

Fact Sheet for Dangerous Waste Permit WAD009250366

Phillips 66 Company Ferndale Refinery

May 15, 2018

Purpose of this Fact Sheet

The Washington State Department of Ecology (Ecology) proposes to renew a permit for dangerous waste storage at the Phillips 66 Company Ferndale Refinery (Ferndale Refinery) in Ferndale, Washington. The permit will allow the Ferndale Refinery to store dangerous waste generated onsite for longer than 90 days. This fact sheet explains and documents the decisions Ecology made in drafting the proposed dangerous waste permit for the Ferndale Refinery.

The proposed permit complies with Section 173-303-840 of the Washington Administrative Code (WAC), which requires Ecology to prepare a draft permit for public evaluation before issuing a dangerous waste permit.

Ecology makes the draft permit and fact sheet available for public review and comment at least forty-five (45) days before issuing the final permit. Copies of the proposed permit and fact sheet for the Ferndale Refinery, dangerous waste permit WAD009250366, are available for public review and comment from May 16 until July 2, 2018. For more details on preparing and filing comments about these documents, please see **Appendix A - Public Involvement Information**.

The Ferndale Refinery reviewed the proposed permit and fact sheet for factual accuracy. Ecology corrected any errors or omissions regarding the facility's location, history, and container storage area prior to publishing this draft fact sheet for public notice.

After the public comment period closes, Ecology may make changes to the draft dangerous waste permit in response to comments. Ecology will summarize substantive comments and provide responses to them. Ecology will include the summary and responses to comments in this fact sheet as **Appendix D - Response to Comments**, and make it available when issuing the final dangerous waste permit. Ecology generally will not revise the rest of the fact sheet. The full document will become part of the legal history contained in the facility's permit file.

Summary

The Ferndale Refinery is a petroleum refining facility in Ferndale, Washington that separates and processes feedstocks, such as crude oil, into gasoline, heating oils, diesel oil, liquefied petroleum gas, and heavy fuel oil. A marine terminal, Olympic Pipeline Company pump station, truck loading rack, and rail loading and unloading facilities are also on-site to manage the receipt and delivery of feedstocks and products to and from the refinery.

Ecology and the U.S. Environmental Protection Agency (EPA) jointly issued the initial permit to this facility on March 31, 1989 (effective May 15, 1989). The 1989 permit was modified several times over the years. The expired permit was administratively continued until a new permit could be issued. The proposed permit will be issued solely by Ecology.

The original permit included permit conditions for a long term (greater than 90 days) container storage area (CSA), two land treatment fields, groundwater monitoring, and corrective actions for continuing releases. The proposed permit has detailed requirements for storing dangerous waste; conditions for the CSA; corrective actions for continuing releases; and permit-by-rule authorization.

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I. Introduction**Table 1 General Facility Information**

Facility Information	
Applicant	Phillips 66 Company Ferndale Refinery
Facility Name and Address	Phillips 66 Company Ferndale Refinery 3901 Unick Road Ferndale, Washington 98248 Mailing Address: PO Box 8 Ferndale, Washington 98248
Contact at Facility	Name: Tim Johnson Telephone #: (360) 384-8368
Responsible Official	Name: Jolie Rhinehart Title: Refinery Manager Address: 3901 Unick Road Ferndale, Washington 98248 Telephone #: (360) 384-8343
Industry Type	Petroleum Refinery
SIC Code	2911
NAICS Code	324110
Facility Location (NAD83/WGS84 reference datum)	Latitude: 48.83308 Longitude: -122.69318
Container Storage Area	Latitude: 48.82751 Longitude: -122.69068
Permit Status	
Effective Date of Previous Permit	May 15, 1989
Application for Most Recent Updated Permit Renewal Submittal Date	September 5, 2017
Date of Ecology Acceptance of Application	September 11, 2017
Inspection Status	
Date of Last Inspection	March 13-14, 2018

Ecology regulates dangerous waste in Washington. The Washington State Hazardous Waste Management Act, Chapter 70.105 Revised Code of Washington (RCW), and the Dangerous Waste Regulations, Chapter 173-303 WAC, regulate the management of dangerous waste. WAC 173-303-800 specifies that facilities that store and treat dangerous waste, such as the Ferndale Refinery, must obtain a permit.

The EPA also has regulations for facilities that manage hazardous waste. The Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), and the regulations in Title 40 of the Code of Federal Regulations (CFR) regulate hazardous waste nationwide. The EPA authorizes Ecology to implement these federal regulations in Washington.

The State of Washington's dangerous waste management program received authorization to implement the state dangerous waste regulations in lieu of the federal hazardous waste regulations on January 31, 1986. The State's program also received approval for revisions to the federal program. The last approval became effective on April 9, 2018. Currently Ecology's program is authorized for all aspects of the federal hazardous waste regulatory program that apply to the Ferndale Refinery's dangerous waste management permit.

A. Facility Description and History

The Ferndale Refinery is a petroleum refinery located in a rural area of Whatcom County, approximately five miles west southwest of the city of Ferndale, Washington, along the Strait of Georgia between Cherry Point and Sandy Point. The refinery encompasses an area of about 820 acres, bordered by Unick Road to the north, Slater Road to the south, and Lake Terrell Road to the east. See Figure 1 for a facility location map.

General Petroleum originally constructed the refinery in 1954. The refinery was later owned and operated by Mobil Oil and British Petroleum (BP Oil). On December 28, 1993, BP Oil Company notified Ecology that Tosco Corporation had purchased the refinery and planned to continue operating it to process crude oil as Tosco Northwest Company. On September 17, 2001, Ecology received notification that Phillips Petroleum completed its purchase of Tosco Corporation. Tosco Corporation is a wholly owned subsidiary of Phillips Petroleum Company. The Phillips Petroleum Company merged with Conoco in 2002 to form ConocoPhillips. In late 2011, ConocoPhillips announced its intent to form a new publicly traded company to be named the Phillips 66 Company and to transfer the ownership of the Ferndale Refinery to the new company. The transition became official on May 1, 2012.

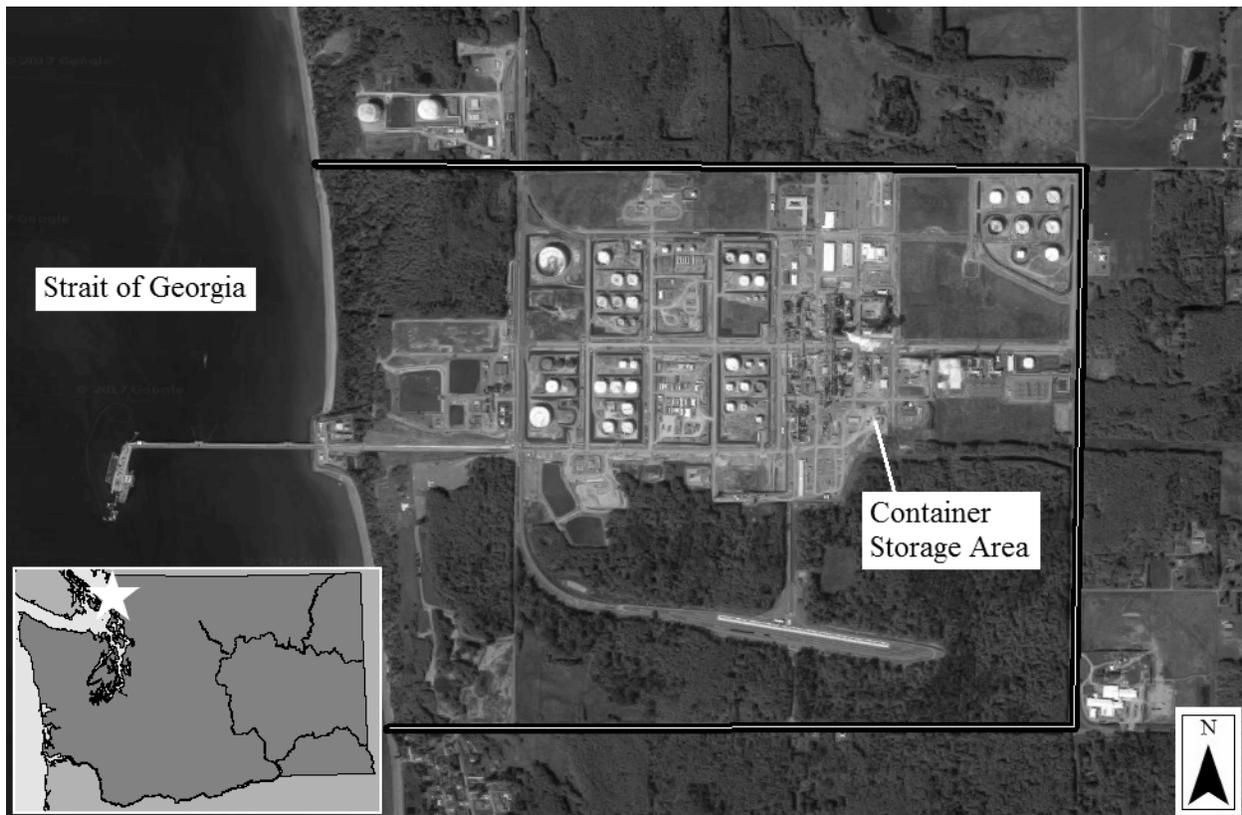
The Ferndale Refinery separates feedstocks into various component parts. The petroleum fractions are further processed at the refinery and blended into a wide range of products. The major processing units at the refinery are the Crude Oil Distillation Unit, the Fluidized Catalytic Cracker Unit, the Catalytic Reformer, the Alkylation Unit, the Diesel Hydrotreater Unit, the Sulfur Recovery Units, the Gasoline Desulfurization Unit, and the Wastewater Treatment Plant (WWTP). A marine terminal, Olympic Pipeline Company pump station, truck loading rack, and rail loading and unloading facilities are also located on-site to manage the receipt and delivery of feedstocks and products to and from the refinery. The

finished petroleum products derived from crude oil and other raw materials at the Ferndale Refinery are gasoline, heating oils, diesel oil, liquefied petroleum gas, and heavy fuel oil.

The refinery currently employs about 275 people with an additional 130 contract employees on average. The refinery operates 24 hours per day and 365 days per year, except during turnaround periods which occur about once every four to five years. The refinery runs two 12 hours shifts per day.

The Ferndale Refinery processed an average of 101,000 barrels per day of crude oil from January 2016 to December 2017. The main source of crude oil has historically been from tankers delivering oil from Alaska's Prudhoe Bay oil field and Canadian Crude oil by pipeline. The refinery also has the capability to bring in additional sources of crude by railcar from North America.

Figure 1 Facility Location Map



B. Regulatory History

Ecology and the Environmental Protection Agency (EPA) jointly issued the initial permit to this facility on March 31, 1989 (effective May 15, 1989). The facility submitted timely permit applications for renewal in accordance with the dangerous waste regulations. The expired permit was administratively continued until a new permit could be issued. Ecology will make a final decision on re-issuing a final permit after considering public comments on the proposed permit. The initial permit was jointly issued by Ecology and EPA because at

the time Ecology was not delegated for authority for corrective action. Ecology has since been delegated authority for corrective action so the proposed permit will be solely issued by Ecology.

The original permit included permit conditions for a long term (greater than 90 days) container storage area (CSA), two land treatment fields, groundwater monitoring, and corrective actions for continuing releases. The permit was modified several times over the years to make changes to the list of approved wastes for the CSA and changes to the closure and post-closure plans for the land treatment fields. See more details about the permit history in **Appendix C** to this fact sheet.

The proposed permit has detailed requirements for storing dangerous waste which have been generated at the Ferndale Refinery; conditions for the CSA; corrective actions for continuing releases; and permit-by-rule authorization. The following sections explain why some permit conditions no longer apply to the permit.

North and South Land Treatment Fields

The original permit included permit conditions for the north and south land treatment fields (NLTF and SLTF). The NLTF and SLTF encompass approximately 5 acres and 8 acres respectively. The majority of the wastes generated at the refinery are oily water sewer sludges (waste codes F037, F038, K048, K049, and K051). Prior to being land banned, these wastes were land farmed onsite. The last dangerous wastes applied to the NLTF and SLTF occurred in 1997.

The NLTF and SLTF were closed in 2001 with post-closure care starting in 2002. Ecology approved the end of post-closure care for the NLTF and SLTF in 2015 and notified the Ferndale Refinery that financial assurance for post-closure care was no longer required. The 2015 Ecology approval was contingent upon the Ferndale Refinery continuing groundwater monitoring at the NLTF and SLTF for sulfate. Sulfate can act as a leading indicator of contamination migration. The approval stated that monitoring must be conducted annually for five years beginning in 2015 and Ecology will evaluate the sulfate data at the end of five years to determine next steps.

Container Storage Area

The original permit included permit conditions for a long term (greater than 90 days) container storage area (CSA). The proposed permit continues to include conditions for the CSA. The CSA is a small concrete pad approximately 28 feet by 36 feet with a 6 inch berm and a waste capacity of approximately 168, 55-gallon drums. Typical wastes stored at the CSA include F037, K050, K051, F038, K048, K049, K169, K170, K171, K172, WT-02, and D-wastes. U- and P-wastes are not typically generated on site, but in the past perchloroethylene and organic peroxides have been stored at the CSA. The wastes stored at the CSA are sent offsite for treatment or disposal.

Wastewater Treatment System

Oily process waters generated at the refinery and oily wastewater received from off-site bulk storage terminals owned by Phillips 66 are treated in primary and secondary (biological) units in the refinery’s on-site wastewater treatment system. The wastewater treatment system is regulated under the permit-by-rule requirements in WAC 173-303-802(5). The proposed permit includes conditions for wastewaters regulated under the permit-by-rule requirements.

Land Disposal Restrictions

The land disposal restrictions mandated by the 1984 Hazardous and Solid Waste Amendments established deadlines for discontinuing land disposal and treatment of petroleum refining wastes as shown in Table 2.

Table 2 Land Disposal Restrictions

Petroleum Refining Waste	Effective Date of Land Disposal Restrictions
K048-K052	November 8, 1990
F037 and F038 primary sludges	June 30, 1993
Primary sludges generated from cleanout of surface impoundments	June 30, 1994
Toxicity Characteristic (TC) organic wastes (D012-D043)	December 19, 1994
Metal characteristic wastes that are EP toxic	May 8, 1992
TC metals wastes in Phase IV of the LDR rule	August 24, 1998
K169-K172	February 8, 1999

Oil-bearing hazardous secondary materials (i.e. sludges, byproducts, or spent materials) that are generated at a petroleum refinery and inserted into a petroleum refining process including but not limited to, distillation, catalytic cracking, fractionation, or thermal cracking units are excluded from the hazardous waste requirements. These secondary materials may be inserted into the same petroleum refinery where they are generated or sent directly to another petroleum refinery and still be excluded from the hazardous waste requirements. This exclusion does not apply if the material is placed on the land or speculatively accumulated before being recycled.

Recovered oil that has been reclaimed from secondary materials (including wastewater) generated from normal petroleum industry practices including refining, exploration and production, bulk storage and transportation incidents are also excluded if recycled in the

same manner as described above. These changes were adopted by and became effective in Washington State on June 1, 2000.

No Migration Petition

In October 1989, the Ferndale Refinery (under BP Oil) submitted a No Migration Petition requesting that they be allowed to continue land farming the land banned wastes. After extensive review, the U.S. Environmental Protection Agency (EPA) denied BP Oil's request and asked them to withdraw their petition. The Ferndale Refinery (under Tosco) withdrew the petition in 1997. Given the land ban restrictions, the refinery decided to close the NLTF and the SLTF.

Oily Water Surge, Phenolic Equalization, and Phenolic Retention Basins

The oily water surge, phenolic equalization, and phenolic retention basins became regulated as hazardous waste surface impoundments in September 1990 following promulgation of the Toxicity Characteristic (TC) Rule. The wastewater received and managed in the basins contained benzene at concentrations above the regulatory levels in the TC rule. The purchase agreement between BP Oil and Tosco Northwest required BP Oil to maintain responsibility for final closure of these basins. BP Oil submitted clean closure certifications for the two phenolic basins on June 19, 1998 and for the oily water surge basin on December 6, 2002.

In July 2004, Ecology completed a review of the clean closure certifications and supporting information for the three basins and concurred with the determination that the Ferndale Refinery had adequately demonstrated clean closure. Ecology notified the Ferndale Refinery in August 2004 that they were no longer required to maintain financial assurance for closure of the basins, per the requirements in Chapter 40 CFR 265.143(h).

Oily Sludge Pond

On June 25, 1985, the Ferndale Refinery (under Mobil Oil Corporation) submitted a clean closure certification for the Oily Sludge Pond. In June 2006, Ecology completed a review of the certification and supporting information and concurred with the refinery's determination that they had adequately demonstrated clean closure of the pond.

Spill Basin

The function of the Spill Basin was to take spilled material from catastrophic tank failures in the tank farm area and any overflows from the stormwater, surge, or phenolic basins. Influent to the Spill Basin was tested in 1991 for benzene to determine if the basin was regulated under the TC Rule. The benzene concentrations in the basin were below regulated levels. Ecology and EPA jointly determined that the overflow events to the Spill Basin were infrequent and so the basin was not considered to be a regulated unit.

Surge Tanks

In 1992, three new tanks were constructed to replace the oily water surge, phenolic equalization, and phenolic retention basins. Following several storm events in the fall of 1992, overflow from the oily water sewer lift stations associated with these new tanks

drained to the Spill Basin. The influent to the basin was re-tested and found to be hazardous due to benzene content.

Acid Soluble Oil Burner

In 1992, the Ferndale Refinery (under BP Oil) requested a permit modification under the Boiler and Industrial Furnaces (BIF) Rule to allow burning of acid soluble oil as supplemental fuel in their Alkylation Unit Depropanizer boiler. The Ferndale Refinery has since changed their process to neutralize the oil so the unit is no longer regulated as a BIF facility. EPA approved the final closure of the Acid Soluble Oil Burner and associated piping on June 9, 1995.

Corrective Action

The initial 1989 permit identified four Solid Waste Management Units (SWMUs) requiring corrective actions. At the time, EPA had authority for review and approval of corrective action at the refineries in Washington State. On November 4, 1994, Ecology was fully delegated to administer the Resource Conservation and Recovery Act (RCRA) corrective action program. In 1997, Ecology and EPA reached an agreement to complete the outstanding work on the SWMUs at the refineries. The refinery's RCRA permit identified four SWMUs that needed additional work: the maintenance shop drum rack, the oily water sewer (OWS), the oily surge and phenolic basins, and the wastewater treatment tanks.

EPA issued letters stating that corrective action had been completed at the maintenance shop drum rack on May 6, 1992 and at the wastewater treatment tanks on August 17, 1990. Ecology issued letters stating that corrective action had been completed at the oily water surge, phenolic equalization, and phenolic retention basins on August 10, 2004.

The OWS is considered a SWMU because it routinely handles waste and is not part of another SWMU. The OWS has been active since the refinery began operations in 1954 and has been added to over time to accommodate refinery expansions. The OWS has been under investigation since 1991 and remains active. The investigation/remediation of releases from the OWS will be handled under a Model Toxics Control Act (MTCA) order requiring implementation of a corrective action plan. Ecology is responsible for future review and action for this SWMU.

II. State Environmental Policy Act

Ecology determined that re-issuing this permit does not require review under the State Environmental Policy Act (SEPA), WAC 197-11. SEPA regulations exempt "license renewal" when there are no "material changes" in operations [see WAC 197-11-800(13)(i)].

Re-issuing this permit is a license renewal under the definition in the SEPA regulations, and there are no material changes in the way the Ferndale Refinery will manage wastes under the permit. The Ferndale Refinery will not increase their waste management capacity. They will continue using existing structures and the same basic operations for waste management as under the previous permit.

If the Ferndale Refinery proposes to increase or change these operations in the future, that proposal will require a permit modification subject to public review. At that time, Ecology will

consider whether that potential proposal would be subject to an environmental evaluation under SEPA.

III. Permit Requirements

The Ferndale Refinery's only active dangerous waste management unit is the long term (greater than 90 days) container storage area (CSA). The proposed permit contains operating requirements that apply only to the CSA.

The Ferndale Refinery generates dangerous waste from crude oil processing, product storage, wastewater treatment, and on-site transportation activities. The Ferndale Refinery typically generates the waste shown in Table 3 and stores these wastes at the CSA prior to shipping them offsite for treatment or disposal. The CSA is also used to store miscellaneous or infrequently generated dangerous wastes.

Table 3 Typical Wastes Generated On-site

Petroleum Refining Waste	Waste Code
Primary oil/water/solids separation sludge	F037
Secondary (emulsified) oil/water/solids separation sludge	F038
Crude Oil Storage Tank Sediment	K169
Clarified Slurry Oil Tank sediment and/or inline filter/separation solids	K170
Spent hydrotreating catalyst	K171
Spent hydrorefining catalyst	K172
Spent desulfurization sorbant fines	WT01
Process units and laboratory wastes (catalysts, charcoal, additives, sandblast, and wastewater treatment plant sludge)	WT02
Lead paint removal and spent parts solvents wastes	D008
Benzene-contaminated waste from used materials (catalysts, sandblast, desiccants, and absorbents)	D018
Painting and surface coating waste	F003, F005

The maximum volume of waste the Ferndale Refinery can store at the CSA is 9,240 gallons. This is equivalent to 168, 55-gallon drums. The Ferndale Refinery may store a combination of different size containers as long as the total waste volume is under 9,240 gallons. The

dimensions of the CSA are approximately 28 feet by 36 feet with a 6 inch berm. The total secondary containment volume of the CSA is 3,770 gallons. The CSA is bermed to prevent run-on into the area. The CSA has an approximate slope of 0.01 and drains toward a sump that drains to the OWS and the wastewater treatment plant. The CSA was designed to support the full weight of containers and any equipment operating on the pad.

The “Section” referenced in the sub-headers below corresponds to the same section in the Ferndale Refinery’s permit renewal application.

A. General Waste Management Requirements

The permit requires the facility to properly operate and maintain all systems of waste management to achieve compliance with the dangerous waste regulations and specific conditions of the proposed permit. The Ferndale Refinery must ensure adequate funding, staffing, personnel training, and process controls to maintain compliance. The Ferndale Refinery must tell Ecology if they are out of compliance with any of the permit requirements.

The proposed permit is specific about how the Ferndale Refinery must maintain compliance. If the equipment or procedures for waste management operations change, the permit will need to be modified. The proposed permit and dangerous waste regulations prescribe the process for permit modifications. It includes notification to the public about any permit changes.

B. Dangerous Waste Container Management (Section D.2)

The Ferndale Refinery uses steel or plastic drums, steel or plastic buckets, flow bins, totes, and roll-off bins to store dangerous waste at the CSA. Containers storing dangerous waste are kept closed, except when adding or removing wastes. The Ferndale Refinery stores containers in the CSA that are less than 119 gallons on wooden pallets to minimize contact with stormwater. The Ferndale Refinery ensures that a minimum of 30 inches is maintained between aisles of containers holding dangerous waste at the CSA. Adequate aisle space ensures that in an emergency, personnel and fire protection, spill control, and decontamination equipment will not be obstructed.

The Ferndale Refinery does not open, handle, or store containers in a manner which may rupture or cause containers to leak. The Ferndale Refinery ensures that each container is in good condition to safely contain and transport dangerous waste. The Ferndale Refinery makes sure that dangerous waste are compatible with the type of container storing the waste so that no corrosion or reaction occurs. Also, if different dangerous wastes are stored in the same container, the Ferndale Refinery ensures that the wastes are compatible with each other.

Labeling of dangerous waste containers allows visitors, emergency personnel, and refinery workers to know the contents and potential risks associated with the waste. The Ferndale Refinery labels all containers to identify the dangerous waste and any hazardous characteristics associated with the contents of the container. Labels are legible and easily visible at all times. The Ferndale Refinery regularly inspects the CSA to ensure that containers are labeled correctly.

C. Waste Analysis and Characterization Requirements (Section C)

Requirements for waste analysis are complex and critical for the safe operation of the facility. WAC 173-303-300 requires the Ferndale Refinery to have comprehensive and accurate information about the composition of all wastes managed on-site. The Ferndale Refinery developed a waste analysis plan that describes the procedures and methodologies utilized to obtain information on the properties and state of the wastes stored in the CSA. Before treating, storing, or disposing of a dangerous waste, the Ferndale Refinery obtains detailed chemical, physical, and/or biological analyses of wastes or relies on knowledge of the wastes.

The Ferndale Refinery designates each dangerous waste stored in the CSA according to the procedures in WAC 173-303-070. The Ferndale Refinery maintains characterization and profile documentation for dangerous wastes that are generated on-site. New dangerous wastes generated on-site are evaluated to ensure proper characterization of the waste occurs. The Ferndale Refinery uses knowledge and testing (if knowledge is not adequate) of new dangerous waste to assist in designating the waste.

The proposed permit specifies methods for sampling and analyzing waste. The Ferndale Refinery obtains samples based on the characteristics of the dangerous waste (liquid or solid, homogeneous or heterogeneous). Samples could be taken as grabs or composites. The waste analysis plan specifies how different wastes are to be sampled. Sampling equipment is properly decontaminated to ensure that cross contamination does not occur. The Ferndale Refinery stores samples in accordance with laboratory requirements, SW-846 protocols, and applicable industry standards. The Ferndale Refinery selects the analytical test method for wastes based on the process generating the waste and the characteristics of the waste. The parameters analyzed are based on the current regulatory requirements in WAC 173-303-110.

The Ferndale Refinery uses chain-of-custody procedures for waste samples. Also, the Ferndale Refinery only uses laboratories accredited by Ecology to perform analyses. The detection and quantitation limits are established at a level which allows for accurate determination of waste characterization. Analytical data reports are reviewed to ensure that the method required procedures are followed.

D. Security (Section F.1)

The Ferndale Refinery is staffed and operates 24 hours per day, seven days per week. The facility has a 24 hour surveillance system including video and security guard monitoring. Access to the facility is controlled by the main gate which is under direct observation by security personnel at all times. Nearly all of the 820 acres of the Ferndale Refinery is surrounded by galvanized steel fencing to prevent unauthorized entry of persons or livestock onto the refinery. Other security measures at the facility include locked gates, lights, communication systems, security badges for refinery personnel, visitor sign in, and patrols.

Signs are posted around the facility's perimeter identifying the area as private property. Also, the CSA has signs which read "Caution – Dangerous Waste Storage Area – Unauthorized Personnel Keep Out" and "Dangerous Waste Area – Container Storage".

E. Inspections (Section F.2)

The Ferndale Refinery inspects the CSA to prevent malfunction, deterioration, operator error, and discharges that may cause or lead to the release of dangerous waste. Qualified personnel inspect the CSA weekly. The results of each inspection are recorded on an inspection log sheet. The following are checked or performed on the inspection:

- The integrity of the concrete pad and berms
- Containers are closed and in good condition
- Container labels are visible, legible, and properly marked
- Adequate aisle space is provided
- Containers less than 119 gallons are stored on pallets
- Containers are not stacked higher than two tiers
- The amount of accumulated precipitation in the bermed area
- Clear drains, drain any non-contaminated water, and close the drain valve
- Ensure that the warning sign is in-place and visible
- Confirm that emergency equipment is present and in working order

The following information is recorded on the log sheet:

- The date and time of the inspection
- The printed name and handwritten signature of the inspector
- A notation of observations made
- An account of spills or discharges
- The date and nature of repairs or remedial actions taken

F. Emergency Planning (Section G)

The proposed permit includes a contingency plan the facility will follow in the case of an emergency at the CSA. The plan includes specific procedures for responding to emergencies. The proposed permit also specifies equipment and supplies the Ferndale Refinery must maintain to respond to potential emergencies.

The proposed permit specifies criteria for incidents that must be immediately reported to Ecology. It also has criteria for incidents that require implementation of contingency plan procedures. If the Ferndale Refinery implements the contingency plan for an emergency circumstance at the CSA, it must provide a written report to Ecology within 15 days. The report must describe the incident, explain its causes, describe emergency responses, assess environmental damage, and list steps taken to prevent recurrence.

The Ferndale Refinery must also notify Ecology of incidents of noncompliance with the permit. If the noncompliance could threaten human health or the environment, the facility must notify Ecology immediately.

The proposed permit identifies a trained emergency coordinator who directs emergency response procedures. The emergency coordinator is authorized to use the Ferndale Refinery's funds to respond to any emergency. The person assigned as an emergency coordinator must meet qualifications and be trained according to the requirements outlined in the proposed permit. The permit also specifies alternate emergency coordinators in case the primary person is not available.

The Ferndale Refinery has established coordination agreements with local emergency response providers and with state and local emergency response teams. The Ferndale Refinery listed the following groups within their contingency plan and can request assistance from these groups in an emergency:

- Western States Petroleum Association mutual aid
- Whatcom County Division of Emergency Management
- Whatcom Unified Local Emergency Planning Committee
- Specialized Emergency Response Program
- Washington State Department of Ecology

The Ferndale Refinery also handles on-site emergency response through an Emergency Response organization, consisting of fire brigade, rescue, emergency medical technician, and spill response teams.

G. Training (Section H)

The proposed permit requires the Ferndale Refinery to conduct comprehensive training for employees and contractors involved with dangerous waste management. Training includes the following general topics:

- Health and safety
- Facility operations
- Permit and other regulatory requirements
- Emergency procedures
- Job-specific training

Employees new to the facility (or employees that transfer to new duties) that perform dangerous waste management activities are trained within six months of starting work. A new operator is given an exam by their supervisor before performing work without supervision. All employees complete annual training. This annual training provides an opportunity for facility personnel to review dangerous waste handling practices and emergency procedures.

H. Record Keeping

The Ferndale Refinery must maintain detailed operating records. These records document compliance with conditions of the permit and dangerous waste regulations. The Ferndale Refinery must also maintain records of spills, releases, incidents of noncompliance, and

emergencies. These records must be kept for periods ranging from three years to when the facility closes. The permit lists specific record keeping requirements.

I. Permit-by-Rule

The proposed permit allows the Ferndale Refinery to treat dangerous wastes generated on- or offsite in the facility's wastewater treatment system. This activity is called permit-by-rule and is found in the dangerous waste regulations at WAC 173-303-802(5). The Ferndale Refinery must follow the requirements of its National Pollutant Discharge Elimination System (NPDES) Permit No. WA0002984 and meet other criteria as outlined in the proposed dangerous waste permit.

Ecology believes the Ferndale Refinery's wastewater treatment system is sufficient to effectively treat the dangerous waste in wastewater from the oily water sewer (OWS) and from bulk petroleum storage facilities offsite. The OWS collects dangerous waste from all over the facility and contains metals, volatile organics, and semi-volatile organics. The wastewater from bulk petroleum storage facilities contain similar constituents.

IV. Closure and Corrective Actions

A. Closure

The Ferndale Refinery must close the CSA when it stops using it to store dangerous waste. To close the facility, the Ferndale Refinery must remove all dangerous waste from the CSA and decontaminate or remove equipment, structures, and contaminated environmental media (such as contaminated soil). The CSA will not be closed as a disposal facility, so no residues will remain after closure, and no post-closure care will be required.

The proposed permit includes a closure plan with detailed procedures that the Ferndale Refinery must follow to close the facility. The first action the Ferndale Refinery will take during closure will be to remove any dangerous waste still stored at the CSA. The dangerous waste will be transported to an approved disposal facility. After removing the dangerous waste, the Ferndale Refinery will decontaminate the CSA by sweeping the concrete pad followed by intensive water and detergent washing. The wash water will be drained to the OWS and treated in the wastewater treatment plant. The concrete pad will be washed a minimum of three times. The Ferndale Refinery will collect samples of wash water from the third washing and analyze the wash water for the following parameters:

- Benzene
- Toluene
- Ethylbenzene
- Total Xylene
- Naphthalene
- 1-Methylnaphthalene
- Phenanthrene
- Total Lead
- Total Mercury
- Total Chromium

These constituents are indicator parameters for the different wastes that have been stored at the CSA. If the concentration of one or more parameters exceeds the closure performance criteria listed in the closure plan, the Ferndale Refinery will perform additional washings. The Ferndale Refinery will repeat the washing of the concrete until the wash water is below the closure performance criteria for all parameters.

When the decontamination process is complete, the Ferndale Refinery will evaluate the integrity of the concrete pad and research historic spills. If the Ferndale Refinery finds no compromise in the concrete pad (e.g., cracks capable of conveying contaminants under the pad) or historic spills outside of containment, the area will be certified as clean closed by an independent professional engineer. The closure plan has additional requirements if the Ferndale Refinery finds that the concrete pad is compromised or do find that historic spills have occurred outside of containment. These requirements include sampling the soil under and around the storage pad.

B. Corrective Action

Ecology requires environmental cleanup at dangerous waste management facilities that have unacceptable levels of contamination in environmental media, such as soil, groundwater, and surface water. This is called “corrective action.” Ecology is authorized to require corrective action by the state’s dangerous waste laws and regulations. Requirements for corrective action are part of this dangerous waste permit.

Corrective action follows similar administrative procedures and has the same objectives as other Ecology and EPA environmental cleanup programs. Ecology generally uses procedures and standards found in the state cleanup law (MTCA), to conduct environmental cleanups. EPA conducts environmental cleanup under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly called “Superfund,” and under federal RCRA “corrective action” authority.

Previous sections of this fact sheet have described corrective action that the Ferndale Refinery has already completed. The draft dangerous waste permit has several conditions for ongoing corrective action by the Ferndale Refinery. These include:

- Requiring that the Ferndale Refinery notify Ecology of any newly identified contamination or new releases at the facility.
- Stating that a permit modification will be used to require additional corrective action if Ecology determines that it is necessary to fulfill corrective action requirements in the dangerous waste regulations.
- Stating that Ecology will conduct periodic “five year” reviews to ensure that remedial actions comply with the dangerous waste regulations for corrective action.

Ecology is working with the Ferndale Refinery on a corrective action plan for the OWS. The dangerous waste permit will be modified to include the MTCA order requiring implementation of the plan.

C. Financial Assurance

The Ferndale Refinery has demonstrated to Ecology that financially they can cover the estimated cost of all closure activities for the CSA. As shown in the permit application in Table I-2, the CSA closure costs are estimated to be approximately \$109,000. The closure cost estimate must be adjusted for inflation during the active life of the CSA. The Ferndale Refinery must demonstrate continuous compliance with the financial assurance requirements in WAC 173-303-620(4).

The Ferndale Refinery must also have financial assurance for corrective actions associated with newly identified contamination or new releases.

V. Changes to RCRA Rules

In general, new or amended requirements in the Hazardous and Solid Waste Amendments of 1984 and related regulations will automatically apply to the Ferndale Refinery's dangerous waste management activities. The exception is new requirements that are less stringent than those in effect when Ecology issues the final permit.

VI. Conclusion

In its permit application, the Ferndale Refinery has demonstrated it is capable of safely operating its dangerous waste management facility under the conditions required for a final permit. Therefore, Ecology has made a tentative decision to renew a final status permit to the facility.

Appendix A -- Public Involvement Information

Ecology proposes to renew a dangerous waste permit to the Phillips 66 Company Ferndale Refinery. The permit includes requirements for accepting, storing, and treating dangerous waste and other conditions. This fact sheet describes the facility and Ecology's reasons for requiring permit conditions.

Ecology will place a Public Notice of Draft on May 16, 2018 in the Ferndale Record Journal to inform the public and to invite comment on the proposed draft dangerous waste permit and fact sheet. Radio advertisement will also take place twice that day on two local stations – KAPS 102 FM and 660 AM, and KBRC 1430 AM.

The notice:

- Tells where copies of the proposed Permit and Fact Sheet are available for public evaluation (Ferndale and Bellingham local public libraries, posted on our website).
- Offers to provide the documents in an alternate format to accommodate special needs.
- Urges people to submit their comments, in writing, by the end of the comment period
- Tells how to request a public hearing of comments about the proposed permit.
- Explains the next step(s) in the permitting process.

Ecology published a document titled *Frequently Asked Questions about Effective Public Commenting*. It is available on our website at <https://fortress.wa.gov/ecy/publications/SummaryPages/0307023.html>.

For more information, contact us by telephone, (360) 407-6934, or by writing to the address listed below.

Greg Gould
Department of Ecology
Industrial Section
PO Box 47600
Olympia, WA 98504-7600

The primary author of this permit and fact sheet is Greg Gould.

Procedures for Reaching a Final Decision

Public Comment Period

May 16, 2018 through June 2, 2018 is the public comment period on Ecology's tentative decision to issue the Ferndale Refinery a dangerous waste facility permit.

Public Hearing

Ecology will hold a public hearing on this tentative decision if, on the basis of requests, there is a significant degree of public interest in the draft permit. To request a hearing, contact Greg Gould by letter or e-mail by the end of the public comment period, June 2, 2018. Ecology will provide notice to all interested parties of the date, time and place if a public hearing is scheduled.

How to Participate

Members of the public may request, review, and comment on the proposed permit and supporting documents. The information Ecology used to make their decision is also available to you. Comments must be delivered or postmarked by June 2, 2018 for Ecology to consider them.

The most effective comments are those that:

- Provide specific information describing what condition believed to be inappropriate.
- Provide factual and regulatory support for the comment.
- Suggest changes to fix the problem.
- Include supporting material, unless Ecology already has the material. For example, if the comment references a regulation on managing dangerous waste, Ecology already has it. If the comment references a report or letter that is not part of the application or the agency files on Ferndale Refinery, or is not a commonly available reference, then Ecology likely does not have it and the person commenting should provide a copy of the reference.

WAC 173-303-840(6) provides details on raising issues and providing information during the public comment period.

Decision-making Process

Public Comments and Testimony

Ecology will consider and respond to written comments the public submits. Ecology will also consider and respond to public testimony from the public hearing, if one is held.

Final Decisions

After considering public comments and testimony, Ecology will make a final permit decision or a new tentative decision. If Ecology renews a final permit to the Ferndale Refinery, it will be valid for 10 years from its effective date. However, Ferndale Refinery or Ecology can modify the permit at any time during that period. Permit modifications are subject to public review.

Effective Date of Decisions

Normally, a permit is effective 30 days after Ecology issues the permit. However, if there are no comments on the proposed permit, Ecology may specify an earlier effective date for the final

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permit. If Ecology makes significant changes to the permit that are less stringent than the public noticed version of the draft permit, there will be a new comment period.

Appealing the Final Permit Decisions

Ecology will make a final decision after considering and responding to comments from the public and the facility on the proposed permit. People can challenge that final decision or any individual permit condition by appealing to the Pollution Control Hearing Board. Appeal procedures are in WAC 173-303-845 and RCW 43.21B Revised Code of Washington.

Appendix B -- Your Right to Appeal

You have a right to appeal this permit to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of the final permit. The appeal process is governed by chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2) (see glossary).

To appeal you must do the following within 30 days of the date of receipt of this permit:

- File your appeal and a copy of this permit with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this permit on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and Chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW STE 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

Appendix C -- Permit History

Date	Activity	Description
March 31, 1989	Permit Issued	
May 15, 1989	Permit Effective	
September 24, 1990	Class 1 Permit Modification	Unit identification, approved wastes, operation and maintenance, groundwater monitoring
March 24, 1991	Class 3 Permit Modification	Basins regarding the TC rule
May 2, 1991	Class 1 Permit Modification	F037/F038 listing
August 21, 1991	Class 1 Permit Modification	BIF Rule – approved wastes
February 21, 1992	Class 3 Permit Modification	BIF Rule
December 22, 1993	Class 1 Permit Modification	Change of ownership from BP to Tosco
March 18, 1994	Class 1 Permit Modification	Change of ownership
May 12, 1994	Class 2 Permit Modification	Regarding waste storage
August 12, 1994	Class 3 Permit Modification	Storage of F038
October 1, 1998	Extension	Extension of Dangerous Waste Permit Renewal Submittal Date to May 15, 1999
May 12, 1999	Permit Renewal Documents	Part B Permit Application
May 21, 1999 (Amended October 4, 1999)	Class 3 Permit Modification	Waste storage, update LTF closure and post-closure plans
April 13, 2000	Notification	Notification of Dangerous Waste Activities
September 15, 2000	Class 2 Permit Modification	LTF gravel cap, ZOI Statistical Analysis, additional waste storage
September 17, 2000	Notification	Notification of Tosco as wholly owned subsidiary of Phillips Petroleum Company

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Date	Activity	Description
October 12, 2001	Notification	Notification of Dangerous Waste Activities
September 10, 2002	Notification	Notification of newly formed ConocoPhillips
September 30, 2002	Class 1 Permit Modification	Change of ownership from Phillips 66 Company to ConocoPhillips Company
May 1, 2006	Class 1 Permit Modification	Abandon CP-2, update permit contingency plan by reference to refinery Integrated Contingency Plan
December 19, 2008	Permit Renewal Documents	Part A/B Permit Application
January 2012	Class 1 Permit Modification	Change in ownership from ConocoPhillips Company to Phillips 66 Company
June 15, 2017	Permit Renewal Documents	Part A/B Permit Application
September 5, 2017	Permit Renewal Documents	Part A/B Permit Application
September 11, 2017	Approval	Approval of Part A/B Permit Application

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Appendix D -- Response to Comments

Ecology will complete this section after the public notice of draft period.