b>Maximum Daily</b>	<b>Maximum Daily</b>
Biochemical Oxygen Demand (5-day)	Local Limits	300 mg/l	300 mg/l
Total Suspended Solids	Local Limits	300 mg/l	300 mg/l
Fat, Oil, and Grease (FOG)	Local Limits	100 mg/l	100 mg/l
Arsenic, Total	Local Limits	0.2 mg/l	0.2 mg/l
Cadmium, Total	Local Limits	---	0.2 mg/l
Chromium, Total	Local Limits	1.0 mg/l	1.0 mg/l
Copper, Total	Local Limits	0.5 mg/l	0.5 mg/l
Lead, Total	Local Limits	0.4 mg/l	0.4 mg/l
Mercury, Total	Local Limits	0.05 mg/l	0.05 mg/l
Nickel, Total	Local Limits	0.05 mg/l	0.05 mg/l
Silver, Total	Local Limits	0.2 mg/l	0.2 mg/l
Zinc, Total	Local Limits	1.0 mg/l	1.0 mg/l
pH	Local Limits	Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 9.0.	Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 9.0.

	<b>Basis of Limit</b>	<b>Previous Effluent Limits: Station 18</b>	<b>Proposed Effluent Limits: Station 18</b>
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Parameter		Daily Average	Daily Average
Flow	Technology-Based	2,500 gallons per day	2,500 gallons per day

#### IV. MONITORING REQUIREMENTS

Ecology requires monitoring, recording, and reporting (WAC 173-216-110) to verify that the treatment process functions correctly and that the discharge complies with the permit's effluent limits.

Ecology details the proposed monitoring schedule under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

The proposed permit requires additional monitoring to further characterize the facility's effluent. This/These pollutant(s) could have a significant impact on the receiving POTW.

##### A. Lab Accreditation

Ecology requires that facilities must use a laboratory registered or accredited under the provisions of chapter 173-50 WAC, *Accreditation of Environmental Laboratories* to prepare all monitoring data (with the exception of certain parameters).

#### V. OTHER PERMIT CONDITIONS

##### A. Reporting and Recordkeeping

Ecology based permit condition S3 on our authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110 and CFR 403.12 (e),(g), and (h)).

##### B. Operations and Maintenance

Ecology requires industries to take all reasonable steps to properly operate and maintain their wastewater treatment system in accordance with state regulations (WAC 173-240-080 and WAC 173-216-110). The facility has prepared and submitted an operation and maintenance manual as required by state regulation for the construction of wastewater treatment facilities (WAC 173-240-150). Implementation of the procedures in the Operation and Maintenance Manual ensures the facility's compliance with the terms and limits in the permit. The proposed permit requires review and submission of an updated O&M manual for the entire wastewater system if needed.

##### C. Prohibited Discharges

Ecology prohibits certain pollutants from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

#### **D. Dilution Prohibited**

Ecology prohibits the facility from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limits.

#### **E. Solid Waste Control Plan**

Asotin County Regional Landfill could cause pollution of the waters of the state through inappropriate disposal of solid waste or through the release of leachate from solid waste.

This proposed permit requires this facility to update the approved solid waste control plan designed to prevent solid waste from causing pollution of waters of the state. Asotin County Regional Landfill has submitted and Ecology has approved its Solid Waste Control plan. The facility will review the plan annually and submit an updated plan to Ecology for approval (RCW 90.48.080) if needed.

#### **F. Non-Routine and Unanticipated Discharges**

Occasionally, this facility may generate wastewater not characterized in the permit application because it is not a routine discharge and the facility did not anticipate it at the time of application. These wastes typically consist of waters used to pressure-test storage tanks or fire water systems or of leaks from drinking water systems.

The permit authorizes non-routine and unanticipated discharges under certain conditions. The facility must characterize these waste waters for pollutants and examine the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and on any opportunities for reuse, Ecology may:

- Authorize the facility to discharge the water.
- Require the facility to treat the wastewater.
- Require the facility to reuse the wastewater.

#### **G. Spill Plan**

This facility stores a quantity of chemicals on-site that have the potential to cause water pollution if accidentally released. Ecology can require a facility to develop best management plans to prevent this accidental release [section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080].

Asotin County Regional Landfill developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the facility to review the plan annually. If needed, the facility will update this plan and submit it to Ecology.

#### **H. Slug Discharge Plan**

Ecology determined that Asotin County Regional Landfill has the potential for a batch discharge or a spill that could adversely affect the treatment plant therefore the proposed permit requires a slug discharge control plan (40 CFR 403.8 (f)).

## **J. General Conditions**

Ecology bases the standardized General Conditions on state and federal law and regulations. They are included in all State Waste Discharge permits issued by Ecology.

## **VI. PUBLIC NOTIFICATION OF NON-COMPLIANCE**

Ecology may annually publish a list of all industrial users in significant non-compliance with Pretreatment Standards or Requirements during any of the previous four quarters in a local newspaper. Accordingly, this permit condition informs the Facility that non-compliance with this permit may result in publication of the non-compliance.

## **VII. PERMIT ISSUANCE PROCEDURES**

### **A. Permit Modifications**

Ecology may modify this permit to comply with new or amended state or federal regulations.

### **B. Proposed Permit Issuance**

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limits and conditions believed necessary to control toxics. Ecology proposes that the permit be issued for 5 years.

## **VIII. REFERENCES FOR TEXT AND APPENDICES**

Washington State Department of Ecology.

Laws and Regulations

(<http://www.ecy.wa.gov/laws-rules/index.html>)

Permit and Wastewater Related Information

(<http://www.ecy.wa.gov/programs/wq/wastewater/index.html>)

## APPENDICES

### APPENDIX A - PUBLIC INVOLVEMENT INFORMATION

Ecology proposes to reissue a permit to Asotin County Landfill. The permit prescribes operating conditions and wastewater discharge limits. This fact sheet describes the facility and Ecology's reasons for requiring permit conditions.

Ecology placed a Public Notice of Application on November 9, 2009 and November 16, 2009 in the Lewiston Tribune to inform the public about the submitted application and to invite comment on the reissuance of this permit.

Ecology will place a Public Notice on March 8, 2010 in the Lewiston Tribune to inform the public and to invite comment on the proposed reissuance of this State Waste Discharge Permit as drafted.

The Notice –

- Tells where copies of the draft Permit and Fact Sheet are available for public evaluation (a local public library, the closest Regional or Field Office, posted on our website.).
- Offers to provide the documents in an alternate format to accommodate special needs.
- Asks people to tell us how well the proposed permit would protect the receiving water.
- Invites people to suggest fairer conditions, limits, and requirements for the permit.
- Invites comments on Ecology's determination of compliance with antidegradation rules.
- Urges people to submit their comments, in writing, before the end of the Comment Period
- Tells how to request a public hearing of comments about the proposed State Waste Discharge Permit.
- Explains the next step(s) in the permitting process.

Ecology has published a document entitled **Frequently Asked Questions about Effective Public Commenting** which is available on our website at <http://www.ecy.wa.gov/biblio/0307023.html>.

You may obtain further information from Ecology by telephone at (509) 329-3473 or by writing to the permit writer at the address listed below.

Water Quality Permit Coordinator  
Department of Ecology  
Eastern Regional Office  
4601 North Monroe Street  
Spokane, WA 99205-1295

The primary author of this permit and fact sheet is Scott Mallery.

## **APPENDIX B - GLOSSARY**

**AKART** - The acronym for “all known, available, and reasonable methods of prevention, control and treatment.” AKART is a technology-based approach to limiting pollutants from wastewater discharges which requires an engineering judgment and an economic judgment. AKART must be applied to all wastes and contaminants prior to entry into waters of the state in accordance with RCW 90.48.010 and 520, WAC 173-200-030(2)(c)(ii), and WAC 173-216-110(1)(a).

**Alternate Point of Compliance** - An alternative location in the ground water from the point of compliance where compliance with the ground water standards is measured. It may be established in the ground water at locations some distance from the discharge source, up to, but not exceeding the property boundary and is determined on a site specific basis following an AKART analysis. An “early warning value” must be used when an alternate point is established. An alternate point of compliance must be determined and approved in accordance with WAC 173-200-060(2).

**Ambient Water Quality** - The existing environmental condition of the water in a receiving water body.

**Ammonia** - Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

**Annual Average Design Flow (AADF)** - The average of the daily flow volumes anticipated to occur over a calendar year.

**Average Monthly Discharge Limit** - The average of the measured values obtained over a calendar month's time.

**Background water quality** - The concentrations of chemical, physical, biological or radiological constituents or other characteristics in or of ground water at a particular point in time upgradient of an activity that has not been affected by that activity, [WAC 173-200-020(3)]. Background water quality for any parameter is statistically defined as the 95% upper tolerance interval with a 95% confidence based on at least eight hydraulically upgradient water quality samples. The eight samples are collected over a period of at least one year, with no more than one sample collected during any month in a single calendar year.

**Best Management Practices (BMPs)** - Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

**BOD<sub>5</sub>** - Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD<sub>5</sub> is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged.

Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

**Bypass** - The intentional diversion of waste streams from any portion of the collection or treatment facility.

**Categorical Pretreatment Standards** - National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

**Compliance Inspection - Without Sampling** - A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

**Compliance Inspection - With Sampling** - A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations. In addition it includes as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Ecology may conduct additional sampling.

**Composite Sample** - A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

**Construction Activity** - Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

**Continuous Monitoring** - Uninterrupted, unless otherwise noted in the permit.

**Distribution Uniformity** - The uniformity of infiltration (or application in the case of sprinkle or trickle irrigation) throughout the field expressed as a percent relating to the average depth infiltrated in the lowest one-quarter of the area to the average depth of water infiltrated.

**Early Warning Value** - The concentration of a pollutant set in accordance with WAC 173-200-070 that is a percentage of an enforcement limit. It may be established in the effluent, ground water, surface water, the vadose zone or within the treatment process. This value acts as a trigger to detect and respond to increasing contaminant concentrations prior to the degradation of a beneficial use.

**Enforcement limit** - The concentration assigned to a contaminant in the ground water at the point of compliance for the purpose of regulation, [WAC 173-200-020(11)]. This limit assures that a ground water criterion will not be exceeded and that background water quality will be protected.

**Engineering Report** - A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

**Ground Water** - Water in a saturated zone or stratum beneath the surface of land or below a surface water body.

**Grab Sample** - A single sample or measurement taken at a specific time or over as short period of time as is feasible.

**Industrial User** - A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

**Industrial Wastewater** - Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

**Interference** - A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

**Local Limits** - Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

**Maximum Daily Discharge Limit** - The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

**Maximum Day Design Flow (MDDF)** - The largest volume of flow anticipated to occur during a one-day period, expressed as a daily average.

**Maximum Month Design Flow (MMDF)** - The largest volume of flow anticipated to occur during a continuous 30-day period, expressed as a daily average.

**Maximum Week Design Flow (MWDF)** - The largest volume of flow anticipated to occur during a continuous 7-day period, expressed as a daily average.

**Method Detection Level (MDL)** - The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

**pH** - The pH of a liquid measures its acidity or alkalinity. It is the negative logarithm of the hydrogen ion concentration. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

**Pass-through** - A discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

**Peak Hour Design Flow (PHDF)** - The largest volume of flow anticipated to occur during a one-hour period, expressed as a daily or hourly average.

**Peak Instantaneous Design Flow (PIDF)** - The maximum anticipated instantaneous flow.

**Point of Compliance** - The location in the ground water where the enforcement limit shall not be exceeded and a facility must be in compliance with the Ground Water Quality Standards. It is determined on a site specific basis and approved or designated by Ecology. It should be located in the ground water as near and directly downgradient from the pollutant source as technically, hydrogeologically, and geographically feasible, unless an alternative point of compliance is approved.

**Potential Significant Industrial User** - A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

- a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;
- b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

Ecology may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

**Quantitation Level (QL)** - A calculated value five times the MDL (method detection level).

**Reasonable Potential** - A reasonable potential to cause a water quality violation, or loss of sensitive and/or important habitat.

**Significant Industrial User (SIU)** -

- 1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;
- 2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority\* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority\* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

\*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

**Slug Discharge** - Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

**Soil Scientist** - An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of 30 semester hours or 45 quarter hours professional core courses in agronomy, crops or soils, and have 5,3,or 1 years, respectively, of professional experience working in the area of agronomy, crops, or soils.

**Solid Waste** - All putrescible and non-putrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials.

**Soluble BOD<sub>5</sub>** - Determining the soluble fraction of Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of soluble organic material present in an effluent that is utilized by bacteria. Although the soluble BOD test is not specifically described in Standard Methods, filtering the raw sample through at least a 1.2 um filter prior to running the standard BOD<sub>5</sub> test is sufficient to remove the particulate organic fraction.

**State Waters** - Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

**Stormwater** - That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

**Technology-based Effluent Limit** - A permit limit that is based on the ability of a treatment method to reduce the pollutant.

**Total Coliform Bacteria** - A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

**Total Dissolved Solids** - That portion of total solids in water or wastewater that passes through a specific filter.

**Total Suspended Solids (TSS)** - Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation.

Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

**Water Quality-based Effluent Limit** - A limit on the concentration of an effluent parameter that is intended to prevent pollution of the receiving water.

## APPENDIX C - TECHNICAL CALCULATIONS

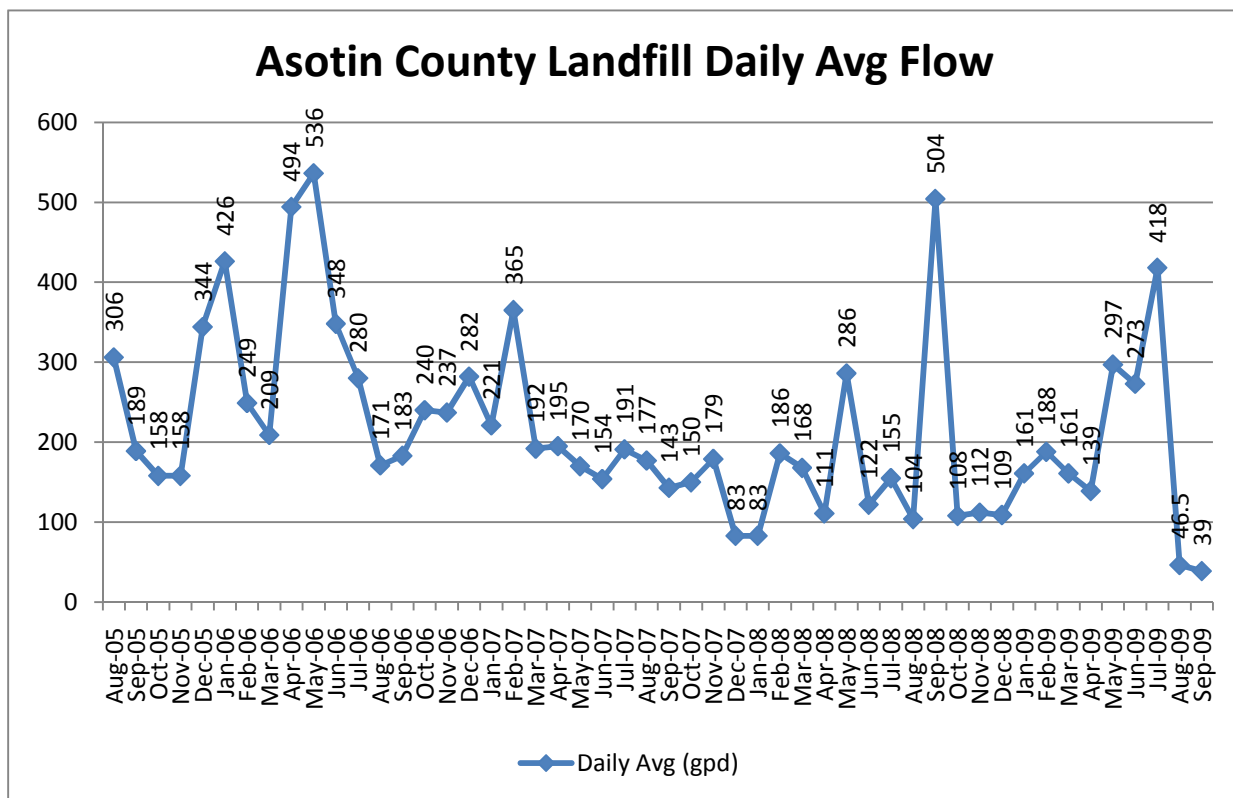
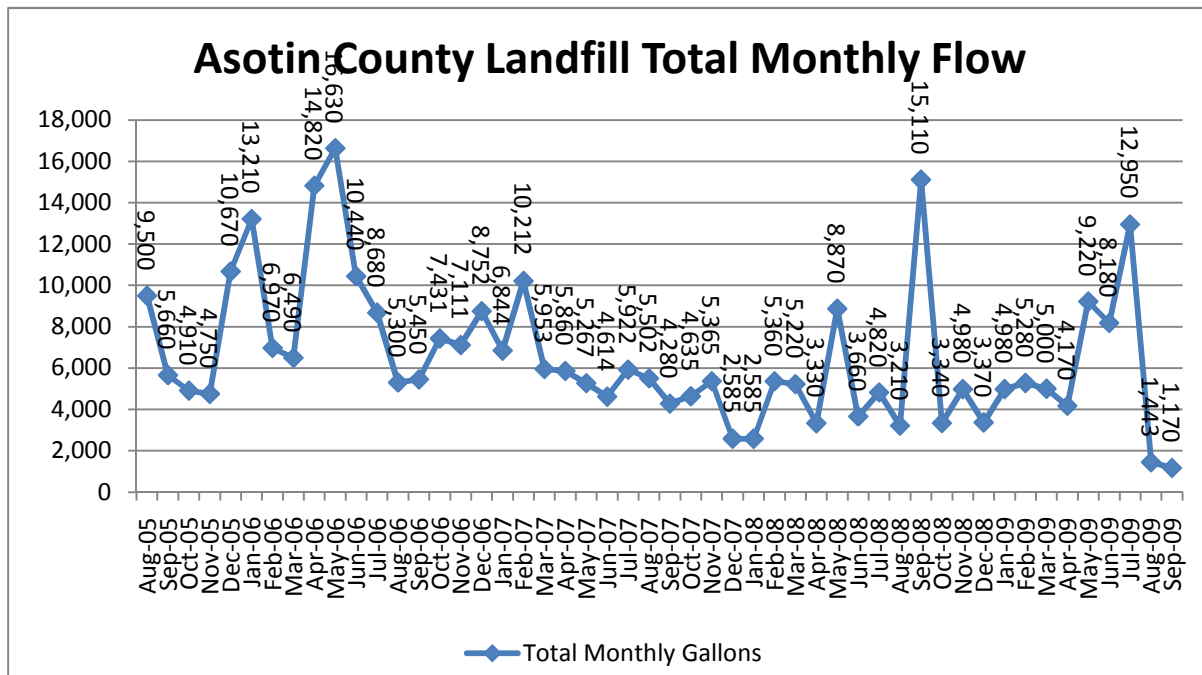
Table - Asotin County Regional Landfill Sampling Data (data is in mg/l)

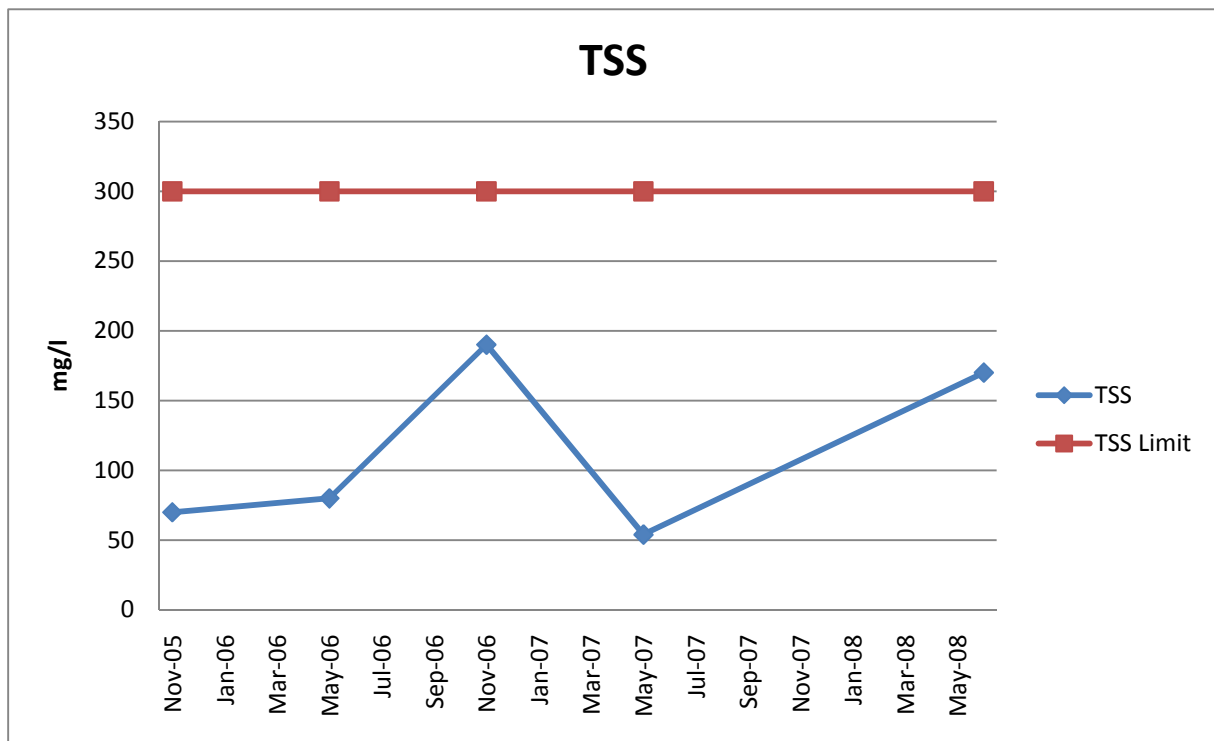
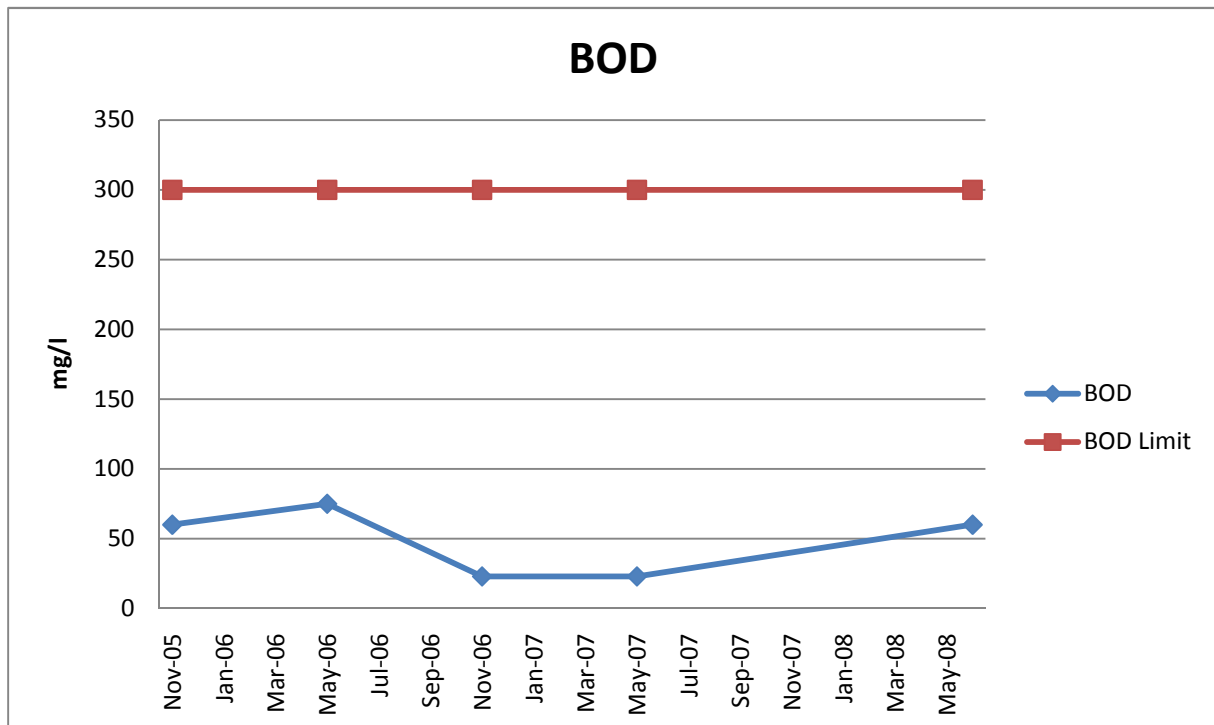
Parameter	11/10/2005	5/24/2006	11/8/2006	5/8/2007	6/3/2008
BOD	60	75	23	23	60
TSS	70	80	190	54	170
Fats, Oil and Grease	5	5	5	5	6
pH	6.6	6.6	6.8	6.4	
Arsenic, Total (as AS)	0.019	0.0205	0.0226	0.0184	0.0155
Chromium, Total (as CR)	0.006	0.0194	0.0003	0.0288	0.005
Copper, Total (as CU)	0.015	0.0926	0.0157	0.0571	0.0119
Lead, Total (as PB)	0.001	0.00609	0.007	0.0136	0.001
Nickel, Total (as NI)	0.15	0.0926	0.123	0.113	0.142
Silver, Total (as AG)	0.001	0.001	0.085	0.001	0.001
Zinc, Total (as ZN)	0.013	0.0749	0.0267	0.108	0.0318
Mercury, Total	0.002	0.002	0.002	0.002	0.000018
TDS	1500	1800		2500	580
Total Alkalinity	1840	1000		1300	1800
NO3 (as N)	2	9.4		0.2	0.4
NH3 (as N)	3.7	1.3		2.4	3.9
Total Organic Carbon	5	5	5	57	59
Chloride	920	410		810	1000
Sulfate	2	2	9.4	1.8	17
Antimony	0.001	0.001		0.001	0.001
Barium	0.43	0.325		0.432	0.364
Beryllium	0.001	0.001		0.005	0.005
Cadmium	0.001	0.000174		0.0045	0.001
Cobalt	0.008	0.0114		0.017	0.0078
Vanadium	0.007	0.0347		0.13	0.0119
Selenium	0.031	0.0216		0.0152	0.009
Thallium	0.001	0.001		0.001	0.001

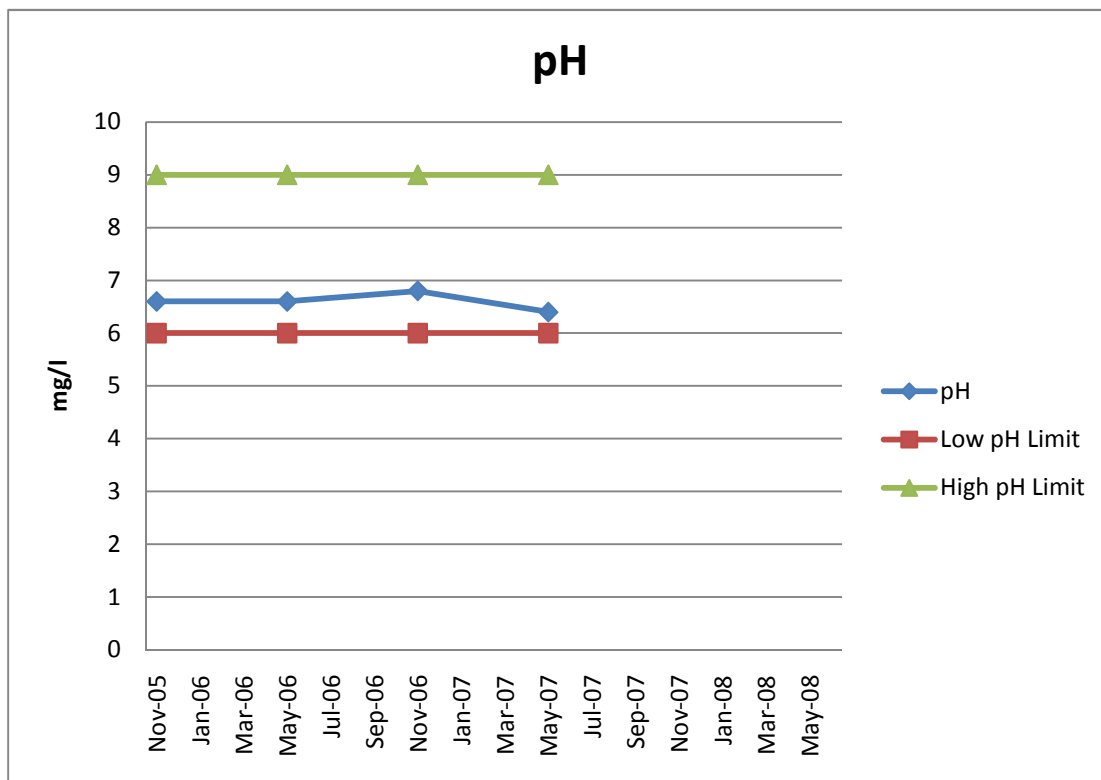
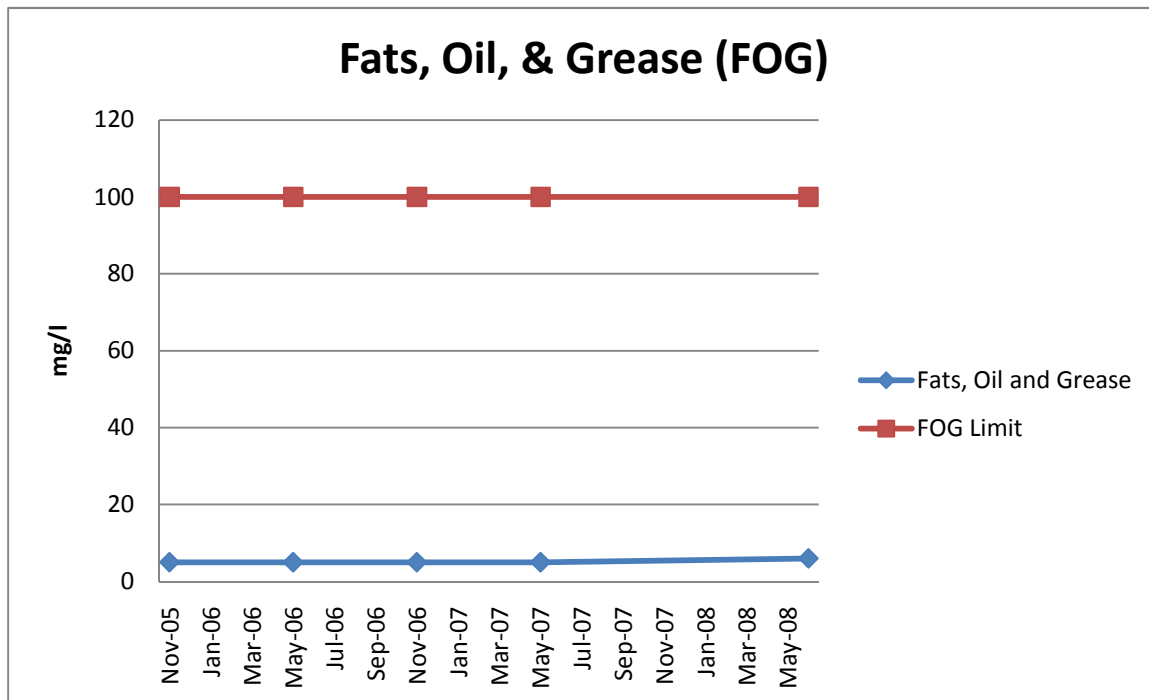
*Fact Sheet for State Waste Discharge Permit ST-5370*  
*Asotin County Regional Landfill*

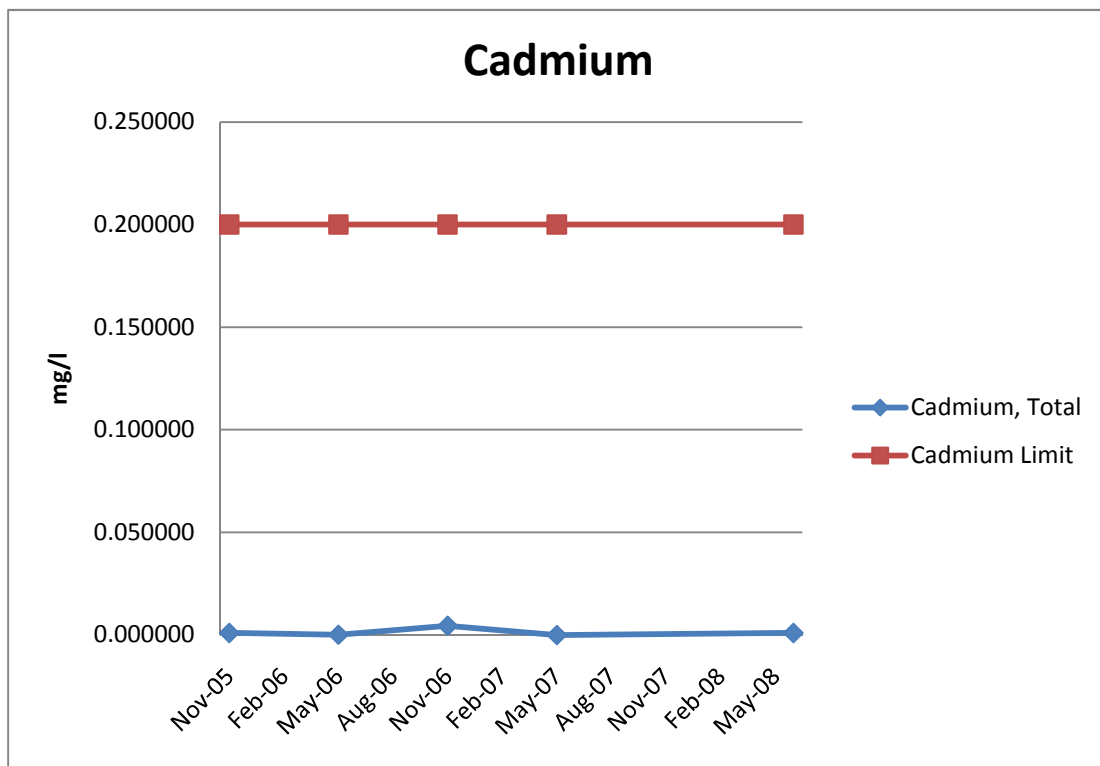
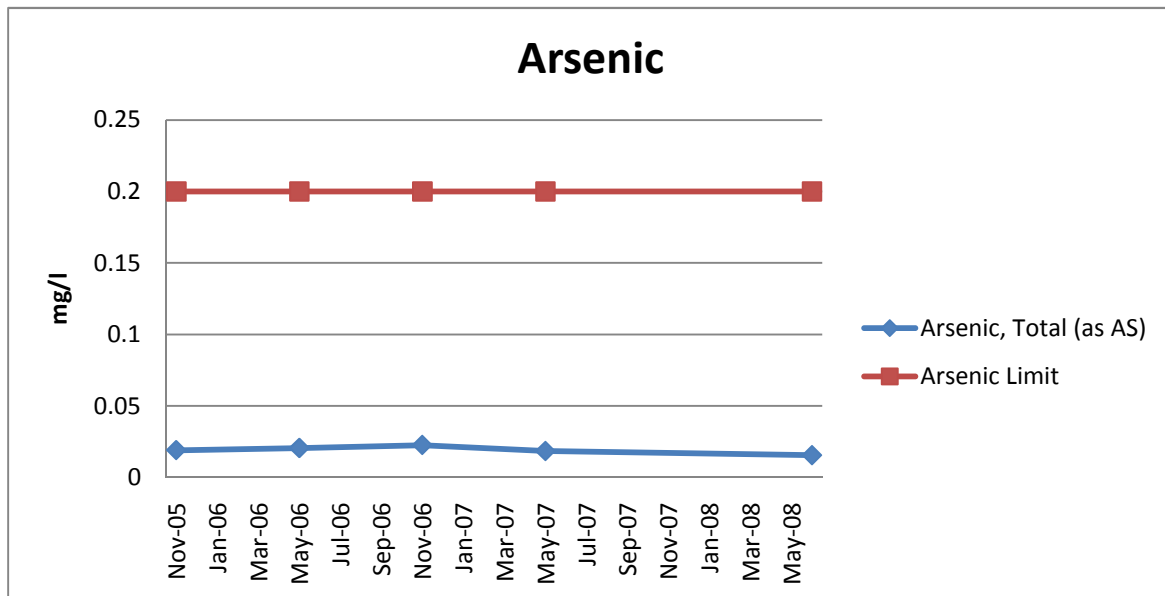
Table - Asotin County Regional landfill Sampling Data for Volatilities (data is in ug/l)

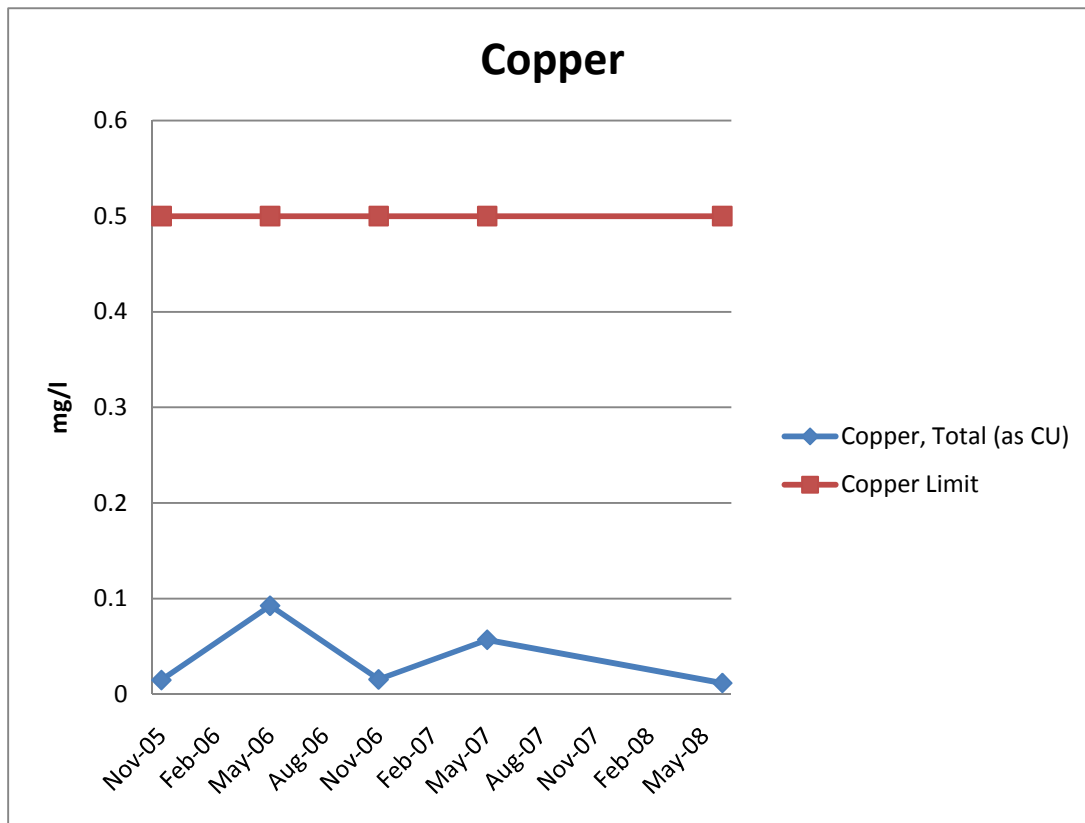
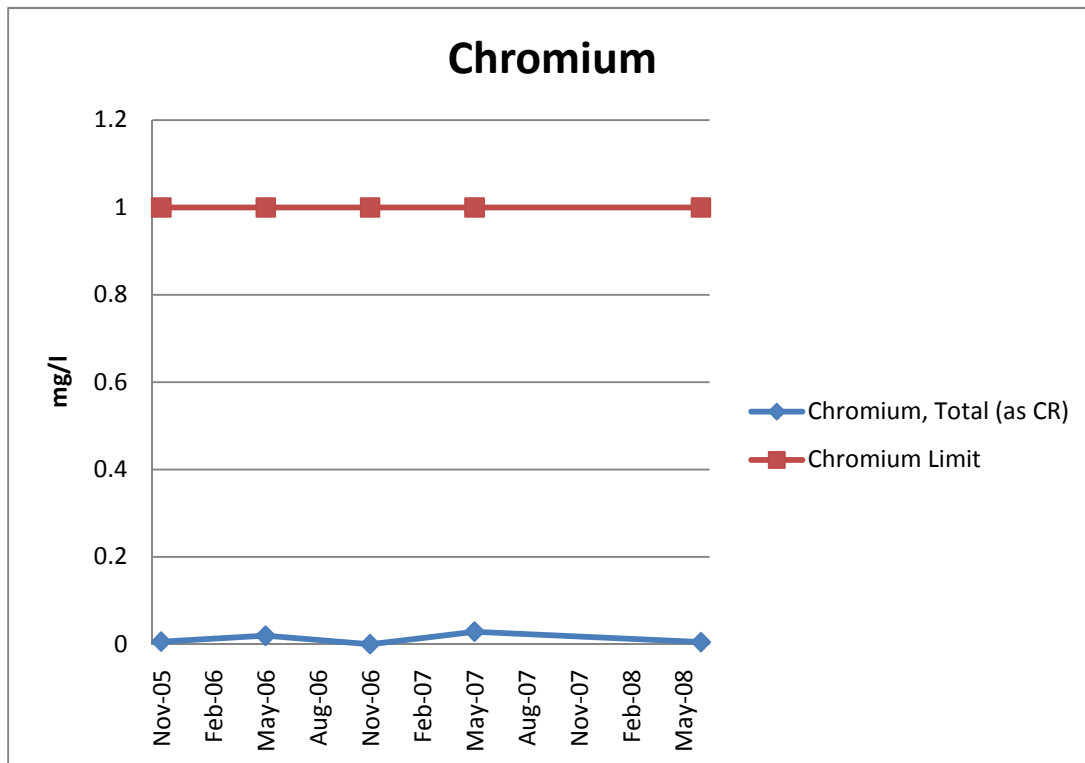
Parameter	8/18/2009	6/3/2008	5/8/2007	5/24/2006
1,1-Dichloroethene	8.9	12	22	1
1,2,4-Trimethylbenzene			1.1	
1,2,5-Trimethylbenzene			1.1	
1,2-Dichloroethane	13.9		3	13
1,4-Dichlorobenzene	4	2	2.7	1.4
Acetone	187	32	100	26
Benzene	1.5	1.4	5.5	
Chloroethane	2.5	1.5	2.2	
cis-1,2-Dichloroethene	13.1	3.6	16	5.5
Dichlorodifluoromethane			1.7	
Ethylbenzene	5.5	1.9	2.7	1.2
m,p-Xylene	39.2	7.9	23	8
Methylene Chloride	6.7	3.2	8.3	7.1
o-Xylene	14.4	3.3	10	2.6
Tetrachloroethene	2	3.6	2.9	3.1
Toluene	5.2	8.3	45	2.7
Trichloroethene	2.3		3.8	1.9
Vinyl Chloride	11.3	5.5	14	9.9
Xylene (total)	53.6			
2-Butanoe (MEK)	52.1			11

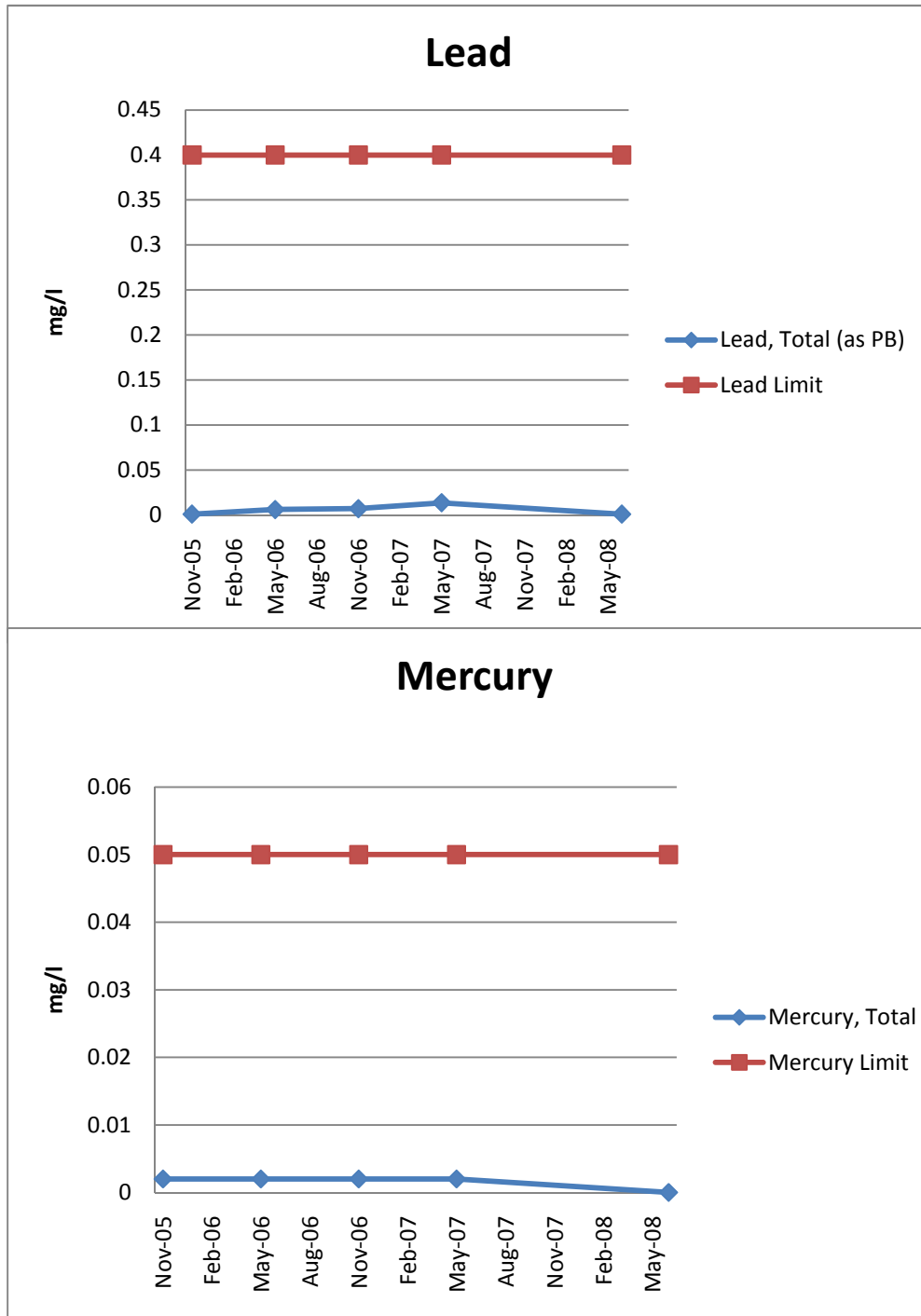


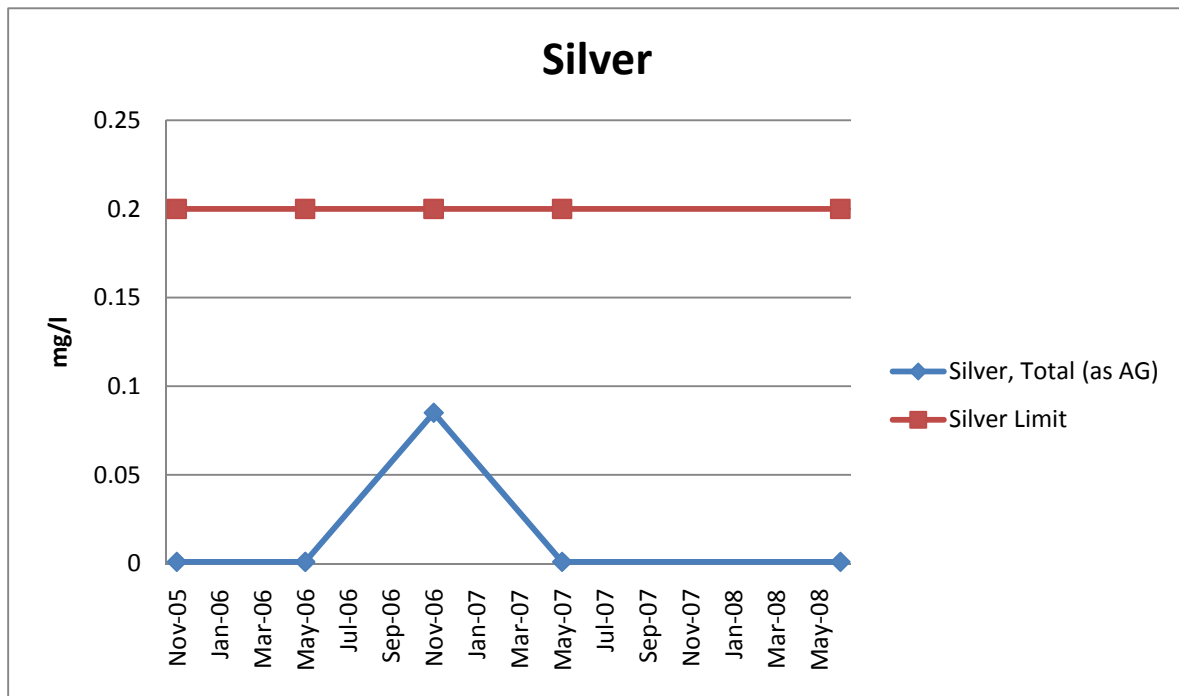
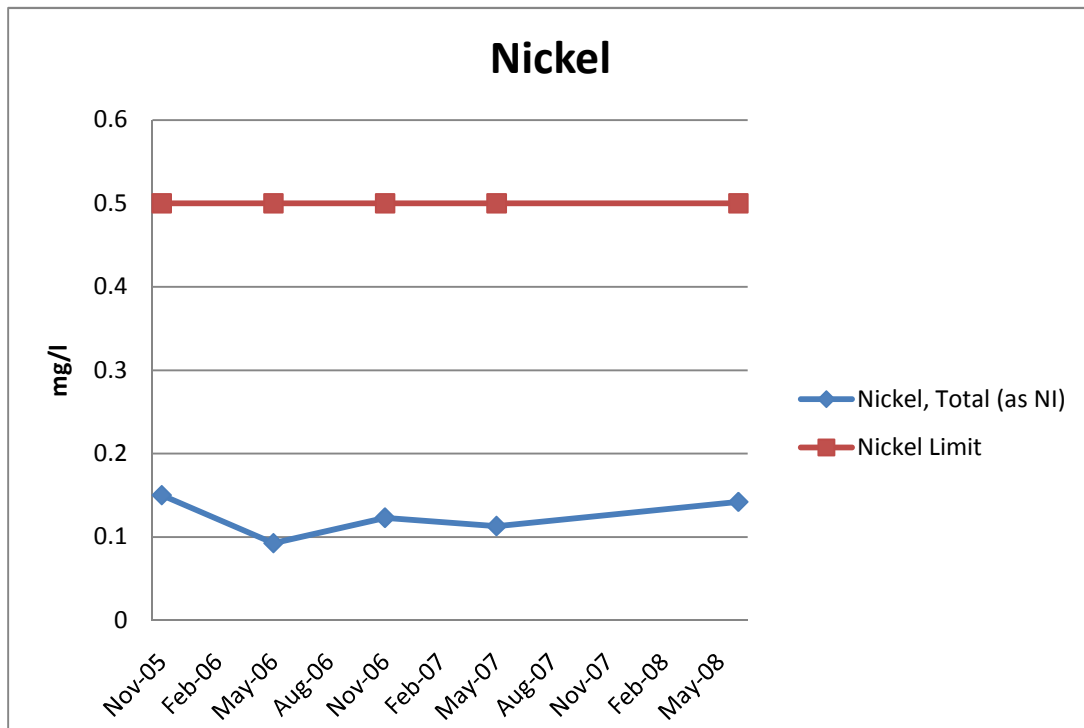


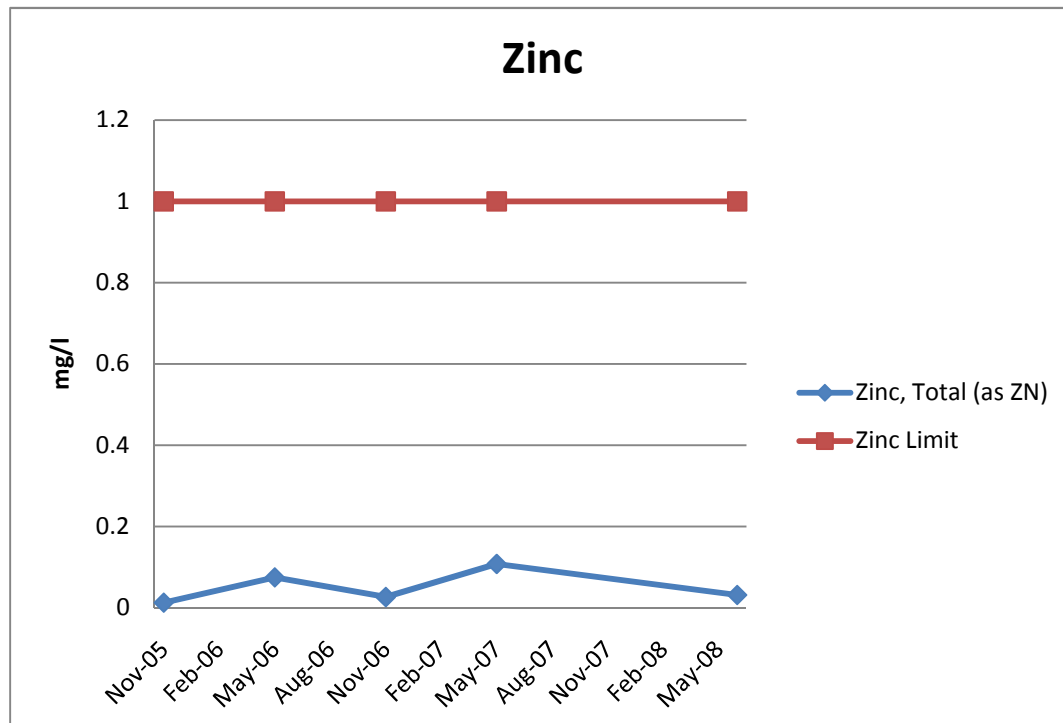


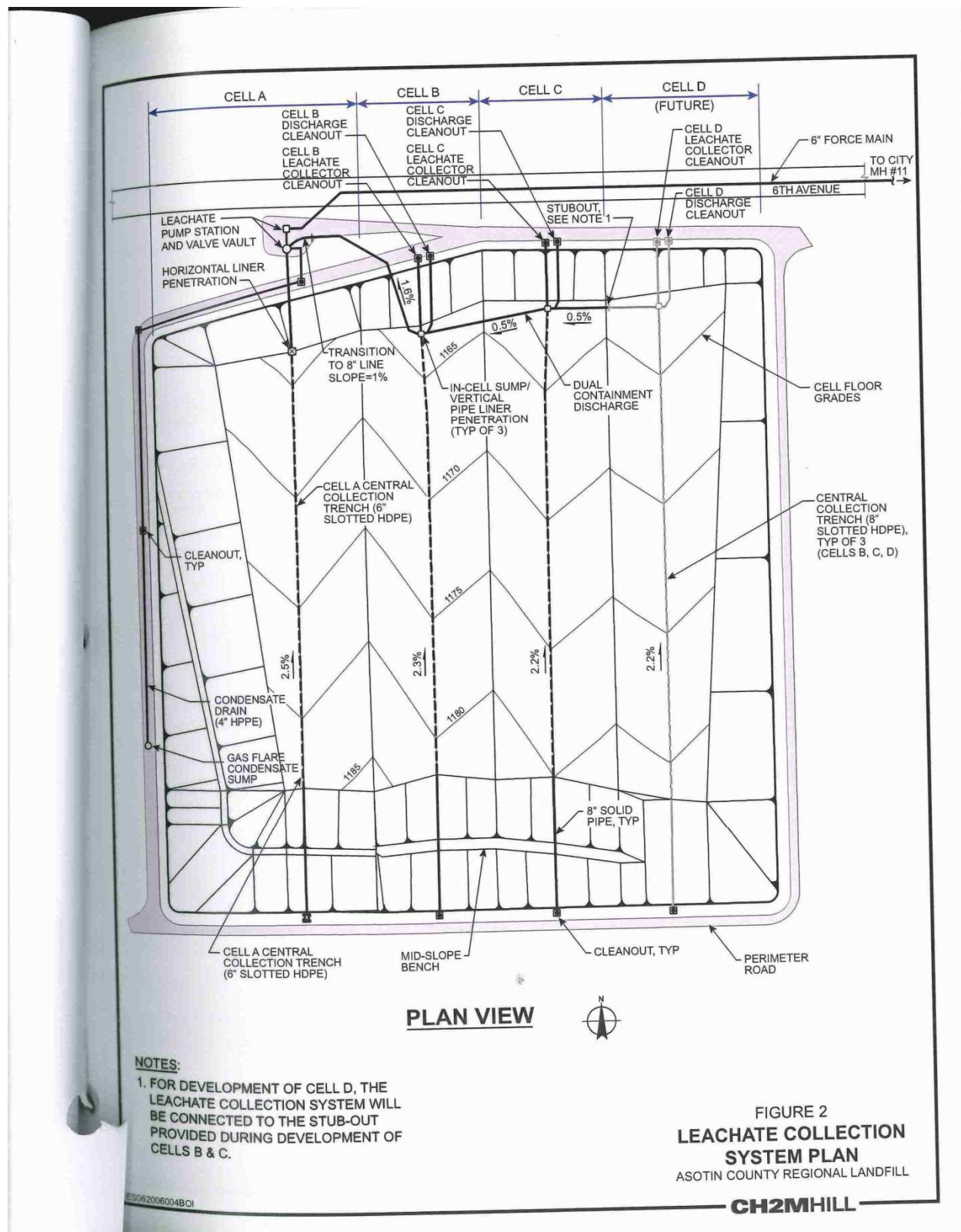


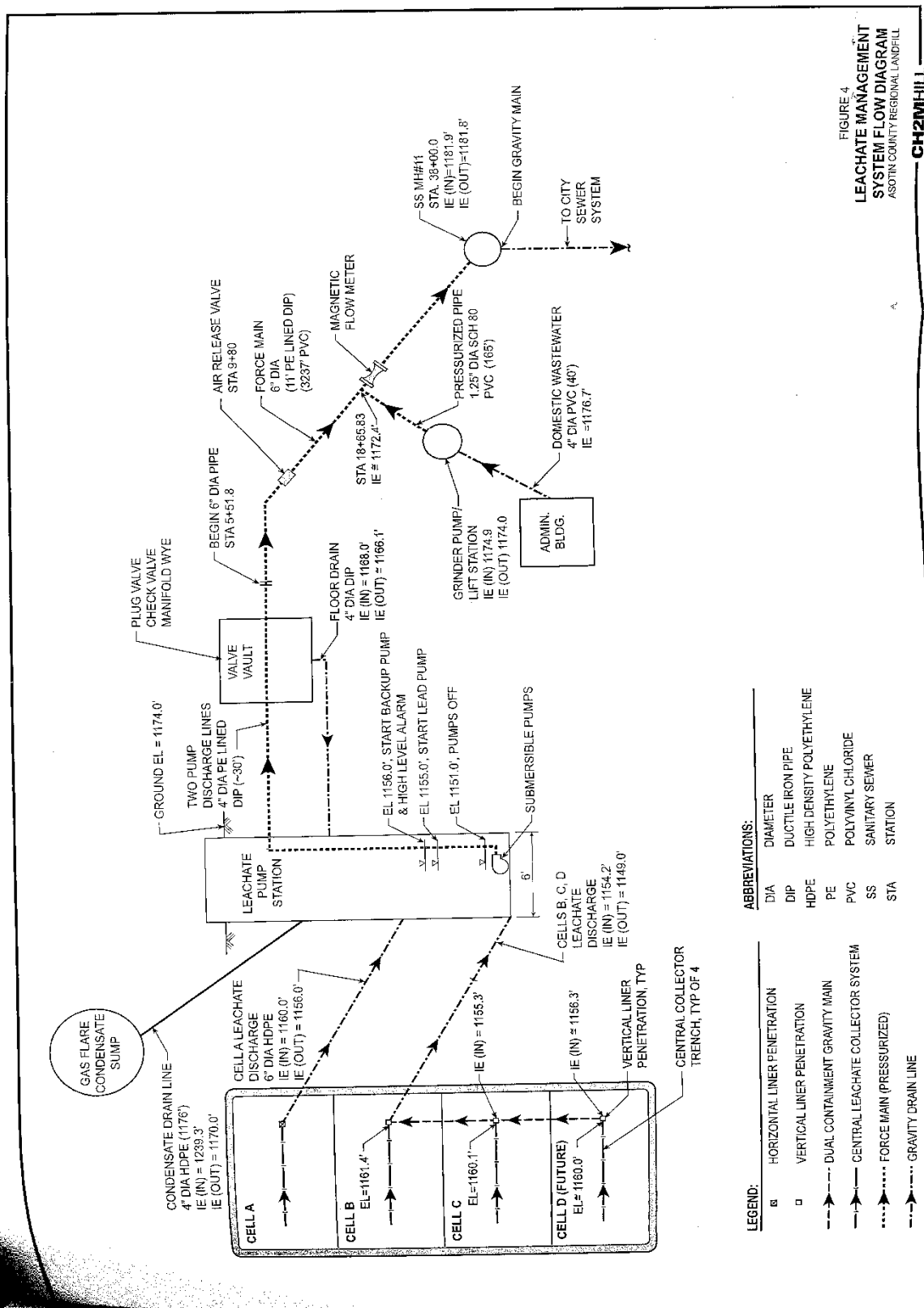












## APPENDIX D - RESPONSE TO COMMENTS

The public notice that informed the public that a draft permit was available for review was published in the Lewiston Tribune March 8, 2010. Ecology did not receive any comments on the draft permit following the 30-day public comment period.