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Spill Prevention, Preparedness and Response Program
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Re: Comments on U.S. Oil & Refining Co. Updated Oil Spill Prevention, Control and Countermeasures Plan

Dear Mr. Ogle,

Thank you for providing the opportunity to review and comment on the updated oil spill prevention plan (the Plan) for U.S. Oil & Refining Co (USOR).

Citizens for a Healthy Bay (CHB) is a 28-year-old organization whose mission is to represent and engage people in the cleanup, restoration, and protection of Commencement Bay, its surrounding waters and natural habitat. We are a 501(c)3 nonprofit providing practical, solutions-based environmental leadership in the Puget Sound area. We work side-by-side with local residents, businesses, and government to prevent water pollution and make our community more sustainable. CHB has been engaging with the Model Toxics Control Act (MTCA) since our founding in 1990.

Staff and expert members of CHB's Policy and Technical Advisory Committee have reviewed the spill prevention plan, related documents state regulations (WAC 173-180). Our comments are outlined below.

Background

US Oil is the largest producer of refined petroleum products in Pierce County. In addition to dock facilities on the Blair Waterway, it has pipelines that connect the dock with the refining facility and a pipeline to Joint Base Lewis-McChord (JBLM). It receives oil by train as well as via the Blair Waterway. The facility has the potential to release oil to the Blair and surrounding Commencement Bay, the Puyallup River, and other water bodies, to soil and to the air. There is a real threat to already stressed salmon runs, the chance of pollution of estuarine and shoreline habitat, and a threat to the entire tideflat. As such, this spill prevention plan is critical to preventing releases, and when they occur, stopping them as quickly as possible. Our comments are directed at individual improvements needed for this plan, but in addition, we expect a plan that is easily accessible and usable in the case of a release of any kind. Consequently, we feel there is significant room for continued improvement.

Section 2.0 Introduction

Subsection 2.3.2 "Ecology Plan Review and Update Procedures" states that within 30 calendar days of an oil spill more than 1,050 gallons, Chapter 11 of the Plan must be updated to document this discharge. CHB requests justification for determining 1,050 gallons as the threshold for documenting oil spills in the Plan.

Under Subsection 2.4.1 "EPA Review and Update Procedures", the Plan states that within 60 calendar days of an oil discharge more than 1,000 gallons in a single release, or 44 gallons in each of two releases in a 12-month period, EPA and Ecology will be notified. Earlier in Section 2, the Plan states that containers at the refinery holding less than 55 gallons are exempt from the Plan. These discrepancies in the volume of oil (either contained or spilled) noted in the Plan imply an ambiguity in the significance of an oil spill of any volume. CHB requests that Ecology conservatively redefine its threshold requirements by including smaller containers and spills, and by consistently using the lowest threshold.

Section 4.0 Spill Prevention Training Program

Subsection 4.1 "Spill Prevention Training & Certification Program" states that "specific outlines of training plan content, evaluation procedures, competencies, recertification procedures and documentation of training are maintained by USOR's Safety Department." Without this specific content, CHB cannot adequately comment on the training program itself, and requests that either complete training content is provided as an Appendix to this document, or is sent to CHB for further review.

In the following paragraph, the Plan affirms that records "sufficient" to document training completeness for certain personnel will be maintained for five years. CHB requests that USOR define "sufficient" in this instance, to include training dates, courses completed, and competency scores.

Subsection 4.5 "Indirect Personnel" insufficiently describes training provided for employee and non-employee truck drivers. CHB requests clarification on numerous facets of indirect personnel training:

1. Who provides non-employee training?

2. Does USOR check and maintain non-employee training records?
3. What is the training schedule (including recertification) for indirect personnel?
4. How does USOR verify that indirect personnel have received and successfully completed relevant trainings?

Section 5.0 Alcohol/Drug Program

Subsection 5.2 "Alcohol/Drug Screening & Treatment Program" stipulates that automatic drug/alcohol testing is implemented when there is a "major" accident. CHB requests the qualifier "major" to be defined.

The last paragraph of this subsection describes employees' access to drug and alcohol treatment programs. CHB requests clarification on this subsection:

1. Are employees who test positive for drugs and/or alcohol immediately removed from their station and recommended for treatment?
2. What is the course of action if an employee refuses treatment?

Section 6.0 Maintenance and Inspection Program

Subsection 6.1.1 "Tankage" and 6.1.2 "Pipelines" indicate that USOR's tankage and pipeline inspection programs are available in another document (the "Mechanical Integrity Manual"), and that inspection and prevention maintenance procedures outlined in the Plan are only a condensed overview of these programs. Only providing a condensed version of the tankage and pipeline inspection program forces the reader to locate and read another document, creating a barrier to public access and reducing opportunity for public review and scrutiny, while placing extra burden on maintenance and inspection personnel to locate these documents. This burden increases the chances of delayed or neglected maintenance and inspection, creating more opportunities for leaks and spills. Additionally, WAC 173-180-630 11.a(ii) specifically calls for summaries of, "…integrity testing of storage tanks and pipelines, including but not limited to frequency; pressures used (including ratio of test pressure to maximum operating pressure, and duration of pressurization); means of identifying that a leak has occurred; and measures to reduce spill risk if test material is product…". CHB requests that these specific parameters be added to the text of the Plan.

Continuing under Subsection 6.1.1, the Plan indicates that inspection frequencies are set by considering tank type, size, and installation configuration. In the following paragraph, the Plan states, "The necessary inspections and frequencies shall be determined by the Chief Inspector." These contradicting statements leave the facility tankage vulnerable to delayed or missed inspections, increasing the chances of an oil spill. CHB requests that USOR clarify which inspection procedure is to be used, and provide justification for scenarios when the inspection protocols outlined in Table 6.2 will be adjusted.

Lastly under this subsection, the Plan indicates that tanks will undergo cleaning prior to any service, but does not provide any information on how the product cleaned out from the tank will be handled and discharged – CHB requests this information to be included in the Plan.

Subsection 6.1.2 "Pipelines" provides information outlining USOR's pipeline inspection program for "plant metallic process piping systems." CHB requests clarification if this inspection program covers facility piping systems made of other medium.

Subsection 6.1.3 Transfer Pipeline Inspections "includes the four pipelines that run from the refinery to the marine terminal." CHB requests justification as to why the USOR JBLM pipeline is not included in the transfer pipeline inspection program – USOR should be concerned about the inspection, maintenance and integrity of all pipelines in its facility, regardless of ownership. Paragraph 3 of this subsection details thickness gauging procedures, and states, "When the thickness of the pipe becomes less than the minimum allowable thickness, the section under consideration is replaced." CHB requests that USOR define "minimum allowable thickness" for all pipeline types and sizes. Lastly under this subsection, paragraph 4 indicates that "dock transfer lines are pressure tested with water or product…." CHB requests USOR add language to this subsection including justification why USOR would complete pressure testing using product rather than water, and what precautions will be taken if pressure testing uses product rather than water.

Additionally, throughout this Plan, the term "product" is used, but never defined. CHB requests "product" be defined where appropriate, given that oils of different types exhibit different characteristics concerning their ability to expand, contract, gasify, and liquify, and their reactivity to other chemical compounds.

Subsection 6.1.6 "Transfer Hoses" states, "transfer hoses that fail their annual inspection are replaced." CHB requests language be added to the Plan to indicate the timeline for transfer hose replacement.

Subsection 6.2.2 "Transfer Lines" explains that if the Maximum Allowable Working Pressure (MAWP) of a transfer line drops below 5% over the integrity testing time period, "the line will be inspected for leak sources and retested." The Plan goes on to state, "The lines are tested at 1.5 times the MAWP. The lines are held at the test pressure for a duration of four hours with a pressure recorder on the line." CHB requests this protocol be clarified. Does pressure testing cease once the MAWP drops below 5% over the testing period, or does the inspector wait until the end of the four-hour testing period? CHB requests language be added indicating the inspector will cease integrity testing *as soon as* the MAWP drops below 5%.

Subsection 6.2.3 "Underground Piping Systems" (and Section 7.4 "In-plant Refinery Piping") describes the protective wrapping, coating and cathodic protection for all below ground piping installed or replaced after August 16, 2002. CHB requests descriptions of all protective measures taken for below ground piping installed or replaced *prior* to August 16, 2002. Additionally, the Plan states, "If any underground piping that is installed or replaced after certification of this Plan does not have protective wrapping and coating and cathodic protection, then USOR will demonstrate in the Plan that the corrosion protection installed will provide equivalent environmental protection…." CHB concludes that this demonstration is missing from the Plan, and requests USOR add procedures and protocols outlining how corrosion protection will be installed on any piping currently without.

In Table 6.5 of this subsection, the Plan states "The condition of the pipe shall also be determined." CHB believes consistency across inspections is key to preventing corrosion, eventual leaks, and spills, and therefore requests that "Pipe Condition" be defined using a rubric-style matrix, allowing all inspection personnel to reach repeatable conclusions.

Subsection 6.3 “Corrosion Detection & Repair Program” states, “Any significant external corrosion is given a more thorough inspection....” CHB requests that “significant” in this instance be defined for both external and internal tank inspections, using a rubric-style matrix, including a work flow outline to be followed if the tank needs to be “reviewed more closely.” This will allow all inspection personnel to reach repeatable conclusions.

Subsection 6.4 “Equipment Repair/Replacement Damage Criteria” is completely lacking *criteria*. Consistent, measurable criteria need to be developed and added to this Plan. Without such criteria, damage inspections are subjective, leaving repair and replacement decisions entirely up to the inspecting personnel. Again, CHB requests that a rubric-style matrix for damage criteria be developed and added to the Plan, allowing all inspection personnel to reach repeatable conclusions.

Subsection 6.6.1 “Pipeline Repairs” referring to the pipeline owned by McChord Pipeline, indicates that the “spill prevention technologies and maintenance requirements are contained in the McChord Pipeline Co. Administration, Operations and Maintenance Manuals.” Again, referencing another manual forces the reader to locate and read another document, creating a barrier to public access, and reducing opportunity for public review and scrutiny, while placing extra burden on maintenance and inspection personnel to locate these documents. This burden increases the chances of delayed or neglected maintenance and inspection, creating more opportunities for leaks and spills.

Subsection 6.6.4 “Cathodic Corrosion Protection System” (and again in subsection 7.7) states that “periodic testing is required to determine if the cathodic protection system is out of adjustment….” CHB requests that “periodic” be defined.

Section 7.0 Current Spill Prevention and Containment Technology

Subsection 7.1.2 “Tank Overfill Prevention” describes the alarm system for tanks reaching overfill, using a wireless signal to transmit tank level data. CHB requests USOR add a contingency plan to this section, outlining how personnel will receive this information should the wireless signal fail. Remaining tanks have local auto-gauges for indicating product level. Product level information is manually entered into the Fuels Manager database. CHB requests USOR add a Quality Assurance/Quality Control protocol to ensure that this information in accurately recorded. This subsection also states tanks not equipped with a high-level alarm system are checked periodically during product transfers to ensure overfill does not occur. CHB requests USOR define “periodically” in this instance. Lastly, this section is missing the following requirements listed under WAC 173-180-630(12b): tank overflow cut-off switches; automatic shutdown systems, and system accuracy. CHB requests the Plan be revised to include this information.

Subsection 7.2.1 “Bulk Tank Secondary Containment” states, “Piping passages through berms are regularly inspected for sufficient seal.” CHB requests USOR define both “regularly” and “sufficient” in this circumstance.

Subsection 7.2.2 “Containment Operation, Maintenance, and Inspection” cites a “secondary field inspection package.” It is unclear if this package is a task-list, but the proceeding items listed appear to be tasks that need to be completed. CHB requests that USOR develop and include in this Plan, a task-list of the items listed in Item #4. Lastly, the Plan indicates that herbicide is applied throughout the facility to control vegetation. CHB requests the Plan include what herbicide is being used. CHB requests USOR’s contractor to only use herbicide with ingredients not-harmful to marine life, or use a non-lethal method of vegetation removal.

Subsection 7.2.3 “Storage Tanks Contained on a Facility-Wide Basis” states, “Secondary containment for these bulk storage tanks is provided by the tertiary containment berm….” As stated in WAC 173-180-320(4), secondary containment must provide at least 100% of the working capacity of the largest storage tank within the secondary containment area. This does not satisfy the requirements under this WAC. CHB requests the plan be revised to meet this requirement.

Subsection 7.10 “Rapid Shutdown Procedures” states that pipeline isolation valves “are painted a bright green color to permit easy identification.” CHB requests the Plan include a cleaning and repainting schedule for these valves, to ensure they do not lose their easily identifiable color.

Subsection 7.12 “Refinery Wastewater Treatment System” states, “Drainage from the remaining undeveloped acreage is uncontrolled and not subject to any type of treatment.” Given the proximity of any undeveloped property within the refinery to developed, impervious surfaces, CHB request USOR add stormwater best management practices to all acreage of the refinery, pursuant to WAC 173-180-630(12l).

Subsection 7.13.1 “Rail Car Facilities” states that the First Facility of the 2nd Street Spur Line Rail Car Facilities is not regulated by the Spill Prevention Control and Countermeasures plan because it only contains liquefied petroleum gas. WAC 173-180-025(21) defines oil or oils as, “any kind that is liquid at atmospheric temperature and pressure and any fractionation thereof, including, but not limited to, crude oil, petroleum, gasoline, fuel oil, diesel oil, oil sludge, oil refuse, biological oils and blends, and oil mixed with wastes other than dredged spoil. Oil does not include any substance listed in Table 302.4 of 40 C.F.R. Part 302 adopted August 14, 1989, under section 101(14) of the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by P.L. 99-499.” Liquefied petroleum gas meets the definition of an oil pursuant to the WAC, and is not included in the aforementioned table, therefore, is subject to regulation by this Plan. Especially given liquefied petroleum gas’ ability to gasify when released from a pressurized container, creating a fire and explosion risk, CHB requests USOR add language to the Plan describing the maintenance and inspection program, and spill prevention technology in place at the 2nd Street Spur Line Rail Car First Facility.

Subsection 7.21.6 [McChord Pipeline] “Leak Detection System” states that if “…the jet volume difference between the jet gallons received at JBLM and the jet gallons sent from the USOR pump station…. exceeds 2000 gallons,” transfer operations will shut down. Given that this

drop in volume could signify a leak, this is an unacceptable loss of oil. CHB requests justification for selecting 2000 gallons as the threshold for initiating a shut down and leak investigation.

Section 10.0 Potential Spill Scenarios

Subsection 10.1.2 "Storage Tank Rupture" indicates that tank rupture is improbable. CHB requests the Plan include language on how spilled material will be moved and transferred from containment infrastructure, in the event of storage tank rupture.

Subsection 10.1.4 "Transfer Lines" states, "…certain other transfer lines are routed through undeveloped areas of the refinery. Discharges from these transfer lines could be released to drainage ditches that discharge off site." As noted above in subsection 7.12, the Plan states, ""Drainage from the remaining undeveloped acreage is uncontrolled and not subject to any type of treatment." Given that there are indeed transfer lines running through the "undeveloped" acreage of the refinery, and therefore an oil leak or spill is probable, CHB requests that a wastewater treatment system be installed in these undeveloped areas, and language describing the method of treatment be added to subsection 7.12. Additionally, subsection 10.1.4 needs to address what materials are discharged "off site." Have these materials been treated? Define "off site."

Appendix C Oil Release Chronology Support Documentation

Under Checklist of Spill Response Operations, emergency response personnel are directed to, "Notify appropriate agencies, USOR personnel and spill response contractors (See Appendix C). Referencing the appendix this checklist is contained in is at best confusing, and at worst leads to delays in notification of the appropriate emergency response agencies. CHB requests this step of the checklist reference a page number in the Plan where these contacts can be found. Additionally, the Puyallup Tribe of Indians should be added to the Agency Notification List on page C-6. Citizens for a Healthy Bay should be added to the local agencies list, especially given our proximity to US Oil and our bay patrol vessel which houses containment booms.

Appendix D Risk Analysis (RA) Report

Subsection 1.5 "Natural and Human Error Hazards" states, "Whether containments would retain their integrity has not been addressed in this risk analysis. The probability of a tank failure due to an earthquake is near zero." It is entirely unclear then, how USOR determined that the risk of tank failure due to an earthquake is zero, if no risk analysis has been done. CHB requests documentation for determining this near-zero tank failure probability. Secondly, the RA states, "If additional seismic improvements were identified, the work has been completed or is scheduled...." CHB believes if seismic improvements have been identified, USOR should be aware of them, and requests that information be added to the maintenance and inspection chapter of this Plan.

Subsection 5.1 "Natural and Human Error Hazards – Rain Storms/Flooding/Lightning" reports that the USOR perimeter road parallel to the Blair Waterway is 17 feet elevation, while the worst possible one hundred-year tide is 15.5 feet elevation. This suggestion that USOR is protected from extreme flooding does not incorporate projections from climate change and sea

level rise. Commencement Bay is particularly vulnerable to sea level rise and increased episodic flooding due to climate change. CHB requests USOR reassess this risk, and add language to Section 7 of the Plan to address infrastructure integrity and containment challenges given a variety of sea level rise and increased flood projection scenarios.

We hope these comments are useful in preparing an improved plan. This plan is not yet one that CHB believes will be adequate in preventing and responding to spills. Please contact me if there are questions regarding my comments. Thank you for the opportunity to provide feedback on U.S. Oil & Refining Co. Updated Oil Spill Prevention, Control and Countermeasures Plan.

Sincerely,

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