BP Cherry Point Refinery – NPDES Permit No. WA0022900

Phillips 66 Ferndale Refinery – NPDES Permit No. WA0002984

Intalco Aluminum Corporation – NPDES Permit No. WA0002950

Supplemental Fact Sheet
November 4, 2015

Whole effluent toxicity (WET) testing is a form of biological monitoring to determine if a wastewater discharge will have toxic effects on organisms that are similar to or the same as those in the receiving water. WET testing is used because it is not possible to develop water quality standards for all of the toxic pollutants possibly found in wastewater discharges. WET testing is also the only method available for assessing the toxic interaction of pollutants.

In 2012, three environmental organizations appealed language in the wastewater discharge permit for the BP Cherry Point Refinery. The language allowed the refinery to remain in compliance with the permit after failing a whole effluent toxicity test, as long as BP took certain subsequent measures. The permit required BP to conduct additional testing to confirm the presence of toxicity and if present, submit a plan to identify the cause of the toxicity and proposed measures to reduce or eliminate it.

The environmental organizations also appealed the wastewater discharge permits for the Phillips 66 Ferndale Refinery and the Intalco Aluminum Corporation.

In July 2015, the Court of Appeals ruled that a single failed WET test, not deemed anomalous by the Department of Ecology, is a violation of the permit. The Court's ruling is narrow and applies only to compliance testing in permits for which there is an acute or chronic WET limit.

The Department of Ecology (Ecology) has revised the BP, Phillips 66, and Intalco permits in response to the Court's ruling. These revisions are discussed in more detail below.

PROPOSED PERMIT CHANGES

<u>BP Cherry Point Refinery</u>

BP has an acute WET limit at Outfall 001 but not a chronic limit. Permit Conditions S7.B. and S7.D. were revised to incorporate new language to reflect the Court's decision.

<u>Phillips 66 Ferndale Refinery</u>

Phillips has a chronic WET limit at Outfall 001. Their NPDES permit does not currently include an acute WET limit. However, it does require an acute effluent characterization at Outfall 001. Effluent characterization is used to determine whether a reasonable potential exists to require a

WET limit. Depending upon the results of this testing, Phillips may be assigned an acute WET limit at Outfall 001. Permit Conditions S7.C, S7.E, S8.B, and S8.D. were revised to incorporate new language to reflect the Court's decision.

Intalco Aluminum Corporation

The Intalco NPDES permit does not currently include acute or chronic WET limits. However, it does require an acute effluent characterization at Outfall 001 and a chronic effluent characterization at Outfalls 001 and 002. Effluent characterization is used to determine whether a reasonable potential exists to require a WET limit. Depending upon the results of this testing, Intalco may be assigned one or more WET limits. Permit Conditions S15.C, S15.E, S16.C and S16.E. were revised to incorporate new language to reflect the Court's decision.

PUBLIC INVOLVEMENT INFORMATION

Ecology proposes to modify the NPDES permits for BP, Phillips 66, and Intalco. The Department will publish a Public Notice of Draft Modification on November 4, 2015 in the Ferndale Record-Journal to inform the public that the draft modified permits and fact sheet are available for review.

Interested persons are invited to submit written comments regarding the proposed changes to these permits. The draft modified permits and supplemental fact sheet are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the Ecology offices listed below.

Department of Ecology
Industrial Section
300 Desmond Drive
Lacey, WA 98503
(360) 407-6916

They are also available at the Anacortes Public Library and online at https://fortress.wa.gov/ecy/industrial/UIPermit/DraftPermits.aspx.

Written comments on the BP and Phillips 66 permits should be mailed to:

Liem Nguyen
Department of Ecology
Industrial Section
P. O. Box 47600
Olympia, WA 98605-7600
liem.nguyen@ecy.wa.gov

Written comments on the Intalco permit should be mailed to:

Judy Schwieters
Department of Ecology
Industrial Section
P. O. Box 47600
Olympia, WA 98605-7600
judith.schwieters@ecy.wa.gov

Comments should reference the specific text followed by the requested change or concern when possible. **Ecology will only consider comments that pertain to the proposed permit changes.**

Ecology will consider all comments received within thirty (30) days from the date of public notice of the draft permits indicated above, in formulating a final determination to modify the permits. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in these permits.

Further information on the proposed changes to the BP and Phillips 66 permits may be obtained from the Department by telephone at (360) 407-6955 or by writing to the address listed above.

Further information on the proposed changes to the Intalco permit may be obtained from the Department by telephone at (360) 407-6942 or by writing to the address listed above.

WASHINGTON STATE DEPARTMENT OF ECOLOGY
RESPONSE TO PUBLIC COMMENTS

Alcoa Primary Metals Intalco Works
4050 Mountain View Road
Ferndale, Washington 98248

NPDES Permit No. WA0002950
February 25, 2016

Whole effluent toxicity (WET) testing is a form of biological monitoring to determine if a wastewater discharge will have toxic effects on organisms that are similar to or the same as those in the receiving water. WET testing is used because it is not possible to develop water quality standards for all of the toxic pollutants possibly found in wastewater discharges. WET testing is also the only method available for assessing the toxic interaction of pollutants.

In 2012, three environmental organizations appealed language in the wastewater discharge permit for the BP Cherry Point Refinery. The language allowed the refinery to remain in compliance with the permit after failing a whole effluent toxicity test, as long as BP took certain subsequent measures. The permit required BP to conduct additional testing to confirm the presence of toxicity and if present, submit a plan to identify the cause of the toxicity and proposed measures to reduce or eliminate it.

The environmental organizations also appealed the wastewater discharge permits for the Phillips 66 Ferndale Refinery, Tesoro Anacortes Refinery, and the Intalco Aluminum Corporation.

In July 2015, the Court of Appeals ruled that a single failed WET test, not deemed anomalous by the Department of Ecology, is a violation of the permit. The Court's ruling is narrow and applies only to compliance testing in permits for which there is an acute or chronic WET limit.

The Department of Ecology revised the BP, Phillips 66, Tesoro, and Intalco permits in response to the Court's ruling and published a Public Notice of Draft Modification for those permits on November 4, 2015 in the Ferndale Record-Journal and Anacortes American. The notice was published to inform the public that the draft modified permits and fact sheets were available for review at the Department of Ecology in Lacey Washington; the Bellingham, Ferndale, and Anacortes Public Libraries; and online at https://fortress.wa.gov/ecy/industrial/UIPermit/DraftPermits.aspx. The notice also stated that further information could be obtained from Ecology by telephone at (360) 407-6942 or in writing.

Ecology invited the public to review the draft documents for 30 days. The deadline for submittal of written comments was December 07, 2015.

PROPOSED PERMIT CHANGES

The Intalco NPDES permit does not currently include acute or chronic WET limits. However, it does require an acute effluent characterization at Outfall 001 and a chronic effluent characterization at Outfalls 001 and 002. Effluent characterization is used to determine whether a reasonable potential exists to require a WET limit. Depending upon the results of this testing, Intalco may be assigned one or more WET limits. Permit Conditions S15. and S16. were revised to incorporate new language to reflect the Court's decision.

Comments were received from:

1. Barry Hullett, Intalco
2. Merle Jefferson, Lummi Natural Resources
3. Katelyn Kinn, Puget Soundkeeper Alliance and Marcie Keever, Friends of the Earth
4. Carol O 'Hearn, Anacortes resident

Internal comments were also received from Ecology's Water Quality Program.

All of the comments received are included in this document. Comments appear in regular text, followed by Ecology's response in italicized text. Ecology will send a copy of this response to comments to each individual who provided comments.

Comments from Intalco (1.)

1. Intalco Aluminum Corporation and Alcoa Inc. (collectively, "Alcoa" or the "Company") submits these comments to Washington State Department of Ecology ("Ecology") on the proposed modification to the National Pollutant Discharge Elimination System (NPDES) wastewater permit for the Intalco aluminum smelter, pursuant to a recent ruling by the Court of Appeals on an appeal to the Whole Effluent Toxicity (WET) testing in the BP permit.

   Alcoa carefully reviewed the aforementioned Draft NPDES permit, fact sheet, and the associated technical support documents. Accordingly, Alcoa respectfully submits the following comments particularly on Ecology's guidance on anomalous test results criteria.

   The WET testing provisions of the Draft NPDES permit provides that sampling and reporting for toxicity testing is conducted in accordance with the most recent version of Ecology Publication No. WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria ("aka the canary manual").

   In defining anomalous test results criteria, the canary manual specifies, in part, that "Labs should not cluster test concentrations just above the ACEC or CCEC in order to increase

the opportunity for an anomalous test result". See last paragraph of item 1, on page 59 of said document.

While Alcoa recognizes and supports Ecology's intent to minimize the creation of test conditions that artificially produce anomalous test results, the company believes that additional data points that encompass the ACEC or CCEC would result in a more reliable dose-response relationship. This position is based on the tremendous body of work in the field of toxicology regarding the number of doses, spacing of test concentrations, and the number of organisms per dose necessary to yield high confidence in particular responses at specific concentrations. Against that background, the company is requesting that the referenced language above (i.e. italicized and bold), be revised to offer the flexibility for additional dilutions and/or replication necessary to enhance study accuracy and WET testing compliance determinations.

Alcoa's proposed language is: *Labs should not cluster test concentrations just above the ACEC or CCEC as it may increase the opportunity for an anomalous test result. However, use of additional test concentrations and/or replicates to improve WET testing compliance determinations is not discouraged.*

We appreciate the opportunity to provide these comments and hope that Ecology will contemplate them in determining anomalous test result criteria.

Alcoa's proposed language is a change to the Canary Book not to the WET permit language. Ecology is in the process of updating the Canary Book and will consider this comment during that process.

Comments from Lummi Natural Resources (2.)

2. The Lummi Natural Resources Department supports the recent Court of Appeals ruling that a failure of a single "Whole Effluent Toxicity" (WET) test constitutes a permit violation, requiring an investigation of toxicity. According to your comment notice, this applies if the test is not determined to be anomalous (unreliable results due to testing problem).

   In areas adjacent to these NPDES wastewater discharges, we believe maintaining a high level of near shore marine water quality is essential. These locations are important spawning beds for Pacific Herring whose eggs must incubate in these waters for several weeks prior to hatching. Larval forms of other forage fish like surf smelt and sand lance (important prey items for juvenile salmon), manila clams, and crab are other important marine resources found along these shorelines which require a high standard for water quality in order to survive.

In addition, bio-concentration of toxins may lead to increased disease, impacts on growth and reproductive impairment. Chronic or acute toxic events at these industries can be transported via contaminated zooplankton prey, larval fish, and juvenile or adult fish advection/migration to a much larger regional area. This expands the impact on other predator species which include halibut, other predatory fish, sea birds, marine mammals and humans.

Initiating an investigation to determine the source of toxicity following a WET test failure is an appropriate response and should be a high priority. If the source of toxicity can be found, it may be possible to correct a problem and improve operations so as to minimize ' future occurrences.

Comments noted.

Comments from Puget Soundkeeper Alliance/Friends of the Earth (3.-4.)

3. Puget Soundkeeper Alliance and Friends of the Earth offer this letter simply to express support of the proposed permit changes. The revisions appear to reflect the July 2015 Court of Appeals of Washington decision in Puget Soundkeeper Alliance v. Washington State Pollution Control Hr'gs Bd, 189 Wn. App. 127, 356 P.3d 753 (2015) requiring specification that a single failed WET test, not deemed anomalous by the Department of Ecology, establishes a violation of the NPDES permit.

   Comments noted.

4. In addition, signatories would like to draw your attention to what we believe to be a typo on page 51. Should the headings for Sl6.B.l and S.16.B.2 be identical (both "Outfall 001 Effluent Limit for Chronic Toxicity")? Or, is S16.B.2 supposed to read "Outfall 002 Effluent Limit for Chronic Toxicity"? Please revise to avoid confusion.

   Condition S16.B.2 was revised to read "Outfall 002 Effluent Limit for Chronic Toxicity".

Comments from Carol O 'Hearn, (5.-9.)

5. Please consider this letter my formal request to become a party of record for any further actions in relation to this issue.

   Your name has been added to the list of interested parties that Ecology notifies for actions related to the Intalco NPDES permit.

6. I am in favor of the Court of Appeals ruling which decided that failure of a single Whole Effluent Toxicity (WET) test is a permit violation, if Ecology finds the test is not

anomalous. It seems only common sense that a single WET test failure should, indeed, be considered a violation of the National Pollutant Discharge Elimination System. This requires the smelter to investigate the toxicity. A failed WET test confirms that the effluent is lethal to fish species. It is necessary for this zero tolerance stance because fish and wildlife have zero tolerance.

Comments noted.

7. It has previously been established by Washington state officials that the Intalco aluminum smelter in Ferndale is the fourth highest polluter in the state. And it has been allowed to "legally" discharge tons of pollutants annually into the Strait of Georgia. Because of the ebb and flow of tides that wastewater does not stay in the strait. It spreads to Lummi Bay, Fidalgo Bay, Padilla Bay, the Salish Sea and beyond.

   This previously "legal" pollution is unacceptable and defies simple logic. I ask that any investigations and subsequent permit violations of this smelter be made a matter of public record and released to the media since these are now enforceable violations.

   Intalco's permit was written to ensure compliance with the laws of the state of Washington and to protect water quality. It requires Intalco to conduct regular monitoring to demonstrate compliance with the limits and conditions of the permit.

   Intalco's violation and enforcement records can be viewed in Ecology's Water Quality Permitting and Reporting Information System (PARIS). PARIS can be accessed by the public via the following link:

   https://fortress.wa.gov/ecy/wqreports/public/f?p=110:1:6393075762758570

   Ecology is working on a new version of PARIS that will include WET test results (including failed tests), the results of subsequent investigations, and any actions taken by Ecology.

8. According to an article in the Seattle Times on Nov. 8, 2015, Intalco will idle its smelter in Ferndale and effectively shut it down. Don't allow Alcoa's announced closure, to let them off the hook for enforcing the Clean Water Act, because announcing the closure and actually closing it and leaving the area are two different aspects. Until Intalco leaves, it is still responsible for the tightened restrictions and following the Clean Water Act. It is still responsible for any violations.

   Intalco's NPDES permit will remain in effect during curtailment and the limits and conditions of the permit will continue to apply. Ecology is planning to modify Intalco's permit to defer several study requirements during curtailment. Ecology will notify the public of the opportunity to review and comment on the proposed permit modification.

9. A recent article in The Seattle Times on Nov. 15, 2015 cited a new analysis of the inland waters of Washington and British Columbia published this fall. It puts the region's total number of varied fish species at 253, including 37 species never before documented in the Salish Sea. The Salish Sea covers 6500 square miles and includes Puget Sound, the Strait of Juan de Fuca and the Strait of Georgia. It can reach depths of close to half a mile in places.

   The Cherry Point Aquatic Reserve near the Canadian border is sensitive habitat for Pacific herring, an essential food source for birds, mammals and larger fish. The Cherry Point herring population is identified as crucial for recovering Chinook salmon and Southern Resident Orca Whales. The herring population has declined by 90 percent since 1973. Coincidentally, the BP oil refinery at Cherry Point began operation in 1971. It discharges stormwater to Terrell Creek that flows to Lummi Bay. And, like Intalco, it discharges wastewater and stormwater into the Strait of Georgia.

   Closer to my home, in Padilla Bay just south of Lummi Bay, there are 8,000 acres of eelgrass beds, salt marshes, tidal flats and upland fields. Padilla Bay is an important ecological area and is a treasured source of salmon, shellfish, Pacific herring, crabs and other wildlife. Adjacent to Padilla Bay is Fidalgo Bay, also south of Lummi Bay. The heron colony on Fidalgo Island is one of the largest on the West Coast and the neighboring wet lands are foraging grounds for over 300 nests. There are numerous bald eagle nests. Eagles, plus herons, as well as other waterfowl use the bays to fish for food.

   In conclusion, I am deeply concerned about the potential for accidents, oil spills and other devastating impacts that would negatively affect Anacortes, Skagit County, Whatcom County and the Salish Sea. The Department of Ecology is delegated by the EPA to implement the federal Clean Water Act and must also comply with federal rules to maintain the integrity of public waters. It stands to reason that a single WET test failure is a violation of water quality standards and, therefore, of the permit. It's time to protect the people and the environment. Do not let industrial polluters off the hook for Clean Water Act violations to accommodate polluters' economic interests. I am not willing to be collateral damage for the economic benefit of Intalco.

   Intalco's permit requires them to take precautions to prevent spills to ground or waters of the state. The permit requires Intalco to have a response mechanism in place to prevent or minimize environmental impacts in the event of a spill. Also, see Ecology's response to Comments 7 and 8 above.

Comments from Ecology's Water Quality Program (10.)

10. The BP Cherry Point Refinery commented that the wording in the WET permit conditions be clarified to state that anomalous test results shall not be used to determine compliance with a WET limit. The Water Quality Program agreed and is making changes to the acute and chronic WET conditions in the NPDES permit template that will apply to all industrial dischargers.

    The anomalous test results section in Conditions S15. and S16. of Intalco's permit were revised to make this clarification.

11. Industrial Section staff observed that the permit number in the NPDES permit (WA000295) was incorrect – it was missing a zero at the end of the number.

    The incorrect permit number was replaced with the correct permit number (WA0002950).