**Phillips 66 Ferndale Refinery**
**Dangerous Waste Permit Modification**
**Supplemental Fact Sheet**

**May 13, 2020**

Ecology is proposing to modify the Phillips 66 Ferndale Refinery dangerous waste permit. The refinery is located at 3901 Unick Road in Ferndale, Washington.

Ecology is proposing to modify the Phillips 66 dangerous waste permit to reference and attach a State Model Toxics Control Act (MTCA) State Agreed Order. This change is categorized as a Class III permit modification. The order requires Phillips 66 to investigate and cleanup any releases from their oily water sewer.

This permit modification is required to meet the corrective action requirements of the Hazardous Waste Management Act, Revised Code of Washington, 70.105. Corrective action is required for all facilities that currently have or had permits to treat, store, or dispose of hazardous waste.

The final permit will allow corrective action at the refinery for the next 10 years from the effective date, unless investigation and cleanup of any releases is completed sooner. However, the permit can be modified at any time during this period. Some permit modifications are subject to public review and comment.

## RCRA Corrective Action 2020 Initiative

The Phillips 66 Ferndale Refinery was included as a RCRA corrective action facility under EPA's RCRA Corrective Action 2020 Initiative. The refinery's oily water sewer was identified as a solid waste management unit with potential for releases of hazardous substances into the environment. The Phillips 66 refinery is an operating facility. There are no known releases from the oily water sewer. Corrective action at the oily water sewer will be different than remediation at a closed facility.

## State and Federal Authorities for Permits and Corrective Action

The U.S. Environmental Protection Agency (EPA) established federal requirements for facilities that manage hazardous wastes or conduct corrective action. The Solid Waste Disposal Act, amended by the Resource Conservation and Recovery Act (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), and the regulations promulgated in Title 40 of the Code of Federal Regulations, regulate the management of hazardous waste nationwide.

On January 31, 1986, Ecology received authorization from EPA for the state's hazardous waste program. In Washington, both EPA and Ecology regulate hazardous waste. Washington regulates more wastes than EPA and Washington-regulated wastes are called dangerous wastes.

The Washington State Hazardous Waste Management Act, Chapter 70.105 RCW, and the Dangerous Waste Regulations, Chapter 173-303 WAC, regulate the management of dangerous waste in Washington. EPA authorized the state's hazardous waste corrective action program on November 4, 1994.

Under the federally-authorized corrective action program, an order or other administrative mechanism incorporating Washington State's cleanup authority, MTCA, is considered to be part of the authorized program. However, the order or other administrative mechanism must be incorporated into an existing permit or issued simultaneously with and incorporated by reference into a new dangerous waste permit. This process of placing specific cleanup requirements in an order has been used to save time and resources and simplify the decision process.

Corrective action is an environmental cleanup program for facilities subject to treatment, storage, or disposal (TSD) permit requirements. These facilities must have a permit to conduct corrective action. The corrective action program was created to protect human health and the environment from the harmful effects of releases or threatened release of hazardous wastes or hazardous substances from solid waste management units at TSD facilities.

Ecology is proposing to modify Phillips 66's permit to incorporate a MTCA agreed order. The modified permit will provide the regulatory framework and legal requirements for continued cleanup actions. The overall regulatory authority for corrective action is RCRA but Ecology uses the procedures and standards in MTCA to conduct corrective action. This has resulted in quicker cleanups that are consistent with other remediation done in Washington.

**Facility Description**

The Phillips 66 Ferndale Refinery is located in a rural area of Whatcom County approximately five miles west southwest 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.

The facility was constructed in 1954 and processes approximately 100,000 barrels per day of crude oil. The refinery separates crude oil for further processing and blending into a variety of petroleum products. These products include gasoline, heating oil, diesel oil, liquid petroleum gas, and heavy oils.

**Facility Permit History**

On March 31, 1989, the U.S. Environmental Protection Agency (EPA) and Washington State Department of Ecology issued a Permit for the Storage and Land Treatment of Dangerous Waste to Mobil (now Phillips 66). The permit was modified several times and renewed on July 20, 2018 for the continued operation of the long term container storage area. The land treatment operations at the refinery ended in 1997.

**Oily Water Sewer**

The oily water sewer (OWS) has been in operation since the refinery was constructed. The OWS is the underground piping system which conveys process wastewater, stormwater runoff from process areas, and fire water to the refinery's wastewater treatment system.

The wastewater can contain total petroleum hydrocarbons (gasoline and diesel range); benzene, toluene, ethylbenzene, and xylene (BTEX), polycyclic aromatic hydrocarbons (PAHs), and metals.

**Agreed Order**

Ecology and Phillips 66 are entering into a MTCA agreed order that requires Phillips 66 to investigate and clean up any contamination from the oily water sewer. The Order includes requirements to:

- Submit an Investigation and Response Plan to identify and cleanup releases
- Fix the cause of a release
- Determine the nature and extent of any soil or groundwater contamination from a release
- Submit a work plan describing the interim action (partial cleanup) that will be implemented to address contamination
- Submit annual progress reports to summarize findings of the oily water sewer investigation and any remedial actions taken to address releases

The Order specifies a number of presumptive interim actions based on Ecology-developed MTCA model remedies for petroleum contaminated soils and petroleum contaminated groundwater. The purpose of the model remedies is to streamline and accelerate cleanup actions. Phillips 66 may select from one of these presumptive interim actions or propose a different remedy in the work plan submitted to Ecology.

**State Environmental Policy Act**

Ecology must make a SEPA threshold determination for any proposed interim actions under a MTCA agreed order (WAC 197-11-268). For SEPA purposes, Ecology determined that reasonable "bounding" assumptions could be made in Phillips 66's environmental checklist based on the nature of the presumptive interim actions prescribed in the Agreed Order and facility-specific information. So long as a future interim action fits within these bounding assumptions, the assumptions should be sufficient to inform a threshold determination. This approach would not apply to interim actions that do not implement the presumptive interim actions in the Agreed Order. In these cases, a separate public notice and SEPA threshold determination will be required for the work plan submitted to Ecology for approval.

Phillips 66 submitted an Environmental Checklist for the presumptive actions prescribed in the Agreed Order. Ecology reviewed the checklist and determined that the proposed action will not have a probable significant adverse impact on the environment and has issued a Determination of Nonsignificance.

**Public Comment Period**

Ecology welcomes public comment on the draft Phillips 66 permit modification. Ecology will consider all comments before making the permit final. Comments must be emailed or mailed **by June 26, 2020** to be considered. Send comments on the draft permit modification to:

Kim Wigfield
Department of Ecology
Industrial Section
P.O. Box 47600
Olympia, WA 98504-7600
kim.wigfield@ecy.wa.gov

**Public Hearing**

Ecology will hold a public hearing on the draft permit via webinar at **6:00 pm Pacific Time on Thursday, June 11, 2020**. The hearing will include a short presentation regarding the proposed investigation and cleanup action for the oily water sewer. To join the webinar, go to https://watech.webex.com/watech/onstage/g.php?MTID=e77886a83835f7ce4c930dbf355fb4d9c.

**Appealing Ecology's Decision**

Anyone who comments on a permit, either in writing or in oral testimony at the public hearing may appeal Ecology's final decision on the permit within 30 days of when the permit is issued. Others may appeal changes made between the draft permit and the final permit, even if they did not comment during the comment period. Ecology's decision must be appealed to the Pollution Control Hearings Board.

**Effective Date of Decision**

Normally, a permit is effective 30 days after Ecology gives notice of its final decision to the permittee and all persons who commented. If there are no comments on the draft permit, Ecology may specify an earlier date for the final permit. If Ecology makes significant changes to the draft permit, there will be a new comment period.

**Phillips 66 Ferndale Refinery Dangerous Waste Permit Modification**
**Response to Comments**

**July 22, 2020**

Ecology made the draft Phillips 66 dangerous waste permit modification and fact sheet available for public review and comment before issuing the final permit. Ecology published notice of the opportunity to comment on the renewal of the permit modification in *The Ferndale Record* on May 13, 2020. In the notice, we invited public review of the proposed permit and provided a 45-day public comment period. On June 11, 2020, Ecology held a public meeting and hearing via webinar. The public meeting included a presentation by Ecology and a question and answer period. There were 12 attendees at the meeting. No one chose to provide oral testimony at the hearing. The deadline for submittal of written comments was June 26, 2020.

During the comment period, we received written comments from the following entities:

- Friends of the San Juans – Lovel Pratt
- RE Sources for Sustainable Communities – Kirsten McDade

The comments and Ecology's responses are presented below. The original comments comprise part of the legal record for this permit. The record is available for public review at Ecology's Industrial Section office in Lacey, WA. Anyone interested in reading the full text of the comments or in obtaining a copy of a particular comment will need to contact the Public Records Office to make a formal request. Their contact information is provided below:

E-mail: RecordsOfficer@ecy.wa.gov

Mail: Public Records Office
Washington Department of Ecology
P. O. Box 47600
Olympia, WA 98504-7600

Comments appear in regular text, followed by Ecology's responses in italicized text.

Ecology will send a copy of the permit documents and Response to Comments to each entity who provided comments.

Ecology will send a notice of the final permit issuance to all interested parties and will post the documents on the Industrial Section webpage at https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Industrial-facilities-permits.

**Comments from RE Sources – Kirsten McDade**

**Comment 1:**

The Oily Water Sewer (OWS) at both of these refineries are old and aging systems that are at a high risk to release petroleum hydrocarbons, BTEX, PAHs, and metals into the surrounding environment. These drainage systems can also accumulate explosive vapors that pose a risk to refinery employees. Given the proximity of these refineries to the Cherry Point Aquatic Reserve and sensitive wetland habitats, we are concerned about the potential harm that could come from even a very small leakage in the system. We appreciate that the Department of Ecology (Ecology) is starting the "Find it, Fix it" program to help ensure that the OWS at both facilities are not contributing pollutants in any way. After attending the Webinar and reading through the various documents available on Ecology's website we have a couple concerns.

The draft Agreed Order states that the refineries have ten years to fully complete their evaluation and inspection of their OWS system. That means that if there are leakages, even minor ones, a considerable amount of toxic pollutants could be released before the leak is discovered and repaired. We would like to see that the initial investigations occur in a shorter time frame.

***Response to Comment 1:***

*Ecology is requiring that Phillips 66 perform an internal integrity assessment of the OWS lines. This will likely involve temporarily shutting down a segment of the line being investigated and diverting the oily wastewater to another line. A sewer line may need to be shut down for a long period (to repair or replace piping, conduct sampling for site characterization, and perform soil remediation) and this could affect refinery operations. We are trying to minimize this impact and allow time for the refinery to meet other requirements of the agreed order (e.g., work plan submittal and reporting) and time for Ecology's review in this first implementation of the 'find it, fix it' program.*

**Comment 2:**

At this time, only major or main trunk lines of the OWS are required to be inspected. We feel that all lines, regardless of size or capacity, should be included in the inspections. Some of the pollutants associated with the OWS bioaccumulate and biomagnify in the environment and in organisms so again, even small leakages over time can have severe impacts especially to large mammals such as the orca whale. The OWS systems are complex - they wind and weave throughout the refineries, contain major and minor lines, are situated underground, and are often found under permanent structures. Because of the complexity and inaccessibility of these systems we would like to be assured that every inch of these aging infrastructures are analyzed for deficiencies. We encourage Ecology to require a neutral party to participate in the inspection of these systems to guarantee objectivity. We are deeply concerned that these antiquated systems are unknowingly leaking toxic pollution into our environment.

***Response to Comment 2:***

*The commenter is correct. The agreed order only requires investigation of the major trunk lines at the Phillips 66 refinery. There are other smaller lines that feed into these trunk lines. Ecology will determine the need for inspecting these smaller lines as we evaluate the results from the investigation of the major trunk lines.*

*Ecology does not have the resources to hire a neutral third party to participate in the inspection of the OWS system. Phillips 66 is required to submit an Investigation and Response Plan which identifies the method that will be used to assess the internal integrity of the sewer lines and follow standard industry protocols and good engineering practices. Ecology will review and approve this plan.*

**Comment 3:**

Thank you for taking the time to read our letter and address our concerns. We look forward to following this program and the progress made by each of these refineries to assure us and the public that harmful pollutants are not entering our environment from refinery activities.

***Response to Comment 3:***

*Ecology will post the Investigation and Response Plan, annual progress reports, 10-year review, and any work plans in the electronic documents section of the Phillips 66 Ferndale Refinery toxics cleanup website. The website can be found at – https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=4886*

**Comments from Friends of the San Juans – Lovel Pratt**

**Comment 1:**

Our primary concern is the potential for adverse impacts, including impacts to the near-shore environment, should necessary environmental remediation not take place in the future due to a lack of sufficient financial assurance(s) for the full costs associated with the necessary corrective action(s). Especially for environmental remediation that must be deferred to the future (e.g., contaminated soil beneath a refinery structure), we urge Ecology to require financial assurance to address a worst-case corrective action or other appropriate means to fully estimate the potential remediation costs. We also ask Ecology to provide the public with details on the metric used to identify annual cost increases that would be used between cost estimate revisions. Finally, we ask Ecology to require the financial assurance to include the decommissioning costs that would be associated with any environmental remediation/corrective action that must be deferred to the future.

***Response to Comment 1:***

*The financial assurance requirements applicable to the "find it, fix it" program at Washington's refineries is an innovative approach to address the concerns you express in your comment. Future unknown or undefined remediation activities are typically not subject to financial assurance requirements. In this case, Ecology may or may not have authority to require financial assurance to address a "worst-case" scenario, but any financial assurance will need to cover a contingency amount to address unknown factors. At the time contamination is identified, Ecology will review both the type and extent of the contamination. Based on that information, Ecology will determine what cleanup options are appropriate and how much financial assurance will be required. The greater the unknowns, the greater the contingency will likely need to be.*

*Financial assurance regulations require that cost estimates are revised annually, as noted in WAC 173-303-64620(5)(h). Cleanup work that has been completed during the previous year may be removed from the updated cost estimate before making the annual adjustment. The annual update can be done one of two ways: first, a liable party may complete a full revision of their cost estimate, updating each line item to a current market cost. This is an unusual approach that most companies choose not to do because of the time and expense involved in preparing a new cost estimate from scratch. The other option is the most common: companies may use an inflation multiplier to increase their cost estimate. The procedure for this is set forth in the financial assurance rules at WAC 173-303-620(3)(c).*

*Inflation is calculated from information provided by the federal Bureau of Economic Analysis, which is part of the U.S. Department of Commerce. The relevant information is published in "National Income and Product Accounts" (NIPA) Table 1.1.9., Implicit Price Deflators for Gross Domestic Product, specifically Line 1, Gross Domestic Product. Currently, this table is available at https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=3&isuri=1&nipa_table_list=13&categories=survey. The rules require the use of annual figures, not quarterly ones.*

*To calculate inflation, divide the most recently available annual figure by the previous year's annual figure. The result is then multiplied by last year's cost estimate (less any work that has been completed). The product is the new cost estimate. It is important to note that the figures in Table 1.1.9. are updated monthly. That means the exact inflation calculation may vary from month to month. This variation is usually very slight and not consequential to overall cost estimate updates, but can be confusing when trying to re-create a prior calculation at a later date.*

*The rules allow for the same procedure to be used substituting Gross National Product instead. As long as the same option is chosen year after year, it is acceptable either way. We do not allow a company to switch back and forth between GDP and GNP.*

*Ecology does not typically use the phrase "decommissioning costs," as that usually refers to sites with a radiological permit issued by the Department of Health. The agreed order requires financial assurance to cover the costs that would be required to accomplish the necessary cleanup of any deferred areas of contamination. Financial assurance is required for closure and post-closure of hazardous waste units. Should "find it, fix it" discoveries result in additional cleanup activities being necessary, those costs will be incorporated into future financial assurance submissions.*

**Comment 2:**

Ecology is being relied upon to ensure that the BP and Phillips 66 refinery properties, as well as the adjacent groundwater and marine ecosystem, are all contamination-free when BP and Phillips 66 no longer operate these refineries.

***Response to Comment 2:***

*There are a number of rules and regulations that Ecology follows to protect the land, groundwater, and surface water at the refinery sites. These rules and regulations include the Resource Conservation and Recovery Act (RCRA), the Model Toxics Control Act (MTCA), and the National Pollutant Discharge Elimination System (NPDES). RCRA corrective action and MTCA are the two authorities that Ecology is using to investigate the oily water sewer and clean up any releases identified.*