

DEPARTMENT OF  
**ECOLOGY**  
State of Washington

**STATEMENT OF BASIS FOR  
FINAL AIR OPERATING PERMIT NO. 14AQ-C192 FIRST REVISION  
WASTE MANAGEMENT OF WASHINGTON'S  
GREATER WENATCHEE REGIONAL LANDFILL AND RECYCLING CENTER  
DOUGLAS COUNTY, WASHINGTON**

**PREPARED BY  
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CENTRAL REGIONAL AIR QUALITY SECTION  
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**MAY 8, 2015**

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**LIST OF ABBREVIATIONS**

AOP	Air Operating Permit
Btu	British thermal unit
CFR	Code of Federal Regulations
CO	Carbon monoxide
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
GWRLRC	Greater Wenatchee Regional Landfill and Recycling Center
lb	Pound
LFG	Landfill gas
m <sup>3</sup>	Cubic meters
Mg	Megagram
MMBtu	Millions of British thermal units
MNMOC	NMOC mass emission rate
MSW	Municipal solid waste
MT	Metric ton
NMOC	Non methane organic compound
NOC	Notice of Construction
NO <sub>x</sub>	Oxides of nitrogen
NSPS	New Source Performance Standard
PCS	Petroleum contaminated soil
PM <sub>2.5</sub>	Particulate matter with an aerodynamic diameter of 2.5 micrometers or less
PM <sub>10</sub>	Particulate matter with an aerodynamic diameter of 10 micrometers or less
PSD	Prevention of Significant Deterioration
RCW	Revised Code of Washington
RICE	Reciprocating internal combustion engine
scfm	Standard cubic feet per minute
SO <sub>2</sub>	Sulfur dioxide
TSP	Total suspended particulate
VOC	Volatile organic compound
WAC	Washington Administrative Code
yd <sup>3</sup>	Cubic yard
yr	Year

## 1.0 GENERAL INFORMATION

Company Name: Waste Management of Washington, Inc.

Source Name: Greater Wenatchee Regional Landfill and Recycling Center

Owner: Waste Management of Washington, Inc.

Parent Company: Waste Management Holdings, Inc.

Unified Business Identification Number: 601415286

Standard Industrial Classification Code: 4953

Mailing Address: 191 Webb Road  
East Wenatchee, WA 98802

Source Address: 191 Webb Road  
East Wenatchee, WA 98802

Responsible Official: Dave Lowe  
District Manager  
Greater Wenatchee Regional Landfill and Recycling Center  
191 Webb Road  
East Wenatchee, WA 98802  
Phone: 509-224-0151  
Cell/24-hr phone: 509-435-2114  
Fax: 509-244-0207

Alternate Responsible Official: Paul Burns  
Area Director of Disposal Operations  
Waste Management Pacific Northwest Area  
7227 NE 55<sup>th</sup> Ave.  
Portland, OR 97218  
Phone: 503-528-0681

Source Contact: Eric Keogh  
Greater Wenatchee Regional Landfill and Recycling Center  
191 Webb Road  
East Wenatchee, WA 98802  
Phone: 509-884-2802  
Cell: 509-860-3260  
Fax: 509-884-3724

## 2.0 BACKGROUND

This document sets forth the legal and factual basis for the permit conditions in an Air Operating Permit (AOP) issued by the State of Washington Department of Ecology (Ecology) for a solid waste landfill located in East Wenatchee, Washington. This document is called a "Statement of Basis" and is required by Washington State regulations [Chapter 173-401 WAC]. A Statement of Basis does not contain enforceable permit conditions. Enforceable permit conditions are contained in the AOP itself.

### 2.1 Basis for Title V Applicability:

Greater Wenatchee Regional Landfill and Recycling Center (GWRLRC) is subject to Title V Air Operating Permit Regulation, by virtue of being subject to the Title 40 CFR Part 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills. Subpart WWW states that municipal solid waste (MSW) landfills with a design capacity greater than or equal to 2.5 million

megagrams or 2.5 million cubic meters are subject to Part 70 (Title V) permitting requirements. GWRLRC's design capacity is approximately 30 million cubic meters (39.2 cubic yards).

## 2.2 Attainment Classification:

GWRLRC is located in an area which is in attainment or unclassified for all criteria pollutants.

## 2.3 Timeline:

- March 7, 2013 – Ecology received GWRLRC's AOP renewal application
- April 22, 2013 – Ecology deemed AOP renewal application incomplete
- June 25, 2013 – Ecology received additional AOP renewal application materials
- August 22, 2013 – Ecology deemed AOP renewal application complete
- July 28, 2014 – Ecology issued Draft AOP renewal and began public comment period. Published in "Permit Register" on March 25, 2014. Published in the Wenatchee World on July 29, 2014. The comment period ended August 29, 2014 with no comments having been received.
- September 2, 2014 – Ecology issued Proposed AOP renewal. Ecology received notice from EPA that "The permit is now eligible for issuance" on the same date.
- September 4, 2014 – Ecology issued Final Title V Air Operating Permit No. 14AQ-C192, effective September 8, 2014.
- November 18, 2014 – Ecology received application to revise NOC & AOP.
- December 23, 2014 – Ecology deemed revision applications complete.
- January 23, 2015 – Ecology issued Draft AOP revision and began public comment period. Published in "Permit Register" on January 23, 2015. Published in the Wenatchee World on January 27, 2015. The comment period ended February 27, 2015, with no comments having been received.
- March 13, 2015 – Ecology issued Proposed Draft AOP revision for 45-day EPA review.

See also the "Air Operating Permit History" in Section 5.0.

## 3.0 SOURCE DESCRIPTION

### 3.1 Physical Description

GWRLRC is a 148.4-acre municipal solid waste landfill. It began operation in the late-1960s, was vertically and laterally expanded in 2008, and GWRLRC is expected to continue operation through 2164. The landfill's maximum design capacity is 30,000,811 m<sup>3</sup> (39,239,580 yd<sup>3</sup>) with maximum waste acceptance rates of 3,119 tons per day and 810,940 tons per year. GWRLRC is located in an arid climate that typically receives an average of 8.6 inches of precipitation per year. Those lands surrounding the landfill are predominately used for agriculture; there are some residences nearby. A site map is included as Figure 1.

### 3.2 Description of Processes

MSW is accepted primarily from Douglas, Kittitas, and Chelan counties for disposal. Besides MSW, the landfill also accepts asbestos, construction demolition and land clearing debris, industrial non-hazardous wastes, petroleum contaminated soil, sewage sludge, and wood wastes. GWRLRC is prohibited from accepting hazardous wastes. A process flow diagram is included as Figure 2.

Waste is delivered to the landfill using waste collection vehicles, including front loaders, rear loaders, and roll-off trucks. GWRLRC is not currently open to the public. The general public is directed to the South Wenatchee Transfer Station where a recycling area is provided. The recycling area includes drop boxes and containers for recycled aluminum, cardboard, newspapers and glass. The landfill generally operates Monday through Saturday, 5:00 a.m. to 5:00 p.m.

#### 3.2.1 Process #1 - Source-Wide

Process #1 includes source-wide emissions originating from site operations which include: excavation, soil stockpiling, construction of lined disposal cells, and the construction of leachate collection systems. Emissions include fugitive dust from motor vehicle operation, and emissions related to source-wide support services such as storage tanks, maintenance,

housekeeping, and miscellaneous insignificant emissions activities. Process #1 emission limits, work practice standards and permit conditions also apply to all significant emission units located at the source. GWRLRC's estimated potential emissions are listed in Table 1.

3.2.2 Process #2 - Solid Waste Landfill

The current site of the landfill was opened in 1962 and was operated as an open burning dump until 1970. It is estimated that during that period up to 25 tons per day were burned in the West Trench. Demolition debris continued to be burned in the west trench through 1972. Then up to 100 tons per day of primarily residential and agricultural wastes were deposited through 1978, and septage and sewage sludge was accepted at the site from approximately 1979 through 1990. During this time, sludge was placed in lined and unlined ponds, landfarmed, and commingled with the MSW.

Present day rate of waste acceptance varies seasonally, with lower volume in the winter and higher volume in the summer. Waste is placed in cells, compacted, and covered on a daily basis. Waste is compacted in thin layers with an assumed compaction density of 1,100 to 1,300 lbs/yd<sup>3</sup>. Ecology has approved use of an alternate daily cover to be used at the landfill. Trench 1 and the Northeast half of the North Berm were closed and capped during the summer of 2000. A vertical expansion of the existing landfill cells and the addition of new cells were approved through NOC Order No. 08AQ-C062, July 9, 2008.

The primary source of MSW landfill emissions is landfill gas, generated by biodegradation, of which the main components are methane, NMOC, and CO<sub>2</sub>. Routine monitoring for the LFG is conducted on a quarterly basis to ensure that the gas is not migrating away from the landfill.

3.2.3 Process #3 - Landfill Gas / Flare

Landfill gas is collected with an active collection system. The collection system has been estimated to collect 90% of the landfill gas. Collected landfill gas is currently routed to a single enclosed flare, with a capacity of 2,000 scfm.

3.2.4 Process #4 - Petroleum Contaminated Soil and Screening

Petroleum contained soil (PCS) is accepted for disposal at GWRLRC. Soils contaminated with the volatile light hydrocarbons must be disposed of within 48 hours and may be used as daily cover. The less volatile heavy hydrocarbon and diesel PCS may be stored, over lined portions of the landfill, for longer period. These PCS may be used as daily cover before or after being screened. Screened rock may be used on site, typically in trenches; screened rock may not be removed from the site.

3.2.5 Process #5 - Gasoline Dispensing Facility

Process #5 consists of a 100-gallon gasoline storage tank with a reported throughput of less than 10,000 gallons per month. The tank is categorized as a gasoline dispensing facility under the Gasoline Dispensing Facility NESHAP.

See also "Title 40 CFR Part 63 Subpart CCCCC, the "Gasoline Dispensing Facility NESHAP" in Section 6.2.3.

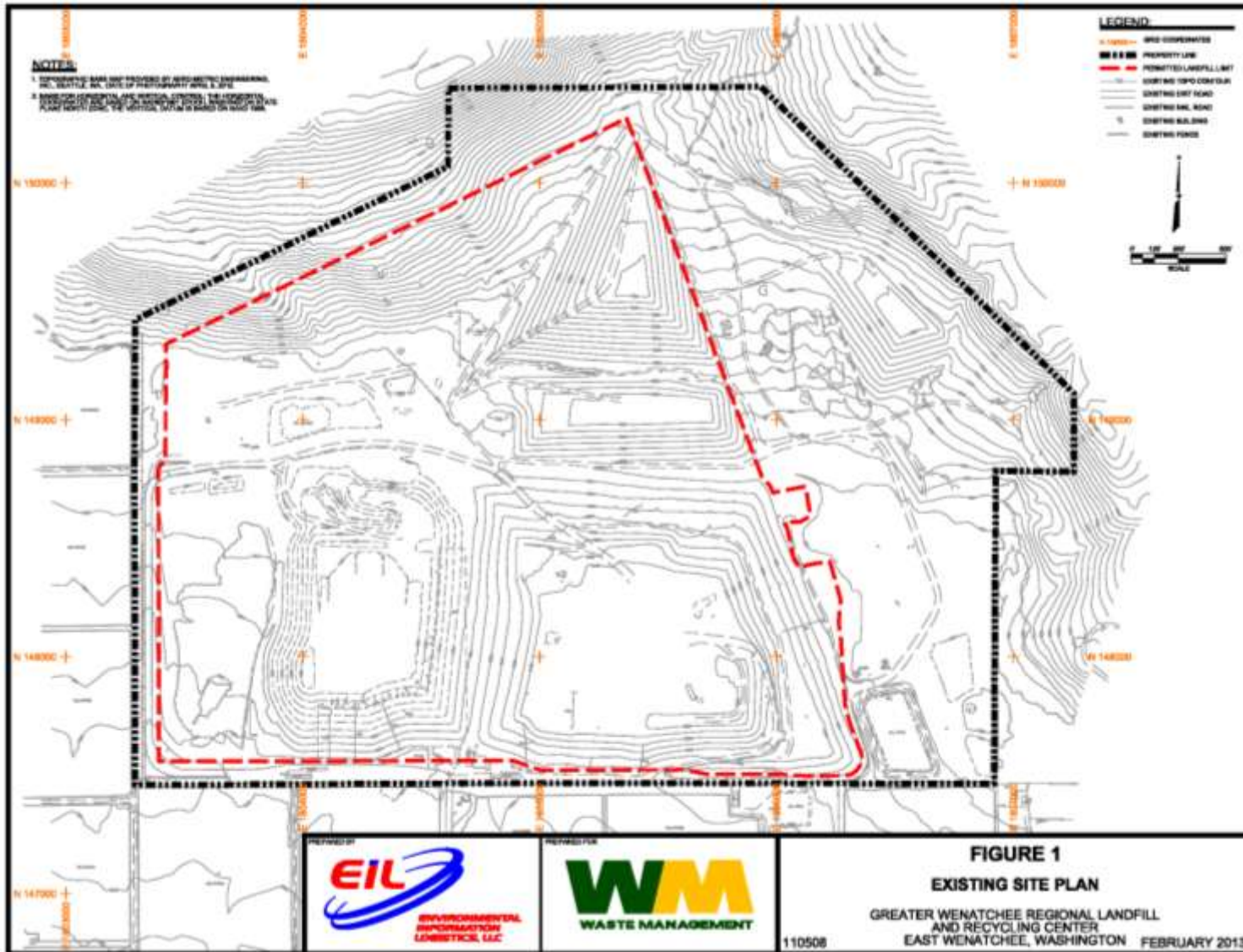


Figure 1: Site plan of GWRLRC (submitted with March 7, 2013 AOP renewal application)

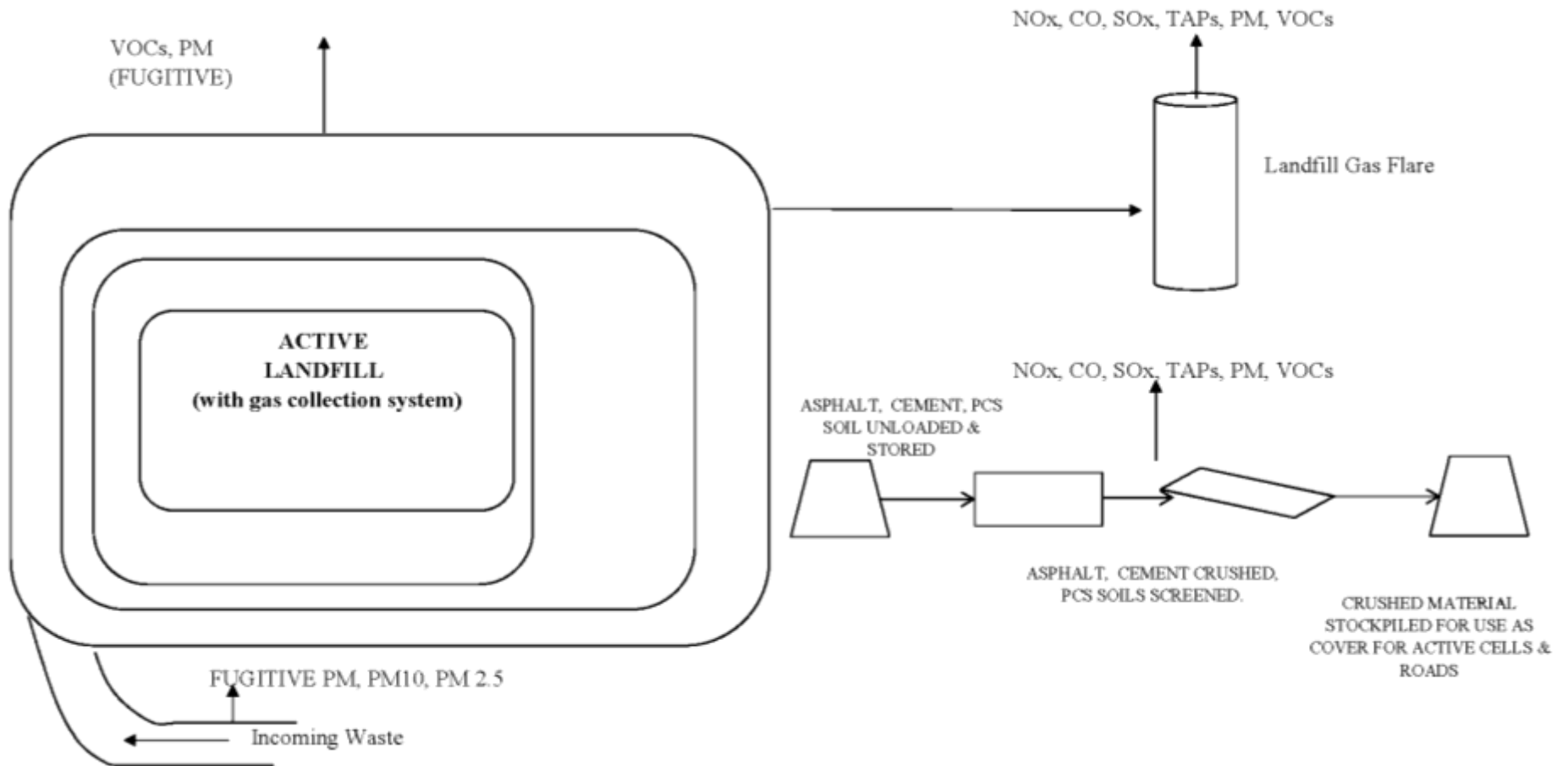


Figure 2: Process flow diagram of GWRLRC (adapted from Environmental Information Logistics diagram submitted with March 7, 2013 AOP renewal application)



**Table 1: Summary of Estimated Potential Emissions from GWRLRC**

Pollutant	“Old” Landfill Fugitives	Enclosed LFG Flare	Roads	Two Leachate Ponds	PCS Storage & Screening	Units
CO		26.50				ton/yr
CO <sub>2e</sub>	55,190 (50,068)	57,722 (52,364)				ton/yr (MT/yr)
NO <sub>x</sub>		15.90				ton/yr
PM <sub>10</sub>	30.1	4.459	5		0.023	ton/yr
PM <sub>2.5</sub>	2.9	4.459			0.0043	ton/yr
SO <sub>2</sub>		7.73				ton/yr
TSP	110.6	4.459	20		0.060	ton/yr
VOC / NMOC	25.8	0.1749		1.9	0.598	ton/yr
Acetone	293.1	2.198				lb/yr
Acrylonitrile <sup>HAP</sup>	75.11	0.5644				lb/yr
Benzene <sup>HAP</sup>	220.1	1.455		1.16		lb/yr
Butane	110.1	0.8257				lb/yr
Carbon Disulfide <sup>HAP</sup>	9.875	0.07406				lb/yr
Carbon Tetrachloride <sup>HAP</sup>	0.1377	0.001033				lb/yr
Carbonyl sulfide <sup>HAP</sup>	6.602	0.04937				lb/yr
Chlorobenzene <sup>HAP</sup>	6.293	0.04720				lb/yr
Chlorodifluoromethane	19.62	0.1472				lb/yr
Chloroethane <sup>HAP</sup>	18.04	0.1353				lb/yr
Chloroform <sup>HAP</sup>	801.0	6.008				lb/yr
1,2-Dichlorobenzene <sup>HAP</sup>	6.904	0.05178				lb/yr
1,4-Dichlorobenzene <sup>HAP</sup>	2.167	0.01625				lb/yr
1,2-Dichloroethane	14.6					lb/yr
Dichlorodifluoromethane <sup>HAP</sup> (Freon 12)	424.5	3.1838				lb/yr
Ethylidene Chloride <sup>HAP</sup> (1,1-Dichloroethane)	52.00	0.3900				lb/yr
Vinylidene Chloride <sup>HAP</sup> (1,1-Dichloroethene)	4.336	0.03252				lb/yr
Ethylene Dichloride <sup>HAP</sup> (cis-1,2-Dichloroethane)	9.074	0.06805				lb/yr

**Table 1 (continued): Summary of estimated potential emissions from GWRLRC**

Pollutant	“Old” Landfill Fugitives	Enclosed LFG Flare	Roads	Two Leachate Ponds	PCS Storage & Screening	Units
1,2-Dichloroethene	61.57	0.4618				lb/yr
Dichlorodifluoromethane	60.30	0.4523				lb/yr
Dichlorotetrafluoroethane	11.28	0.08457				lb/yr
Ethanol	280.3	2.103				lb/yr
Ethylbenzene <sup>HAP</sup>	109.5	0.8208				lb/yr
Ethyl Chloride <sup>HAP</sup> (Chloroethane)						lb/yr
Ethylene Dibromide	0.04202	0.0003152				lb/yr
Ethyl Mercaptan	31.68	0.2376				lb/yr
Hexane <sup>HAP</sup>	126.6	0.9495				lb/yr
Hydrogen Sulfide <sup>HAP</sup>	1444	17.5				lb/yr
Mercury <sup>HAP</sup>	0.01310	0.03930				lb/yr
Methyl Chloride <sup>HAP</sup>	13.67	0.1025				lb/yr
Methylene Chloride <sup>HAP</sup>	271.7	2.038				lb/yr

Pollutant	“Old” Landfill Fugitives	Enclosed LFG Flare	Roads	Two Leachate Ponds	PCS Storage & Screening	Units
Methyl Ethyl Ketone <sup>HAP</sup> (2-Butanone)	114.4	0.8574				lb/yr
Methyl isobutyl ketone <sup>HAP</sup>	41.89	0.3142				lb/yr
Methanethiol <sup>HAP</sup> (Methyl Mercaptan)	26.79	0.2009				lb/yr
Pentane	53.09	0.3982				lb/yr
2-Propanol	673.5	5.051				lb/yr
Propylene Dichloride	4.548	0.03411				lb/yr
Styrene <sup>HAP</sup>	4.309	0.03232				lb/yr
Tetrachloroethane <sup>HAP</sup>	41.67	0.3125				lb/yr
Tetrachloroethylene <sup>HAP</sup> (Tetrachloroethene)	138.4	1.038				lb/yr
Toluene <sup>HAP</sup>	3400	25.5				lb/yr
1,1,1-Trichloroethane <sup>HAP</sup> (Methylchloroform)	14.33	0.1075				lb/yr
Trichloroethylene <sup>HAP</sup> (Trichloroethene)	82.87	0.6215				lb/yr
Trichlorofluoromethane (Freon 11)	23.35	0.1752				lb/yr
Trimethyl Benzene	25.95	0.1946				lb/yr
Vinyl Chloride <sup>HAP</sup>	155.7	0.7594		2.09		lb/yr
Xylenes <sup>HAP</sup>	287.3	2.155				lb/yr
Total HAP	3.77	0.033		0.0016		ton/yr

Adapted from the October 2, 2007, Title V Operating Permit Renewal Application, NOC Order No. 00AQCR-1000 Third Revision, and NOC Order No. 08AQ-C062 First Revision

#### 4.0 NEW SOURCE REVIEW HISTORY

In Washington State, new sources of air pollutants are potentially subject to four types of air quality permitting, or “new source review”. Federal New Source Review includes Prevention of Significant Deterioration (Title 40 Code of Federal Regulations Part 52.21) and Nonattainment New Source Review (Title 40 Code of Federal Regulations Part 52.24). These Federal programs apply to large sources with potential emissions equal or greater than specified thresholds. Additionally, State New Source Review, referred to as Notice of Construction permitting, applies to smaller sources and the lesser emissions at the larger sources. Notice of Construction permitting may be required for criteria pollutants (WAC 173-400-110) and/or toxic air pollutants (WAC 173-460-030).

##### 4.1 Municipal Solid Waste Landfill

The establishment of this landfill predates new source review requirements.

##### 4.2 Trench 1 & North Berm

Trench 1 and the northeast half of the North Berm were capped during the summer 2000. Closure of these cells was permitted under Notice of Construction Order No. 00AQCR-1000, issued April 21, 2000. Initially, a passive landfill gas collection system and eleven open flares were approved. Passive landfill gas collection wells and fourteen open flares were installed. Partially due to the discrepancy between the approved and installed systems, GWRLRC requested that the Order be revised.

On January 29, 2003, Notice of Construction Order No. 00AQCR-1000 First Revision was issued. The revised Order mandated installation and use of an active landfill gas collection system and a single enclosed flare. Additionally, the revised Order deleted previously required landfill gas monitoring probe requirements.

On April 13, 2006, Notice of Construction Order No. 00AQCR-1000 Second Revision was issued. The revised order increased the landfill gas flaring capacity, provided that all flaring capacity is achieved through the use of enclosed flares meeting Best Available Control Technology. As this Order addresses facility-wide landfill gas collection and control requirements, the Order is no longer specific to the final cover of Trench 1 and the northeast half of North Berm.

#### 4.3 Flare

The existing flare is currently permitted under Notice of Construction Order No. 00AQCR-1000 Third Revision, as briefly described above. Additional flaring capacity was originally approved by Notice of Construction Order No. 00AQCR-1000 Second Revision, issued April 13, 2006.

Upon replacing the previously installed 500 scfm landfill gas flare with a new 2000 scfm landfill gas flare, GWRLRC source tested the new flare. The February 8, 2007, source test demonstrated that the flare was operating in exceedance (i.e., 0.030 lb SO<sub>2</sub>/MMBtu) of its prescribed emission limit (i.e., 0.011 lb SO<sub>2</sub>/MMBtu) for sulfur dioxide (SO<sub>2</sub>). On November 16, 2007, GWRLRC applied to increase the flare's SO<sub>2</sub> emission limit (i.e., 0.090 lb SO<sub>2</sub>/MMBtu). Ecology approved the new emission limit within Notice of Construction Order No. 00AQCR-1000 Third Revision. Source testing performed on July 11, 2012 showed compliance with the limit (i.e. 0.05 lb SO<sub>2</sub>/MMBtu).

#### 4.4 Landfill Expansion

A vertical and horizontal expansion of the landfill was permitted under Notice of Construction Order No. 08AQ-C062, issued July 9, 2008. The expansion included horizontal expansion to the west and north of the original landfill, including the addition of 92.5 acres of lined disposal modules, and a second leachate collection pond.

Of significant note was the triggering of a Second Tier toxics analysis, as required by WAC 173-460-090, for hydrogen sulfide and vinyl chloride emissions. The Second Tier toxics analysis concluded that, "the risks from inhalation exposure to hydrogen sulfide and vinyl chloride are within acceptable levels ..."

The NOC was revised to allow for an increase in daily waste acceptance rate by issuance of NOC Order No. 08AQ-C062 First Revision, issued May 8, 2015.

#### 4.5 Rock Crusher and Diesel Generator

A rock crusher and diesel fired generator was permitted under NOC Order No. 08AQ-C062, issued July 9, 2008. The emission units were never installed at the facility. The permittee secured permission to install and operate the units by January 8, 2010. However, GWRLRC did not seek to extend the installation date, and greater than 18-months elapsed from the time of permit issuance without commencement of construction. Therefore, per NOC Order No. 08AQ-C062 Condition 2.9.4, GWRLRC no longer has authorization to install a rock crusher or diesel fired generator. The authorization to install and operate these emission units was clearly removed in NOC Order No. 08AQ-C062 First Revision.

GWRLRC may contract with a second party to perform rock crushing within the site. Such rock crusher shall operate within the conditions of the second party's own valid air permit.

## 5.0 AIR OPERATING PERMIT HISTORY

Title V of the 1990 Federal Clean Air Act Amendments required all states to develop a renewable operating permit program for industrial and commercial sources of air pollution. Congress structured the air operating permit system as an administrative tool for applying existing regulations to individual sources. The goal is to enhance accountability and compliance by clarifying in a single document which requirements apply to a given business or industry.

The Washington State Clean Air Act (Chapter 70.94 Revised Code of Washington) was amended in 1991 and 1993 to provide the Department of Ecology and local air agencies with the necessary authority to implement a state-wide operating permit program. The law requires all sources emitting one hundred

tons or more per year of a criteria pollutant, or ten tons of a hazardous air pollutant, or twenty-five tons in the cumulative of hazardous air pollutants, to obtain an operating permit. Criteria pollutants include sulfur dioxide, nitrogen oxides, particulate matter, carbon monoxide, and volatile organic compounds.

Ecology authored Chapter 173-401 of the Washington Administrative Code (WAC), which specified the requirements of Washington State's Operating Permit Regulation. This regulation became effective on November 4, 1993. On November 1, 1993, this regulation was submitted to the United States Environmental Protection Agency (EPA), for program approval. On December 9, 1994, EPA granted interim approval of Chapter 173-401 WAC. This interim approval was extended until EPA granted final approval on August 13, 2001. The current version of this regulation was filed on September 16, 2002. On March 12, 1996, EPA promulgated the Standards of Performance for Municipal Solid Waste Landfills (Subpart WWW). Subpart WWW required the acquisition of Title V permits for subject landfills with a design capacity greater than or equal to 2.5 million megagrams or 2.5 million cubic meters.

The permittee submitted a complete Title V application on July 1, 1997. On April 2, 1999, Ecology issued AOP No. DE 99AOP-C122 (valid April 2, 1999 through May 10, 2010). The Permit went through an administrative permit amendment, to update the responsible official, resulting in AOP Order No. DE 99AOP-C122, First Revision, issued July 13, 2000 (valid May 11, 2000 through October 19, 2001). The Permit went through a reopening for cause, to incorporate NOC Order No. 00AQCR-1000, resulting in AOP Order No. DE 99AOP-C122 Second Revision, issued October 19, 2001 (valid October 20, 2001 through July 25, 2002). Finally, the permit went through a combined administrative amendment, to add a second responsible official, and reopening for cause, to incorporate NOC Order No. 00AQCR-1000 First Revision, resulting in AOP Order No. DE 99AOP-C122 Third Revision, issued July 26, 2002 (valid July 26, 2002 through April 2, 2004).

The first five-year renewal of GWRLRC was issued as AOP No. 04AQ-C007, on March 8, 2004, and was effective April 3, 2004 through April 12, 2006. On April 13, 2006, Ecology approved a significant modification of the AOP to allow for an increase in the landfill gas flaring capacity. AOP No. 04AQ-C007 First Revision was effective April 13, 2006 through March 6, 2008. On March 7, 2008, Ecology approved another significant modification of the AOP to allow an increase in the sulfur dioxide emission limit placed on the landfill gas flare. AOP No. 04AQ-C007 Second Revision was effective March 7, 2008 through April 2, 2009.

The second five-year renewal of GWRLRC's AOP was issued as AOP No. 09AQ-C107 on September 8, 2009 and became effective on the same date. The third five-year renewal, AOP No. 14AQ-C192, was issued on September 4, 2015, and effective September 8, 2014 through May 7, 2015. AOP No. 14AQ-C192, was significantly modified, after integrated review with NOC 08AQ-C062 First Revision, by issuance of AOP No. 14AQ-C192 First Revision, issued and effected May 8, 2015.

See also "Renewal Timeline" in Section 2.3.

## **6.0 FEDERAL REGULATIONS**

### **6.1 New Source Performance Standards**

#### **6.1.1 Title 40 CFR Part 60 Subpart WWW, the "Landfill NSPS"**

On March 12, 1996, EPA promulgated Title 40 CFR Part 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills. The NSPS applies to each municipal solid waste landfill that commenced construction, reconstruction, or modification, or began accepting waste, on or after May 30, 1991. The NSPS requires landfills with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters to submit non-methane organic compound (NMOC) emission reports. When the pre-controlled NMOC emissions are calculated at or above 50 megagrams per year additional requirements are triggered.

GWRLRC is considered a "new" landfill under the NSPS because it began construction on a landfill expansion after May 31, 1991. As such, GWRLRC is subject to Subpart WWW.

Ecology received a copy of the permittee's initial *Design Capacity Report* and *NMOC Report* on June 4, 1996. The initial NMOC emission rate report listed the NMOC emission rate as 67 Mg/yr using the default variable values listed in 40 CFR §60.754(a)(1)(i). Subsequent NMOC emission rate reports measured NMOC concentrations by the Tier 2 methodology (40 CFR §60.754(a)(3)).

The most recent *New Source Performance Standards Tier 2 Sampling, Analysis, and Landfill NMOC Emissions Estimates*, received June 10, 2014, listed total landfill NMOCs as 42.14 Mg/yr, 45.42 Mg/yr, 49.98 Mg/yr, 55.04 Mg/yr, and 60.06 Mg/yr, for calendar years 2014 through 2018, respectively. Because NMOC emissions are not less than 50 Mg/year for the next five years, annual NMOC reporting is required. An additional Tier 2 analysis may be performed prior to 2017 to determine a new site-specific NMOC concentration.

AOP Applicable Requirement Table 6.2 details the current requirements for compliance with Subpart WWW. If the calculated NMOC emissions are not less than 50 Mg/year within the first two years after issuance of the AOP 14AQ-C192, the AOP, or revisions thereof, will be reopened to incorporate additional requirements specified by Subpart WWW.

## 6.2 National Emission Standards for Hazardous Air Pollutants

### 6.2.1 Title 40 CFR Part 61 Subpart M, the "Asbestos NESHAP"

On April 5, 1984, EPA promulgated the National Emission Standard for Asbestos. The NESHAP applies to a variety of asbestos related activities. One of these activities is waste disposal. GWRLRC is a waste disposal facility that receives asbestos containing waste material from manufacturing, fabricating, demolition, renovation, or spraying operation wastes. GWRLRC is subject to this NESHAP. AOP Condition 3.18 and AOP Applicable Requirement Table 6.2 detail the requirements for compliance with Subpart M.

### 6.2.2 Title 40 CFR Part 63 Subpart AAAAA, the "Landfill NESHAP"

On January 16, 2003, EPA promulgated the National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills. The NESHAP applies to municipal solid waste landfills that have accepted waste since November 8, 1987, or have additional capacity for waste deposition, may include a bioreactor, and meets any one of three other criteria.

The applicability criteria defines a subject landfill as one that is a major source or collocated with a major source as defined in 40 CFR §63.2 of subpart A. Specifically, major source is defined as, "a stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants...." As indicated in Table 1, GWRLRC has the potential to emit less than 10 tons per year each individual hazardous air pollutant and less than 25 tons per year in combination of hazardous air pollutants.

The applicability criteria also define a subject landfill as one that has a design capacity greater than, or equal to, 2.5 million megagrams and 2.5 million cubic meters and has estimated uncontrolled emissions greater than, or equal to, 50 megagrams per year NMOC. Once each of those thresholds are exceeded, 40 CFR §63.1945(f) states that GWRLRC will need to comply with Subpart AAAAA by the date the source is required to install a collection and control system by 40 CFR §60.752(b)(2) of subpart WWW.

As discussed in Section 6.1.2, GWRLRC's estimated uncontrolled annual emissions of NMOC are not forecasted to exceed 50 megagrams per until the year 2017. If subsequent estimates indicate the threshold will be exceeded with three or more years remaining in

AOP No. 14AQ-C192 term, or revisions thereof, the AOP may be reopened for cause to include the requirements of Subpart AAAA.

- 6.2.3 Title 40 CFR Part 63 Subpart CCCCCC, the “Gasoline Dispensing Facility NESHAP” On January 10, 2008, EPA promulgated Title 40 CFR 63 Subpart CCCCCC, National Emission Standards for Hazardous Air Pollutants for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities. The NESHAP established national emission limitations and management practices for hazardous air pollutants emitted from the loading of gasoline storage tanks at gasoline dispensing facilities at area sources. The NESHAP was revised on January 24, 2011.

GWRLRC is an area source of HAP, since the source does not have the potential to emit greater than 25 tons per year in combination of HAPs or 10 tons per year of any single HAP (Table 1). There is a 100 gallon gasoline storage tank at GWRLRC with a reported monthly throughput of less than 10,000 gallons per month. Therefore, Subpart CCCCCC is applicable to GWRLRC. AOP Applicable Requirement Table 6.5 details the requirements for compliance with Subpart CCCCCC.

## **7.0 GREENHOUSE GAS REPORTING**

### **7.1 Federal Greenhouse Gas Reporting**

On October 30, 2009, the EPA promulgated 40 CFR Part 98 – Mandatory Greenhouse Reporting, a rule for the mandatory reporting of greenhouse gases (GHG) from large GHG emissions sources. The rule applies to certain facilities, including those which emit 25,000 metric tons (MT) CO<sub>2</sub>e or more per year in combined emissions from all stationary fuel combustion sources. GWRLRC’s potential GHG emissions are approximately 154,247 tons per year (139,931 MT) of CO<sub>2</sub>e per year. Therefore, GWRLRC may be subject to the Mandatory Greenhouse Gas Reporting rule.

Regardless of applicability of the Mandatory Greenhouse Gas Reporting rule to GWRLRC, the rule is not an AOP applicable requirement. According to EPA guidance, as published in the Federal Register (56288 FR 74:209, Friday, October 30, 2009), the requirements imposed by this rule are not applicable requirements under the Title V operating permit program. Therefore, requirements of the rule have not been included in this permit.

### **7.2 State Greenhouse Gas Reporting**

On December 1, 2010, Ecology promulgated Chapter 173-441 WAC – Reporting of Emissions of Greenhouse Gases. The WAC incorporates by reference certain, but not all, calculation methods and other requirements from Title 40 CFR Part 98, the federal GHG reporting rule. The WAC applies to any facility that emits 10,000 MT of CO<sub>2</sub>e or more per calendar year in total GHG emissions, including biogenic CO<sub>2</sub>, from all applicable source categories listed in WAC 173-441-120.

GWRLRC may be subject to the requirements of chapter 173-441 WAC if actual GHG emissions are greater than 10,000 MT of CO<sub>2</sub>e per year. Potential GHG emissions at GWRLRC are 154,247 tons per year (139,931 MT) of CO<sub>2</sub>e per year. As owner and operator of the affected facility, GWRLRC is required to demonstrate compliance with all applicable provisions of chapter 173-441 WAC; AOP Condition 3.10 addresses compliance requirements for state GHG reporting.

## **8.0 COMPLIANCE ASSURANCE MONITORING (CAM)**

### **8.1 Criteria**

On October 22, 1997, EPA promulgated the Compliance Assurance Monitoring rule (Title 40 Code of Federal Regulations Part 64). This Rule requires specialized pollutant-specific monitoring for those emission units which meet the following criteria:

- 8.1.1 The unit is located at a Title V Air Operating Permit source.
- 8.1.2 The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or surrogate thereof), other than an emission limitation or standard that is exempt.
- 8.1.3 The unit uses a control device to achieve compliance with any such emission limitation or standard.
- 8.1.4 The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as an Air Operating Permit source.

## 8.2 **Applicability**

The emission unit considered for CAM applicability was the landfill itself. Following is a summary of how the landfill compares to the above listed criteria:

- 8.2.1 GWRLRC is a Title V Air Operating source (see Basis for Title V Applicability, Section 2.1).
- 8.2.2 CAM exempts post November 15, 1990, New Source Performance Standard emission limitations/standards from triggering CAM. While GWRLRC is subject to the Landfill NSPS, Subpart WWW, the NSPS was promulgated in 1996, and thus it cannot trigger CAM.

However, Notice of Construction Order No. 00AQCR-1000 Third Revision requires a destruction efficiency of 99% for NMOC and organic TAPs. The NMOC standard is specified as an alternative to a volatile organic compound (VOC) emission limitation or standard. VOC is a surrogate for ozone. Therefore, GWRLRC is subject to an emission standard for an applicable regulated surrogate air pollutant.

- 8.2.3 GWRLRC has a landfill gas collection system which must be routed to a control device. The control device tied to the emission standard discussed above is an enclosed flare.
- 8.2.4 While landfills can produce a significant quantity of NMOC emissions, only a portion of the NMOC emissions are collected and made available for control. GWRLRC has estimated that they collect 90% of the landfill gas produced. Based upon the July 11, 2012 source test, and the associated NMOC content in the landfill gas, when the flare is operated at full capacity (2000 scfm), potential pre-control NMOC emissions are approximately 81 tons per year.  
  
Therefore, CAM has been identified as an inapplicable requirement for the landfill, based upon the NMOC emission standard on the flare.

## 9.0 **INSIGNIFICANT EMISSION UNITS AND ACTIVITIES**

Insignificant emission units are those units which are regulatorily exempt from some AOP requirements. While the insignificant emission units listed below are subject to the generally applicable requirements specified in Column 1 of Section 6.1 of the AOP, the permittee is not required to perform testing, monitoring, recordkeeping, or reporting for these units and activities, unless specified by Ecology. Ecology has not required any testing, monitoring, recordkeeping, or reporting for these units. The permittee may certify continuous compliance, for these units and activities, if there were no observed, documented, or known instance of noncompliance during the reporting period. The permit shield, permit Condition 2.1, does not apply to any insignificant emission unit or activity.

Emissions generated by haul trucks are insignificant on the basis that they generate only fugitive emissions. [WAC 173-401-530(1)(d), 5/7/94]

Emissions from the evaporation pond and a 500 gallon diesel storage tank are insignificant on the basis that these activities generate actual emissions of all regulated pollutants less than or equal to the insignificant emission thresholds of WAC 173-401-530(4). The emissions thresholds for insignificant

emission units are partially listed in Table 2. [WAC 173-401-530(4), 4/2/14; WAC 173-401-531(1), 4/2/14]

**Table 2: Insignificant Emissions Units Thresholds (tpy)\***

TSP	PM <sub>10</sub>	VOC	CO	SO <sub>2</sub>	NO <sub>x</sub>	Lead
0.5	0.75	2	5	2	2	0.005

\*WAC 173-401-530(4)

Emissions from a 150 gallon diesel storage tank are insignificant on the basis of size [WAC 173-401-533(2)(a), 4/2/14]. Emissions from: a 5 hp gasoline fueled portable generator; two 7 hp gasoline fueled water pumps; a 5,500 Btu/hr diesel fueled portable space heater; a 125,000 Btu/hr diesel fueled portable space heater; and a 13 hp gasoline fueled power washer are also insignificant on the basis of size [WAC 173-401-533(2)(f), 4/2/14]. Additionally, emissions from a 13 hp diesel fueled portable light plant are insignificant on the basis of size. [WAC 173-401-533(2)(g), 4/2/14]. Lastly, emissions from welding activities using up to twenty 12-inch welding rods per month are also insignificant on the basis of size. [WAC 173-401-533(2)(i), 4/2/14].

**10.0 GAPFILLING**

Section 6 of the air operating permit identifies requirements that are applicable to existing emission units at GWRLRC. The air operating permit must contain emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance. Where the applicable requirement does not require periodic testing or monitoring, periodic monitoring sufficient to yield reliable data has been identified and included in the permit. This action is termed gapfilling.

The last column of the tables in Section 6, contain the monitoring, recordkeeping, and reporting to be performed by the permittee (MRR). This column identifies the periodic action that must be taken to demonstrate compliance with the applicable requirement. It should be noted that in addition to the MRR a source must consider all other credible evidence when certifying to their compliance status. For some applicable requirements no action is warranted and instead the permittee will annually certify their compliance status. These requirements are identified with the statement "no additional monitoring required" in the MRR column.

Many applicable requirements specified periodic MRR while gapfilling was used for the remainder. The source of the MRR is identified in brackets for each MRR requirement. Those that reference WAC 173-401-615(1) were gapfilled. Below is a brief explanation of the basis for each instance of gapfilling.

**Table 3: Identification and Basis of “Gapfilled” Items**

Applicable Requirement(s)	Gapfilling Basis
6.1.5	A test method has been added to this condition in case testing is required to determine compliance.
6.1.5, 6.1.6, 6.1.7, 6.3.18	GWRLRC is not expected to have problems complying with established fugitive dust and visible emission standards. Monthly MRR is determined to be appropriate. Additionally, action is required when visible emissions are observed at times other than the monthly survey.
6.1.15, 6.1.16, 6.1.17, 6.2.14, 6.2.16, 6.3.11	Development and implementation of these documents fulfill the applicable requirement. Periodic review/inspections will aid in assuring that the documents contents are being followed.
6.1.18, 6.1.19, 6.2.18, 6.3.1, 6.3.15, 6.4.2, 6.4.3, 6.4.4	MRR required for other similar applicable requirement(s) should sufficiently demonstrate compliance with the specified applicable requirement.



Applicable Requirement(s)	Gapfilling Basis
6.2.13, 6.3.6, 6.4.1	Simple records, generally already kept, will be helpful in proving such operations.
6.4.1	The Guidance for Remediation of Petroleum Contaminated Sites, Washington State Department of Ecology, specified by NOC Order No. 08AQ-C062 Condition 2.7.1, was updated and replaced by Guidance for Remediation of Petroleum Contaminated Sites, issued November 2010 and last revised October 2011.

Those requirements that specify “no additional monitoring required” as the MRR, have been determined to require no specific monitoring. However, the responsible official will be required to certify GWRLRC’s compliance status, with these requirements, at least annually.

**11.0 STREAMLINING**

This Air Operating Permit does not include any streamlined provisions.

**12.0 COMPLIANCE CERTIFICATION**

By virtue of the Air Operating Permit application and the issuance of this permit, the reporting frequency for compliance certification for GWRLRC shall be annual.

**13.0 ENFORCEABILITY**

Unless specifically designated otherwise, all terms and conditions of the Air Operating Permit, including any provisions designed to limit the GWRLRC’s potential to emit, are enforceable by EPA, and citizens, under the Federal Clean Air Act. Those terms and conditions which are designated as state-only enforceable, as indicated by (S), are enforceable only by Ecology. It should be noted that state-only terms and conditions will become federally enforceable upon approval of the requirement in the State Implementation Plan. However, the enforceability of the terms and conditions of this Air Operating Permit are not expected to change during the Permit term. All terms and conditions of the Air Operating Permit are enforceable by Ecology.

Following is an example of how to identify a state-only enforceable condition. At the end of Condition 2.7.2 the following notation occurred: “[WAC 173-400-107, 8/20/93, 4/2/14 (S)].” If a version of the regulation is cited with no reference to enforceability, it is federally enforceable. Thus, this notation means that the authority for this permit condition is contained in the 8/20/93 version of WAC 173-400-107 (this is the version of WAC 173-400-107 that is in the SIP and is federally enforceable) and in the 4/2/14 version of WAC 173-400-107. The (S) after 4/2/14 means that the 4/2/14 version of WAC 173-400-107 is state-only enforceable.

**14.0 OPERATIONAL FLEXIBILITY**

The permittee did not request or specify any alternative operating scenarios. However, in the event that an emission unit is not operated during a period equal to or greater than the monitoring period designated, no monitoring is required. For example, a monthly visible emission survey is not required if the emission unit is not operated during the month that the survey covers. A monthly visible emission survey is required if the emission unit is operated for any portion of the month that the survey covers. Recordkeeping and reporting must note the reason why, and length of time, the emission unit was not operated.

## 15.0 OTHER PERMITTING ISSUES

### State Ambient Air Quality Standards

Chapter 173-476 WAC, Ambient Air Quality Standards contains ambient air quality standards that apply generally to all areas of the state. There are no on-going monitoring, recordkeeping, or reporting requirements specific to the source to prove compliance with the ambient air quality standards.

Compliance with the ambient air quality standards is required, and the standards are triggered for any source when undergoing New Source Review for Notice of Construction or Prevention of Significant Deterioration permitting and are generally reported in the permits as findings as required, or when an actual or suspected violation of an ambient air quality standard is found locally.

## 16.0 COMPLIANCE SUMMARY

### 16.1 Compliance Status

A Full Compliance Evaluation (FCE)<sup>1</sup> was completed for GWRLRC on September 26, 2012. The FCE showed that as of August 9, 2012<sup>2</sup>, GWRLRC was *in compliance*<sup>3</sup>. Documents related to this and other FCEs completed for GWRLRC are available for public viewing from the Department of Ecology, Central Regional Office. Interested persons may make an appointment to view these documents by calling (509) 575-2490 and asking for the public records disclosure coordinator.

### 16.2 Notice of Violation No. 1732

On October 18, 2004, Ecology issued Notice of Violation (NOV) No. 1732, to Waste Management for air quality violations at the GWRLRC, occurring prior to August 17, 2004. The violations cited included permitting, recordkeeping, monitoring, and reporting requirement violations.

Most notably, Ecology alleged that Waste Management operated a portable crusher on-site without obtaining the required air quality permits. NOV No. 1732 was resolved by pre-penalty Settlement Agreement and Agreed Order No. 2035, effective March 28, 2005. In the Settlement, Waste Management neither admitted nor denied the alleged violations, and made a payment of \$8,500, to the Air Pollution Control Account.

### 16.3 Other Reported Violations

The permittee has submitted annual *Compliance Certifications*, required by AOP Condition 4.3. In the *Compliance Certifications*, the permittee has stated their compliance status with respect to each permit term and condition. The permittee has reported some violations of permit terms and conditions. Generally, these violations have not been categorized as “high priority” and thus the most recent ones have not resulted in formal enforcement action. The *Compliance Certifications* are available for review at the Department of Ecology’s Central Regional Office, located in Yakima, Washington. Interested persons may make an appointment to view these documents by calling (509) 575-2490 and asking for the public records disclosure coordinator.

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<sup>1</sup> An FCE is a comprehensive evaluation of the compliance status of a source. It evaluates all regulated pollutants at all regulated emission units, and it addresses the compliance status of each unit, as well as the source’s continuing ability to maintain compliance at each emission unit.

<sup>2</sup> This is the most recent date (i.e., end of time period covered) of a document used in making the compliance status determination.

<sup>3</sup> Defined per: HPV criteria from “The Time and Appropriate (T&A) Enforcement Response to High Priority Violations (HPVs)”, issued by EPA on, 12/22/98; and Federally Reportable Violation criteria from the memorandum “Clarification Regarding Federally-Reportable Violations for Clean Air Act Stationary Sources”, issued by EPA on 3/22/10.