

Statement of Basis – August 17, 2001

Administrative Revision No. 1 — November 15, 2002



**King County Department of Natural Resources
Wastewater Treatment Division**

West Point Treatment Plant



Purpose of this Statement of Basis

This document summarizes the legal and factual basis for the proposed permit conditions in the King County Department of Natural Resources Wastewater Treatment Division's West Point Treatment Plant air operating permit to be issued under the authority of the Washington Clean Air Act, Chapter 70.94 Revised Code of Washington (RCW), Chapter 173-401 of the Washington Administrative Code (WAC), and the Puget Sound Clean Air Agency (previously known as Puget Sound Air Pollution Control Agency (PSAPCA)) Regulation I, Article 7. Unlike the permit, this document is not a legally enforceable document. It includes references to the applicable statutory or regulatory provisions that relate to King County Wastewater Treatment Division's air emissions, and provides a description of the Division's activities, including a short compliance history.

Source Description

The King County Wastewater Treatment Division West Point Treatment Plant is located at 1400 Utah Street, Seattle, Washington. The facility is a secondary municipal wastewater treatment system with an average annual design flow capacity of 143 million gallons per day of wastewater. The facility includes a primary treatment system; a high-purity oxygen biological secondary treatment system; anaerobic primary and secondary solids digestion with capture of digester gas for use as fuel; and digester gas and propane combustion sources, including internal combustion engines, boilers, and thermal oxidizing flares. The facility was originally constructed in the mid-1960s as a primary treatment plant and was upgraded to provide secondary treatment in 1995. As part of the

facility upgrade, a system of scrubbers and adsorbers was installed to control odors from primary treatment and solids processing.

Pollutants Emitted to Air

The West Point Treatment Plant is required to have an operating permit because it typically emits greater than 100 tons per year of oxides of nitrogen (NO_x). The primary source of emissions at this facility is the combustion of methane gas produced by the solids digesters. From combustion of that gas, the main emission products are oxides of nitrogen (NO_x) and carbon monoxide (CO). Hydrogen sulfide is the main odor emission of concern. However, amine and mercaptan-based constituents that can be detected in the parts-per-billion range as odors are also components of wastewater treatment plant emissions.

In 1998, NO_x emissions totaled 154 tons; in 1999, NO_x emissions totaled 156 tons. The next largest emission during these years was carbon monoxide (CO). During both 1998 and 1999, the facility emitted 39 tons of carbon monoxide. The facility also emitted 10 tons of VOCs in 1998 and 12 tons of VOC in 1999. Of those amounts of VOC, approximately one ton came from combustion sources, the remainder was estimated by the BASTE model as coming in with the wastewater and then emitted from the facility during treatment. During modeling, as part of Order of Approval No. 4295 one toxic, chloroform, was calculated as possibly being emitted in amounts that may exceed the Acceptable Source Impact Level (ASIL) listed in WAC 173-460-090 and Puget Sound Clean Air Agency Regulation III, Appendix A. A Tier II analysis was performed by the Washington State Department of Health for the Department of Ecology. Final approval of the Second Tier Analysis was given on July 24, 1992.



Figure 1 - Primary Treatment

As shown in Figure 1 above, raw wastewater(1) entering the plant passes through a coarse-grit structure for heavy grit removal and then through six mechanically cleaned bar screens(2) to remove large items such as sticks and rags. The sewage then enters the raw sewage pump building(3) where four internal combustion-engine-driven pumps lift the sewage flow to the beginning of the primary treatment process. The sewage then enters an aerated channel that divides the flow between four pre-aeration tanks (aerated grit chambers)(4). Air flows up through each tank create a spiral flow pattern, allowing dense solid particles to settle out of the process flow. Sand and gravel are settled out, dewatered, then removed and trucked to a landfill(5).

Effluent from the aerated tanks discharges through four aerated distribution channels to twelve primary sedimentation tanks(6) to allow quiescent settling of suspended solids. Solids from the bottom of the sedimentation tanks and scum skimmed from the top are sent to the solids processing area(A).

Effluent from the primary sedimentation tanks enters a flow diversion structure. Under ordinary operating conditions, the effluent is transferred to an intermediate pumping station(7) where three electric pumps deliver the effluent to the secondary treatment system. The secondary process will treat up to 300 million gallons per day (MGD). When plant flow exceeds 300 MGD, the excess primary effluent bypasses secondary treatment and goes directly to chlorination(10) and discharge(12).

During the upgrade to secondary treatment, described in the 1992 Notice of Construction Order of Approval No. 4295, the primary treatment processes were covered and vented to the new odor control facility, where three packed scrubber towers remove odor-causing compounds released from the process.

Secondary Treatment

Effluent from the primary treatment system enters six parallel, four-stage, high-purity oxygen aeration basins(8). Each stage consists of an underground vented tank that is mechanically aerated by a surface impeller with a draft tube to introduce oxygen into the wastewater. Active bacteria which “feed” on the dissolved and suspended organic matter in the wastewater are also introduced. An on-site facility produces the high-purity oxygen for the process.

Following aeration, the wastewater discharges into the mixed-liquor distribution channel. The wastewater flows over weirs into 13 secondary clarifiers(9). The clarifiers provide quiescent flocculation and settling. Here the bacteria settle to the bottom and are removed. Some bacteria are discarded to the solids processing area(A), but most are returned to the aeration basins for reuse. A portion of the solids from the tanks is returned to the aeration basins to provide microbes for biological reaction, and the remainder is sent to the solids processing area(A).

Following secondary sedimentation, the secondary effluent exits the basins via overflow weirs and flows through the secondary effluent channel to the chlorine contact chambers(10). Chlorine is added in the chambers to aid in disinfection. A chlorine scrubber attached to the chlorine building emergency ventilation system removes chlorine from air vented during a catastrophic release of chlorine. Final effluent from the chlorine contact chambers flows to the effluent pumping station(12) where residual chlorine is removed using a sodium metabisulfite solution. The final effluent is then discharged via three electric pumps to Puget Sound through a 96-inch-diameter outfall pipe. A portion of the treated wastewater is treated for a third time, producing higher quality reclaimed water which is then used for plant processes and irrigating park landscapes(11).

Solids Processing

Solids removed from the wastewater flow are thickened, digested and dewatered. By processing the solids in digesters and with dewatering equipment, two valuable by-products are produced for reuse, methane gas and biosolids.

Primary and secondary solids are pumped to a raw solids-blending tank(B). The tank is aerated with coarse bubble diffusers that blend the solids to a uniform consistency. The solids are then pumped to ten-gravity belt thickeners(C). Some of the water in the solids seeps through the belt and is collected to be pumped back into the wastewater flow for treatment. The thickened solids are heated to 95 degrees F by a hot water heat

exchanger(D) on their way to one of six digesters(E).

The digestion process acts to stabilize and break down the solids removed from the wastewater. Digestion reduces the total amount of solids by about half. This greatly reduces the amount of solids going to dewatering. The digested portion of the solids is broken down into methane and water.

Methane gas from the digesters(F) is used as a fuel in the facility. Digested solids are pumped to a dewatering centrifuge(G). Water from the centrifuge is returned to the wastewater treatment system, and dewatered solids are conveyed to a truck loading area(H) for transport to a reuse site. Vapors vented from the blending tanks, belt thickener, dewatering centrifuge, and truck loading area are routed to three packed scrubber towers.

There are the remains of a sludge drying plant on site. Its use was discontinued when testing showed that it could not economically operate to reduce the number of sludge carrying trucks leaving the plant without also creating uncontrollable odors. The plant has been decommissioned. As of the date of operating permit issuance, nearly half of the installed equipment, including the sludge dryer, has been removed. The building shell and the odor control system are slated for reuse in a future project.

Combustion Units

Boilers – There are three hot water boilers at the facility. The boilers function as back-up sources of heat to the cogeneration plant to heat the anaerobic digesters, and provide onsite building heating as necessary. They are preferentially fired with digester gas, with propane used as a back-up fuel. 40 CFR 60 Subparts A and Dc only apply to Boiler No. 3.

Internal Combustion Engines – The facility uses seven engines for which the main fuel is methane developed in digester gas. These engines include three cogeneration engine generators used to produce electricity used by the facility. The electricity produced is sold to the City of Seattle. Waste heat from these cogenerators is recovered and reused to heat the anaerobic digesters and to supply building heating as needed. The four remaining engines are used to pump raw sewage after it has entered the facility. These pumps are preferentially fired with digester gas, with propane used as a back-up fuel.

Thermal Oxidizing Flares – In the event that all of the digester gas generated by the anaerobic digesters cannot be used by the facility's internal combustion engines and boilers, three thermal oxidizing flares are in place to incinerate excess gas.

Miscellaneous Sources

Miscellaneous sources at the facility include a range of units, such as chemical storage tanks, secondary treatment process vents, and maintenance activities. The offices occupy structures at the south and east sides of the treatment plant. The buildings also contain employee lunchroom areas with sanitary and shower facilities, as well as office space for the environmental monitoring, maintenance, and engineering support staffs. Staff and county vehicles are present at the treatment plant day and night. All roads are paved for dust control. Small machines and equipment used to maintain the property include weed-eaters, air compressors, portable generators, hand-held augers, plastic pipe welders, and portable pumps. The various buildings on the site are ventilated via the heating and air conditioning systems.

Responsible Individual

Don Theiler, Manager, Wastewater Treatment Division, is listed as the responsible individual meeting the requirements of WAC 173-401-200 (27)(c). This requirement defines the responsible individual for public agencies as “either a principal executive officer or ranking elected official.” The contact phone numbers listed in the permit will allow the reader with questions to contact the department responsible for the original application, the King County Department of Natural Resources Wastewater Treatment Division. Regulators will be able to arrange direct contact with the responsible individual through these access numbers. Though the site is called the “West Point Treatment Plant,” the King County Department of Natural Resources Wastewater Treatment Division is responsible for day-to-day operations of the facility. The phrase “King County Wastewater Treatment Division” is used throughout the permit.

Review of the Wastewater Treatment Division Permit Application

The Puget Sound Clean Air Agency received the original air operating permit application on June 7, 1995. Requested revisions and addenda to the original application were received by the Puget Sound Clean Air Agency on September 5, 1995 in response to an incomplete letter sent on August 1, 1995. The Agency acknowledged that the application was complete in a letter to King County Wastewater Treatment Division dated September 8, 1995.

Compliance History

In the last six years (January 1995 – present), the Puget Sound Clean Air Agency inspected King County Natural Resource Wastewater Treatment plant a total of nine times. One of the inspections was in response to a complaint received by the Puget Sound Clean Air Agency (December 6, 1996). There were four odor complaints in 1996, and one odor complaint was received in 1997. Most of these complaints were resolved by telephone. Consistent with the Agency’s inspection policy, the Puget Sound Clean

Air Agency has inspected the West Point Treatment Plant during each of the past six federal fiscal years.

Since 1995, the Puget Sound Clean Air Agency has issued only one Notice of Violation (NOV No. 37201) to West Point Treatment Plant.

Date of NOV	Notice of Violation (NOV) No.	Regulation or Order of Approval No. Violated	Description	Resolution
12/16/97	37201	Puget Sound Clean Air Agency Regulation I, 5.05(e) (Dated 9/11/97)	Failure to have an Operation and Maintenance (O&M) Plan available on site with respect to air emission sources. An O&M Plan, submitted in October 1996, was on file at our Agency, but not at the facility	Case Closed 2/18/98 by letter signed by Neal Shulman, Manager of Inspection

In addition, on one occasion (March 31, 2000), the Puget Sound Clean Air Agency issued a Compliance Status Report (CSR) to the treatment plant regarding a possible Notice of Construction permitting issue. The Agency requested digester gas Btu data and flow rates. Based on the information received in response to the CSR, the Agency determined that an additional Notice of Construction permit application was not required for two of the digester gas boilers. On July 28, 2000, a final disposition letter from Walter Voegtlin, Air Pollution Inspector, closed the matter, and no further enforcement action was taken.

Each year, the Puget Sound Clean Air Agency has received the required emission statements.

There are currently no outstanding enforcement actions.

Emission Inventory

See Attachment A.

Applicable Requirements

Applicable requirements are listed in several sections of this operating permit as outlined below. The permit lists only the requirements that the Puget Sound Clean Air Agency has determined to be within the scope of the definition of “applicable requirements” under the operating permit program. King County Wastewater Treatment Division is legally responsible for complying with all applicable requirements of the operating permit as well as other requirements that do not fit the definition of “applicable requirements” found in Chapter 173-401 Washington Administrative Code (WAC). Some of the applicable requirements contain terms or monitoring, maintenance and recordkeeping that require detailed explanation in this statement of basis. The specific

conditions are listed below, along with any necessary explanations in monitoring, maintenance, and recordkeeping requirements.

The King County Wastewater Treatment Division is subject to all the requirements listed in Section I of the permit. Section I.A contains the requirements that are applicable facility-wide and Section I.B contains requirements applicable only to specific emission units. The requirements in Section I.B only apply to the specific emission units cited; however, the requirements in Section I.A also apply to the specific emission units or activities described in Section I.B. If the monitoring, maintenance, and recordkeeping method for any requirement in Section I.A is more extensive for specific emission units, that requirement is repeated in Section I.B with the additional monitoring, maintenance and recordkeeping requirements.

The tables list the citation for the “applicable requirement” in the second column. The third column (Date) contains the adoption or effective date of the requirement. In some cases, the effective dates of the Federally Enforceable Requirement and the State Only Requirement are different because only rules approved by EPA through Sections 110, 111, and 112 of the federal Clean Air Act are federally enforceable and either the state has not submitted the regulation to the EPA or the EPA has not approved it.

The first column is used as an identifier for the requirement, and the fourth (Requirement Paraphrase) column paraphrases the requirement. The first and fourth columns are for information only and are not enforceable conditions of this permit. The actual enforceable requirement is embodied in the requirement cited in the second and third columns.

The fifth column (Monitoring, Maintenance & Recordkeeping Method) identifies the methods described in Section II of the permit. Following these methods is an enforceable requirement of this permit. The sixth column identifies the averaging time for the reference test method. The last column (Reference Test Method) identifies the reference method associated with an applicable emission limit that is to be used if and when a source test is required. In some cases where the applicable requirement does not cite a test method, one has been added.

In the event of conflict or omission between the information contained in the fourth and sixth columns and the actual statute or regulation cited in the second column, the requirements and language of the actual statute or regulation cited shall govern. For more information regarding any of the requirements cited in the second and third columns, refer to the actual requirements cited.

Those requirements are explained in detail below.

Section I. A. (Facility-Wide) Applicable Requirements

Requirements I.A.1

Both WAC 173-400-040(1) and Puget Sound Clean Air Agency Regulation I, Section 9.03 standards are 20% opacity and apply to all stationary sources.

The monitoring method is based on monthly visual inspections of all emission points at the West Point Treatment Plant, with King County Wastewater Treatment Division taking corrective action within 24 hours or using the reference test method, WDOE Method 9A, to determine opacity if any visible emissions are noted. The Puget Sound Clean Air Agency has determined that the monitoring should be monthly for the reasons listed below.

- 1) Initial compliance. The Puget Sound Clean Air Agency has not observed visible emissions from these activities during any inspection since 1995.
- 2) Margin of compliance. The monitoring method is designed so that the King County Wastewater Treatment Division will take corrective action before a violation occurs. The emission units are unlikely to generate visible emissions except under the most unusual circumstances. In addition, the Puget Sound Clean Air Agency has inspected this facility at least nine times since 1995 and has not identified opacity issues with the stationary equipment. Because the Agency has never observed any visible emissions for the facility, the margin of compliance with the 20% opacity standard is high. Therefore, the Puget Sound Clean Air Agency has determined that monthly monitoring is adequate except as provided for under specific emission unit monitoring requirements. Recording of visible emissions is not necessarily a deviation of the opacity requirements. However, failure to take timely corrective action, as defined by the monitoring method, is a deviation of the specific permit term. Taking corrective action does not relieve King County Wastewater Treatment Division from the obligation to comply with the opacity requirement itself.
- 3) Variability of process and emissions. While water flow varies with weather, organic load rates are relatively constant on an annual and daily basis. Digester emission rates change slowly as a function of barometric pressure. However, the most significant potential sources of opacity emissions are the flares, waste handling activities, and building heating. The flares and waste handling are addressed elsewhere in the permit and subject to specific Operation and Maintenance (O&M) and inspection requirements.
- 4) Environmental impacts of problems. Observed opacity is generally related to emissions of particulate matter or finely divided liquid droplets. The stationary emission units at the West Point Treatment Plant typically do not generate visible

emissions. Experience with flare system failures and other emission units since 1995 has not resulted in any observed opacity violations.

- 5) Technical considerations. Catastrophic failure of a boiler or engine unit is a likely cause of an opacity standard deviation at the West Point Treatment Plant; such a failure would quickly come to the attention of the operating staff. However, as long as these units are operated in accordance with an acceptable O&M Plan, the probability of an opacity standard violation is minimized.

Requirements I.A.2

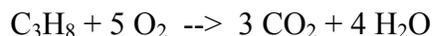
Both Puget Sound Clean Air Agency Regulation I, Section 9.07 and WAC 173-400-040 (6) are equivalent requirements (SO₂ emissions not to exceed 1000 ppm), except for the second paragraph of the WAC 173-400-040(6) which is not in the Puget Sound Clean Air Agency regulation. That paragraph, which is not federally enforceable, allows for exceptions to this requirement if the source can demonstrate that there is no feasible method of reducing the SO₂ concentrations to 1000 ppm. Since the Puget Sound Clean Air Agency rules do not allow the exception, the second paragraph does not apply to the West Point Treatment Plant. The West Point Treatment Plant is currently set up to only burn digester gas in the cogeneration engines and flares. Only digester gas with propane backup can be used to fuel the raw sewage pump engines and the boilers.

Propane is found in North American wells with a maximum sulfur contamination of 10 ppm. This maximum occurs in US Gulf of Mexico stocks. Refined propane contains up to 5 ppm sulfur.

“Digester gas” is roughly a 60/40 mixture of methane and carbon dioxide, with trace constituents that yield approximately 600 Btu/cu-ft. Some of these trace constituents are sulfur compounds, typically hydrogen sulfide (H₂S). The presence of these trace compounds is due primarily to the sulfur compounds that are produced in the decomposition process of solids in the digesters. Digester gas from the West Point Treatment Plant has contained up to 150 ppm of sulfur.

When sulfur-bearing compounds are combusted in the flares, boilers or engines, a large portion of the sulfur leaves as sulfur dioxide (SO₂).

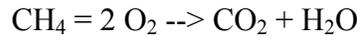
Stoichiometric combustion of propane occurs as follows:



This means that one cubic foot of propane combusted in an internal combustion engine or a boiler will produce three cubic feet of exhaust gases made up of CO₂ and four cubic feet of uncombined/uncondensed water vapor. Even if all five ppm of the sulfur were to combine with oxygen to produce SO₂, the concentration in this

uncondensed moist exhaust would decrease to one-seventh of the original five ppm value, or one-third of its original value on a dry basis. This demonstrates compliance with the 1000 ppm SO₂ standard assuming stoichiometry (no excess O₂). However, the above equation actually overpredicts stack SO₂ emissions, as excess air is needed to ensure complete combustion in non-ideal systems. Additionally, the nitrogen in this air further dilutes the exhaust concentration.

Digester gas is a mixture of roughly 60% methane (CH₄) and 40% CO₂. When combusted, the following occurs to the methane in the gas:



Since digester gas is more than just methane, the example where 100 cfm of this gas is combusted results in the following table:

Gas Constituent	Inlet scfm	Outlet scfm
CH ₄	60	0
CO ₂	40	100
Total	100	100

Therefore, regardless of the inlet digester gas composition (methane to CO₂ ratio), one cubic foot of digester gas yields one cubic foot of CO₂ (and one cubic foot of uncombined water vapor) at stoichiometric combustion. So the maximum of 150 ppm of sulfur compounds in the digester gas cannot result in more than 150 ppm of SO₂ in the exhaust. Adding the excess air used in real combustion and taking into account the nitrogen in air further reduces the expected concentration of SO₂ emissions. This demonstrates compliance with the 1000 ppm SO₂ standard in Puget Sound Clean Air Agency Regulation I, Section 9.07 and WAC 173-400-040(6).

The other emission units are not capable of generating SO₂ emissions as permitted. Therefore, the permit does not contain additional monitoring requirements.

Requirement I.A.3

Puget Sound Clean Air Agency Regulation I, Section 9.09 limits particulate emissions to 0.05 grain per dry standard cubic foot (gr/dscf) from equipment used in a manufacturing process. (The solids when processed are sent out for vivacultural application on forestlands. Therefore, they are “manufacturing” a product by changing the product by “physical means.”) Puget Sound Clean Air Agency Regulation I, Section 9.09 also limits particulate emissions from fuel burning equipment using a fuel other than wood to 0.05 grain per dry standard cubic foot

(gr/dscf) corrected to 7% O₂. WAC 173-400-060 limits particulate emissions to 0.1 gr/dscf from general process units (i.e., units using a procedure or a combination of procedures for the purpose of causing a change in material by either chemical or physical means, excluding combustion). WAC 173-400-050(1) limits particulate emissions to 0.1 gr/dscf corrected to 7% O₂ from combustion and incineration units (i.e., units using combustion for waste disposal, steam production, chemical recovery or other process requirements; but excluding open burning).

The monitoring method is based on monthly visual inspections of all emission points at West Point Treatment Plant, with the source taking corrective action or using the reference test method, WDOE Method 5, to determine particulate matter emission concentration if any visible emissions are noted. Recording of visible emissions is not necessarily a violation of the grain-loading standard, because the threshold for visible emissions occurs at a grain loading of less than 0.05 gr/dscf. However, failure to take timely corrective action, as defined by the monitoring method, is a deviation of the specific permit term. Taking corrective action does not relieve King County Wastewater Treatment Division from the obligation to comply with the particulate standard itself.

The Puget Sound Clean Air Agency has determined that the monitoring should be monthly for the same reasons listed for Requirements I.A.1, since particulate emissions from these units are directly related to opacity emissions.

Requirements I.A.4 and I.A.10

Puget Sound Clean Air Agency Regulation I, Sections 9.11(a) and 9.15(d) and WAC 173-400-040(4) and (5) are similar requirements that address emissions that may be environmentally detrimental or cause a nuisance. Although the permit lists these requirements together, West Point Treatment Plant must comply with each. The monitoring method is based on responding to complaints and general inspections of the facility to identify any emissions that are likely to be injurious to human health, plant or animal life, or property, or that unreasonably interfere with enjoyment of life and property. Receiving complaints does not necessarily mean King County Wastewater Treatment Division is in violation of this requirement, but it has a responsibility to investigate complaints and take corrective action if necessary. The monitoring method specifies additional monthly inspections of the facility to monitor for changes that may result in emissions. Monthly inspections are appropriate for the reasons listed below.

The facility is currently in compliance with these requirements. The emissions most likely to be environmentally detrimental or cause a nuisance are the gases generated by the solids digesters, and the odors from the solids dewatering and loading processes. Wastewater treatment and solids output are relatively constant on a per-shift basis, and there are no batch operations in the treatment process, so emissions from wastewater processing are relatively constant for each day of facility operation.

The rate of digester gas generation is very constant and controlled by the gas collection, engines, boilers, and flare systems, which are the subject of other monitoring methods. Currently, the wastewater treatment plant is unlikely to generate emissions in excess of allowable limits except under the most unusual circumstances, as long as King County Wastewater Treatment Division follows its O&M Plan. Monthly facility-wide inspections will insure that the King County Wastewater Treatment Division can respond to any externally caused changes in conditions that may increase emissions.

Requirements I.A.5, I.A.6, I.A.7 and I.A.11

Puget Sound Clean Air Agency Regulation I, Section 9.15(c) prohibits fugitive dust emissions from any refuse burning equipment, fuel burning equipment, equipment used in a manufacturing process, or control equipment. The monitoring method specifies monthly inspections of the facility to monitor for changes at the facility that may cause fugitive emissions for the reasons listed below. West Point Treatment Plant does not have any refuse burning equipment (i.e., equipment employed to burn any solid or liquid combustible refuse), and all other equipment subject to this requirement is now either controlled or vented directly through a stack. Other monitoring methods are in place to insure that digester gas continues to be routed to either the engine sets or the control devices (flares). Because no liquid or solid fuels are used anywhere on the facility, the combustion units are not likely to cause fugitive dust emissions. Therefore, it is very unlikely that the King County Wastewater Treatment Division would cause a violation of this standard while complying with the other requirements in the permit.

Puget Sound Clean Air Agency Regulation I, Section 9.15(a) requires best available control technology (BACT) for all fugitive dust emissions. WAC 173-400-040(2) and (3) addresses fugitive dust emissions for some activities, and WAC 173-400-040(8) requires reasonable precautions or reasonably available control technology (RACT) to control fugitive emissions. Puget Sound Clean Air Agency Regulation I, Section 9.15(a) refers to cleaning vehicle undercarriages before they leave a facility to prevent track-out of mud or dirt onto public roadways. Puget Sound Clean Air Agency Regulation I, Section 9.15(a)(4) refers to prevention of escape of dust-bearing materials from trucks operated on public roadways. Recording of fugitive dust emissions is not necessarily a violation of the requirement, since the requirement does not prohibit fugitive dust emissions, but prohibits fugitive dust unless BACT is employed.

King County Wastewater Treatment Division has the responsibility to perform inspections of its property to determine if vehicles are creating track-out or spillage of mud or dirt onto paved public roadways. The trucks used to remove processed solids are the most likely source of fugitive emissions. However, the West Point Treatment Plant parking lots and roadways are all paved. Additionally the truck solids loading bay is totally enclosed and acts as a truck wash. The trucks are parked for loading

below hoppers in the bays ceiling. The loading process is monitored with cameras in both the solids building control room and the loading bay booth. After the loading process is complete, personnel inspect the truck for spillage. Hoses are used for cleaning the trucks, wheels, and undercarriages. The wash water is collected through floor drains and recycled into the wastewater treatment system. Tarps are placed over the load before the vehicles leave the loading bay. The Puget Sound Clean Air Agency considers these actions to be reasonable precautions to prevent track-out or spillage onto public roadways.

Therefore, the monitoring method specifies monthly inspections of the facility to monitor for fugitive emissions for the reasons listed below. The monitoring method is based on visual inspections with the King County Wastewater Treatment Division taking corrective action as soon as possible but no later than within 24 hours if any fugitive dust emissions are noted. The monitoring method is consistent with Puget Sound Clean Air Agency's "*Agency Policy on Fugitive Dust Controls, March 1995,*" which specifies reasonable precautions that must be taken to prevent fugitive dust emissions, but does not necessarily define BACT for all processes.

- 1) Initial compliance. The Puget Sound Clean Air Agency has never had a fugitive dust complaint nor during the last five years has the West Point Treatment Plant had a violation of these fugitive dust regulations.
- 2) Margin of compliance. The emission units are unlikely to generate emissions in excess of allowable limits except under the most unusual circumstances, so long as King County Wastewater Treatment Division follows its fugitive emission section of its O&M Plan.
- 3) Variability of process and emissions. The vehicles used to carry digested solids are of the same size, are used to carry the same predetermined solids load, and use the same size tarps to cover the loads. Each truck receives the same level of monitoring and final inspection prior to being allowed to leave the totally-enclosed loading bay. There are no changes that are likely to occur from outside influences that may suddenly increase fugitive emissions leaving the facility. The most significant variable affecting emissions would be the degree to which King County Wastewater Treatment Division follows its O&M Plan.
- 4) Environmental impacts of problems. Control of trackout using the controls and monitoring methods established will not only prevent fugitive dust emissions but will also prevent odor emissions from the trucks as they move through the neighborhoods surrounding the plant.
- 5) Technical considerations. West Point Treatment Plant is not likely to cause fugitive dust emissions. Processed solids are still 70% moisture and facility-wide inspections, either in response to a complaint including odor or at least monthly as set in the monitoring method, will insure that the King County Wastewater

Treatment Division can respond to any externally-caused changes in conditions that increase fugitive emissions.

The fugitive dust requirements that are in the state implementation plan are addressed in I.A.5 and I.A.7. The Puget Sound Clean Air Agency Board of Directors revised Section 9.15 on March 11, 1999, and it became effective April 17, 1999. The amended version will be forwarded to EPA as a SIP amendment. Upon approval of the SIP changes, the revised version of Regulation I, Section 9.15 will be federally enforceable and the old version will no longer apply. The revised rule requires the use of reasonable precautions for fugitive dust and lists some examples of reasonable precautions. The Monitoring, Maintenance and Recordkeeping Methods are the same as those listed in I.A.5. and I.A.7.

Requirements I.A.8, EA 1.1, and EA 2.1

Puget Sound Clean Air Agency Regulation I, Section 9.20 requires King County Wastewater Treatment Division to maintain equipment in good working order. Section 9.20(a) applies to sources that received a Notice of Construction Order of Approval under Puget Sound Clean Air Agency Regulation I, Article 6. Section 9.20(b) applies to equipment not subject to Section 9.20(a). Section II.A Monitoring, Maintenance, and Recordkeeping Procedures of the permit identifies the minimum monitoring criteria for maintaining equipment in good working order. This section identifies both facility-wide criteria and specific criteria for the emission units and activities. In addition, the facility-wide inspections provide monitoring of the general effectiveness of King County Wastewater Treatment Division's O&M Plan. The Puget Sound Clean Air Agency chose to list all of Section II.A as the monitoring method because many parts of Section II.A apply to several emission units and activities. Where there are specific monitoring requirements for specific emission units, the Puget Sound Clean Air Agency has listed them in Section II.A.2. The Puget Sound Clean Air Agency has determined that following the requirements of Section II of the permit provides sufficient monitoring criteria to certify that the equipment has been maintained in good working order. However, the Puget Sound Clean Air Agency reserves the right to evaluate the maintenance of each piece of equipment to determine if it has been maintained in good working order. Note that EA 1.1, and EA 2.1 are emission unit-specific requirements, but they have been included here because this explanation is the same as it would be if it were repeated in the "Emission Unit Specific" section below.

Requirement I.A.9

In accordance with Puget Sound Clean Air Agency Regulation I, Section 7.09(b), King County Wastewater Treatment Division is required to develop and implement an O&M Plan to assure continuous compliance with Puget Sound Clean Air Agency

Regulations I, II, and III. The requirement specifies that the Plan shall reflect good industrial practice, but does not define how to determine good industrial practice. To clarify the requirement, the Puget Sound Clean Air Agency added that, in most instances, following the manufacturer's operations manual or equipment operational schedule, minimizing emissions until the repairs can be completed and taking measures to prevent recurrence of the problem may be considered good industrial practice. This language is consistent with a Washington Department of Ecology requirement in WAC 173-400-101(4). The Puget Sound Clean Air Agency also added language establishing criteria for determining if good industrial practice is being used. These include, but are not limited to, monitoring results, opacity observations, review of operations and maintenance procedures, and inspections of the emission unit or equipment. The Puget Sound Clean Air Agency added this wording in response to Washington State court decision, *Longview Fibre Co. v. DOE*, 89 Wn. App. 627 (1998), which held that similar wording was not vague and gave sufficient notice of the prohibited conduct.

Puget Sound Clean Air Agency Regulation I, Section 7.09(b) also requires King County Wastewater Treatment Division to promptly correct any defective equipment. However, the underlying requirement in most instances does not define "promptly." Hence for significant emission units and applicable requirements that King County Wastewater Treatment Division has a reasonable possibility of violating or that a violation would cause an air quality problem, the Puget Sound Clean Air Agency added clarification that "promptly" usually means within 24 hours. For many insignificant emission units and equipment not listed in the permit, "promptly" cannot be defined because the emission sources and suitable pollution control techniques vary widely, depending on the contaminant sources and the pollution control technology employed. However, the permit identifies a means by which to identify if King County Wastewater Treatment Division is following good industrial practice.

As described in Section V.P, King County Wastewater Treatment Division must report to the Puget Sound Clean Air Agency any instances where it failed to promptly repair any defective equipment. In addition, King County Wastewater Treatment Division has the right to claim certain problems were a result of an emergency (Section V.R) or unavoidable (Section V.S).

Following these requirements demonstrates that King County Wastewater Treatment Division has properly implemented the O&M Plan, but it does not prohibit the Puget Sound Clean Air Agency or EPA from taking any necessary enforcement action to address violations of the underlying applicable requirements after proper investigation.

Requirement I.A.12

Puget Sound Clean Air Agency Regulation I, Section 9.10(a) specifies that HCl emissions shall not exceed 100 ppm (dry), corrected to 7% O₂ for combustion sources. Non-ionic sources of chlorine consist of a small amount of chlorinated solvents that enter the plant with the wastewater. During wastewater treatment, these compounds are removed either by the large amount of aeration that takes place during primary treatment or by biological degradation during the water treatment process. Because the primary treatment tanks are enclosed, chlorinated solvent emissions removed through aeration are recovered and oxidized by the odor treatment system. Chlorine is not added back into the wastewater for sterilization until after the solids removal process. Because the solids going into the digesters are solvent-free, there is no chlorine source to produce in the digester gas any constituent that might create HCl during combustion in an engine, a boiler, or a flare.

Therefore, it is reasonable to assume that combustion units that are fired on digester gas or propane cannot exceed the 100 ppm HCl limits in Puget Sound Clean Air Agency Regulation I, Section 9.10(a). Therefore, the permit does not contain additional monitoring requirements.

Section I. B. (Emission Unit Applicable Requirements)

Section I.B of the permit lists applicable requirements that are specific to an emission unit or activity. The Generally Applicable Requirements of Section I.A apply to all the emission units listed in Section I.B and are not repeated in this section. Monitoring Methods and Reference Methods are also identified if they are different from, or in addition to, those listed in Section I.A. Where a recently adopted federal regulation does not identify a monitoring method, the permit does not identify one either, because it is EPA's policy to incorporate all necessary monitoring into recently adopted federal regulations except where the Puget Sound Clean Air Agency has determined it necessary.

Emission Activity #1 (EA-1): Wastewater Treatment Operations

This emission activity consists of a wastewater treatment plant designed to process 143 million gallons per day of wastewater through primary and secondary treatment, with anaerobic sludge digestion. After digestion and further water removal in the solids handling facility, the resulting product, now called "biosolids," is trucked from the plant to be used as agriculture fertilizer or soil conditioner. This emission unit also includes the three packed bed scrubbers that remove odor-causing compounds released by the primary treatment processes and the three packed scrubber towers that treat the odors from the solids handling facility. Seal leakage or emergency venting of the anaerobic digester is routed to two carbon odor-control adsorbers.

The King County Wastewater Treatment Division currently has all of the physical parameters of its wastewater treatment plant under computer control and monitoring from the central control station. This includes all of the operating parameters of the odor control scrubbers. Each parameter is alarmed to insure that it is not allowed to operate outside of assigned ranges. According to the O&M Plan, critical alarms are investigated immediately, and all other alarms are investigated and corrective action is initiated during that eight-hour shift. Therefore, no additional monitoring requirements have been added for this emission activity.

Emission Activity #2 (EA-2): Methane Gas Combustion

This emission activity covers the direct and indirect use of the methane gas produced by the digesters for the production of heat and mechanical power. Digester gas is the only fuel available for the three co-generation engines. Digester gas with propane as a backup fuel is used by the three boilers, the four diesel-engine-driven raw sewage pumps, and the emergency generators. On rare occasions, excess digester gas is incinerated in enclosed ground flares.

Requirement EA 2.4

Of the three boilers, only No. 3 has an emission limit, which is 0.11 lbs of NO_x/MMBtu. Since the initial source test after it was installed in 1992, there have been no violations of the opacity standard. Opacity problems would indicate combustion problems with digester gas that might also cause the boiler to exceed its NO_x limit. Therefore, the Puget Sound Clean Air Agency has determined that one additional performance test would be sufficient to check compliance with this emission limit during the term of this permit for the following reasons:

- 1) Initial compliance. The initial source test showed that the boiler was in compliance. There have been no opacity violations documented for this boiler. An opacity violations is the primary indicator of other problems that might also cause NO_x emission violations.
- 2) Margin of compliance. The margin of compliance is large since there have never been indications of problems occurring with this boiler.
- 3) Variability of process and emissions. There are no known process variables that could cause emissions variability. Digester gas and propane are the only two fuels used in this boiler. All potential sources of air contaminant emissions are required to be maintained in accordance with the O&M Plan. The most significant variable affecting emissions would be the degree to which the King County Wastewater Treatment Division follows its O&M Plan.
- 4) Environmental impacts of problems. This boiler is too small to cause significant impacts on ambient concentrations of NO_x, CO or particulate.

- 5) Technical considerations. The wastewater process control station monitors the boiler operations. Any changes in the firing conditions in the boiler that might cause a boiler casualty or an emission exceedance would also result in a trouble call to have the boiler technicians physically check the boiler. This monitoring, combined with a computer scheduled O&M program, insures that problems with the boiler will be identified and corrected. The facility has additional sources of heat for the digesters from Boilers No. 1 and No. 2, as well as heat recovered from the co-generation engines. There is no technical reason for the facility to operate a boiler that has problems with these backup sources of heat.

Requirements EA 2.6, 2.9, and 2.10

King County Wastewater Treatment Division shall quarterly monitor NO_x and CO on raw sewage pumps 401, 402, and 403, and on all three diesel co-generation engines using either the EPA Methods 7E and 10 or a calibrated portable exhaust gas analyzer meeting the specifications contained in: (I) Steady-State Exhaust Analysis System of Appendix D-Steady-State Short Test Equipment of Subpart S-Inspection/Maintenance Program Requirements of Part 51 of Chapter 1, Title 40 of the Code of Federal Regulations in effect as of July 1, 2000. The results from this monitoring shall be used for calculating the 12-month rolling total required in the emission limits for EA 2.6 and for checking that the raw sewage pump engines 401, 402, and 403 are operating below the emission limit in EA 2.9. The 5200 ppm CO limit on the co-generation engines was placed as a permit condition to insure that these units would not exceed the EA 2.7 requirement limiting emissions to 250 tons of NO_x and 250 tons of CO in any 12-month period.

The Puget Sound Clean Air Agency has determined that the monitoring should be done at the specified frequency for the reasons listed below:

- 1) Initial compliance. The Puget Sound Clean Air Agency received annual emission reports from this source that have indicated that since 1982 they have been in compliance with these emission limits. The facility has never been found to be in violation of these requirements.
- 2) Margin of compliance. Supporting data received from the plant shows that these engines typically operated near 25% of their limits. The engines are unlikely to generate NO_x or CO emissions in sufficient quantities to violate these limits between the quarterly audits when they are properly maintained. Should the margin of compliance change, the monitoring method increases the frequency of monitoring when the units begin to emit more than 75% of the emission limits.
- 3) Variability of process and emissions. All potential sources of air contaminant emissions are required to be maintained in accordance with the O&M Plan. The most significant variable affecting emissions would be the degree to which the King County Wastewater Treatment Division follows its O&M Plan.

- 4) Environmental impacts of problems. A temporary maintenance problem, if addressed in accordance with the requirements contained in the air operating permit, is unlikely to result in emissions that would have a significant environmental impact.
- 5) Technical considerations. The wastewater process control station monitors these engines. Any changes in engine conditions that could cause emissions to increase will also cause a loss of efficiency in the engines and a partial loss in power. This loss in power will immediately cause changes in process flows that will be seen in the central control station, which will result in a trouble call to have the engines physically checked. This monitoring, combined with a computer scheduled O&M program, insures that problems with the engines will be identified and corrected.

Requirements EA 2.11 and 2.12

The flares have a wide range of sizing that corresponds to the seasonal requirements and the various types of casualties that may occur at either the boilers or internal combustion engines. This allows excess digester gas to be routed to the one or two flares that can most optimally combust the gas. The smallest flare which operates at 330 cfm is the smallest available ground flare and was purchased because the 500 cfm flare was too large for the small amount of excess digester gas that is normally in excess during the summer months.

The flows of digester gas to all emission units that use it is monitored and recorded continuously at each location and in the central control room. Part of the responsibility of the control room operator is to insure that excess digester gas is routed to the proper ground flare (330, 500, or 2000 cfm) for the most efficient combustion and destruction of methane and odors. For this reason, as long as the King County Wastewater Treatment Division follows its O&M Plan, odors will be most unlikely to be generated in sufficient quantities or duration to be, injurious to human health, plant or animal life, or property, or which unreasonably interferes with enjoyment of life and property.

Orders of Approval by the Puget Sound Clean Air Agency – Obsolete Requirements

Obsolete Requirement	Effective Date	Requirement	Reason
Puget Sound Clean Air Agency Order of Approval No. 4295, Condition No. 4	8/3/92	Initial test of emissions from Boiler No. 3 within 60 days of startup	Emission test results received
Puget Sound Clean Air Agency Order of Approval No. 4295, – Condition No. 5	8/3/92	Submit NOx monitoring plan for all combustion sources before startup of secondary treatment facility	Emission Monitoring Plan received

Obsolete Requirement	Effective Date	Requirement	Reason
Puget Sound Clean Air Agency Order of Approval No. 4295, Condition No. 6	8/3/92	Submit O&M Plan	O&M Plan received

Monitoring, Maintenance and Recordkeeping Procedures

King County Wastewater Treatment Division must follow the procedures contained in Section II of the permit, Monitoring, Maintenance, and Recordkeeping Procedures. Failure to follow a requirement in Section II may not necessarily be a violation of the underlying applicable emission standard in Section I. However, not following a requirement of Section II is a violation of Section II and King County Wastewater Treatment Division must report such violations, as well as violations or deviations from any other permit condition, as a deviation under Section V.P.2 of the permit. In addition, all information collected as a result of implementing Section II can be used as credible evidence under Section V.N.2. of the permit. Reporting a permit deviation and taking corrective action does not relieve King County Wastewater Treatment Division from its obligation to comply with the underlying applicable requirement.

A standard Puget Sound Clean Air Agency Notice of Construction Order of Approval condition, used in all NOC Order of approvals since NOC 4295 as Condition No. 1, requires that the equipment, device or process be installed according to plans and specifications submitted to the Puget Sound Clean Air Agency. Once the equipment is installed, the Puget Sound Clean Air Agency requires certification by the applicant that the installation was as approved; this is usually done with a Notice of Completion. Normally within six months to a year after receiving a Notice of Completion, a Puget Sound Clean Air Agency inspector verifies by inspection that the equipment was installed as specified and in accordance with the Order of Approval. King County Wastewater Treatment Division cannot change the approved equipment in such a manner that requires an Order of Approval without first submitting an NOC application, which is addressed in Section IV.A of the permit. Once a Puget Sound Clean Air Agency inspector has verified that the equipment was installed according to the Order of Approval, the Puget Sound Clean Air Agency considers Condition No. 1 of the Order of Approval an obsolete condition.

The Title V Operating Permit requires King County Wastewater Treatment Division to conduct monthly facility-wide inspections. These inspections are to include checking for prohibited activities under Section III of the permit and activities that require additional approval under Section IV of the permit, as well as checking for any “nuisance” odor bearing contaminants. The Puget Sound Clean Air Agency determined the frequency of these inspections after considering the potential for emissions, King County Wastewater

Treatment Division in-house training practices and similar factors. If problems are identified, King County Wastewater Treatment Division has the responsibility to not only correct the specific problem, but also to adjust the work practices and training to prevent future problems.

In determining the appropriate frequencies for monitoring identified in Section II.A of the permit, the Puget Sound Clean Air Agency considered several factors, including the following:

- West Point Treatment Plant's compliance history and the likelihood of violating the applicable requirement;
- The complexity of the emission unit including the variability of emissions over time;
- The likelihood that the monitoring would detect a compliance problem;
- The likely environmental impacts of a deviation;
- Whether add-on controls are necessary for the unit to meet the emission limit;
- Other measures that King County Wastewater Treatment Division may have in place to identify problems;
- The types of monitoring, process, maintenance, or control equipment data already available for the emissions unit;
- The technical and economic considerations associated with the range of possible monitoring methods;
- The type of monitoring found on similar emissions units; and
- Requirements for monitoring frequencies in applicable federal regulations.

Basis for Prohibited Activities

Some of the requirements King County Wastewater Treatment Division identified in the operating permit application are included in Section III as prohibited activities. The Puget Sound Clean Air Agency has listed these activities in this section to highlight that they cannot occur at the facility. Since these activities are prohibited, routine monitoring of parameters is not appropriate; however, the permit does require King County Wastewater Treatment Division to look for such activities during a routine facility-wide inspection.

Puget Sound Clean Air Agency Regulation I, Section 9.13 and WAC 173-400-040(7) contain similar requirements addressing concealment and masking of emissions. Although both requirements apply, the permit language has been simplified by grouping these requirements together.

The circumvention prohibition in 40 CFR 60.12 is covered by Section III.D, Concealment.

Activities Requiring Additional Approval

Some of the requirements King County Wastewater Treatment Division identified in the operating permit application are included in Section IV as activities that require additional approval. For new source review, the permit language has been simplified. Chapter 173-460 WAC and Puget Sound Clean Air Agency Regulation I, Article 6 New Source Review Programs require approval to construct, install, establish, or modify an air contaminant source. All these requirements apply, but the language in these requirements has been incorporated into one section to simplify the permit language. WAC 173-400-110 does not apply within Puget Sound Clean Air Agency's jurisdiction because the rule exempts areas that have a local program that is incorporated into the state implementation plan.

Notification and Recordkeeping 40 CFR 60.7 – King County Wastewater Treatment Division has already notified the EPA Administrator that 40 CFR 60 Subpart Dc applies to this facility as required in 40 CFR 60.48(c), and 40 CFR 60.7(a)(1 through 3). 40 CFR 60.7(a)(4) - Notification of a Physical or Operational Change, 40 CFR 60.14 - Modification, and 40 CFR 60.15 - Reconstruction, are included in Sections IV.A and B of Activities Requiring Additional Approval.

Standard Terms and Conditions

Some of the requirements King County Wastewater Treatment Division identified in the operating permit application are included in Section V, Standard Terms and Conditions. This provided a mechanism for describing requirements that are more general in nature. This section also contains the standard terms and conditions specifically listed in WAC 173-401-620.

Section V.P.2 of the permit requires King County Wastewater Treatment Division to report deviations of the permit to the Puget Sound Clean Air Agency, normally within 30 days after the end of the month. Section V.P.1 of the permit requires that a responsible official certify all required reports at least once every six months. King County Wastewater Treatment Division may submit the certification with the report or certify all the reports submitted in the previous six months. For example, if King County Wastewater Treatment Division detected a deviation in January, it must report the deviation to the Puget Sound Clean Air Agency in February. A responsible official must certify the report according to WAC 173-401-520 at the time the report is submitted or any other time within six months of submitting the report.

If King County Wastewater Treatment Division does not detect any deviations to report for a six-month period, then King County Wastewater Treatment Division shall report that there were no deviations during the six-month period. Notification and Recordkeeping 40 CFR 60.7(b) - Startup, Shutdown, or Malfunctions and 60.7(f) - File of

all Measurements, are adequately covered by the Standard Terms and Conditions in V.O. through V.Q.

40 CFR 60.4(b) requires that all information required to be submitted to EPA also be sent to the Puget Sound Clean Air Agency.

40 CFR 60.19 - General Notification and Reporting Requirements is an applicable section that describes how reports are to be postmarked, calendar day is defined and the procedure for changing the reporting time periods (also see 40 CFR 60.7(e)(1)) is described).

Basis for Inapplicable Requirements

Standards of Performance for Sewage Treatment Plants [40 CFR Part 60 Subpart O] do not apply because the subpart applies to incinerators that combust waste containing more than 10% sewage solids (dry basis) produced by municipal sewage treatment plants. The West Point Treatment Plant does not treat the solids using incineration.

National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works, [40 CFR 63 Subpart VVV], do not apply, as the affected source is not located at a major source of hazardous air pollutant (HAP) emissions. In 1998, King County reported 9.11 tons of all VOCs were emitted from the plant based on 47,250 million gallons of water processed during that year, or 129 million gallons per day. At max flow of 143 million gallons per day, potential to emit would be 10.1 tons of all possible VOCs per year. Additionally King County controls the amount and type of wastes that local industries can put in their wastewater. They do not treat regulated waste streams from an industrial user for the purpose of allowing that industrial user to comply with another NESHAP or to meet the treatment and control requirements of the other relevant NESHAP. The preamble on the October 26, 1999 federal register states, “There are approximately 16,000 POTW nationwide ... only six major sources have been identified. Today’s final rule does not add new requirements for these existing facilities. Current information from POTW representatives projects no new or reconstructed major POTW for the next 5 years. Thus, the EPA does not expect that any facilities will be required to apply the emission controls included in today’s final rule, and the EPA projects minimal impacts from today’s action.”

Stationary Internal Combustion Engines; Standards of Performance for New Stationary Sources, [40 CFR 60 Subpart FF], proposed on 7/23/79, do not apply to any Wastewater Treatment Facility. The Puget Sound Clean Air Agency placed conditions in two New Source Review-Orders of Approval that stated that this subpart would apply when this proposed subpart became final. Normally, when a new subpart to 40 CFR is finalized, it becomes an applicable regulation to sources new or modified since the date of the proposal. The Puget Sound Clean Air Agency determines when proposed regulations might apply to new sources and places that information in its Orders of Approval. In this case EPA elected to control large diesel engine emissions by placing maximum emissions

on engines at the point of manufacture and importation [40 CFR Parts 85 & 89]. 40 CFR Subpart FF is now listed as “reserved.”

Public Comments and Responses

The Public Notice was published on May 22, 2001. The 30-day public comment period expired on June 21, 2001.

The only comment received was an email from Showell Osborn, a process engineer for King County Waste Water Treatment Division, containing a few suggested edits on the wastewater treatment plant process in the Statement of Basis. These comments were incorporated in the Statement of Basis.

EPA 45-Day Comment Period:

EPA’s 45-day comment period expired August 13, 2001. No comments were received.