



Oregon

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Re: DEQ comments on EPA's Draft Re-Proposed NPDES General Permit (WAG520000) Offshore Seafood Processors Discharging in Federal Waters off the coast of Washington and Oregon

Dear Ms. Gockel:

Thank you for your letter of November 7, 2016 giving the Oregon Department of Environmental Quality the opportunity to comment on the draft EPA is re-proposing of the NPDES General Permit for Offshore Seafood Processors in Federal Waters off the coast of Washington and Oregon. As your letter states, EPA believes that seafood waste discharged under this General Permit could potentially affect waters of the State of Oregon and so, in accordance with CWA Section 401 (a)(2) has provided Oregon with a preliminary draft permit and Fact Sheet for our review prior to the public comment period.

A previous draft of the permit and fact sheet with accompanying documents was proposed in the Federal Register in August of 2015. The draft permit currently in preparation for re-proposal includes some changes summarized in your letter. However, the environmental protection afforded by this permit is still of concern for Oregon waters as follows:

1. The practice of grinding and dumping of seafood heads, guts, and carcasses, even while the ship is moving, is insufficient treatment because it will result in significant Biological Oxygen Demand (measured as BOD5) discharged in federal waters. Those discharges will reach state waters due to known onshore currents. The BOD5 will reduce Dissolved Oxygen (DO) in state waters which is a violation of our state water quality criteria for DO.

Based on Oregon DEQ's experience permitting shore based seafood processors, we offer the following information. The ratio of waste fish solids to raw product has been reported in Discharge Monitoring Reports (DMRs) as 40 to 50% when mechanical and hand fillet is occurring or as 50 to 65% when hand fillet only occurs (based on land based processors, using 2 years of DMRs). The large offshore processing vessels, which stay at sea until full, reportedly have total capacities such as 14,000 metric tons of finished product.¹ Using the lowest waste percentage (40%) from our shore based records, the raw weight processed on these vessels would be some 23,300 metric tons and, similarly, the waste material would be at least 9,300 metric tons per vessel per trip. These vessels also have equipment to process residuals into usable by-products but may only have capacity for 300 metric tons of the residuals products.¹ Therefore, the total solids discharged at sea as ground chunks or in slurry forms such as fishmeal "stickwater" would be in excess of 9000 metric tons of solids discharged in wastewater per vessel per trip.

¹Specifications for American Seafoods' vessel *Northern Jaeger*, given at this link.
<http://americanseafoodscompany.com/vessels/northern-jaeger>

These vessel production capacity numbers, reported in pounds of fish products, are also associated with significant discharged volumes of wastewater. The volume of wastewater generated during land based processing (hand fillet and mechanical), has been 600-800 gallons per metric ton processed. When cooked and peeled shrimp or cooked crab is considered, flows have been reported as high as 9000 gallons per metric ton processed. (As reported by onshore processors on DMRs for two years of data analyzed).

Wastewater from typical shore based seafood processing, without any ground solids and screened by 40 mesh screens, has been reported with averages over 1500 mg/L BOD5 and peaks as high as 8000 mg/L BOD5 (based on land based processors, using 2 years of DMRs). With the added material from grinding fish solids the BOD5 discharged by ship board processors will be significantly higher in concentration than those with no ground solids. Without advanced treatment, the wastewater discharged from fishmeal and other residuals processing has been reported with values averaging 50,000 mg/L and as high 90,000 mg/L BOD5 (based on land based residuals processor with no advanced treatment, using 2 years of DMRs). Thus, the wastewater and solids mixture from these processes would be high volume and high concentration and must be considered a significant source of BOD5.

As reported in the draft EPA Fact Sheet accompanying the General Permit², the process called Ekman transport seasonally moves oxygenated surface waters offshore while deeper waters (from more than 100 m depth) move shoreward upwelling onto the continental shelf. That upwelling deep water is low in dissolved oxygen and contributes to seasonal hypoxia in state waters. The Fact Sheet reports documented incidences of hypoxia (*reduced* dissolved oxygen conditions) and anoxic (*depleted* dissolved oxygen, [less than 0.5 mg/L; the USGS definition of anoxic conditions]) off Oregon and Washington coasts. These events have been accompanied by "mass die-offs of fish and invertebrates including Dungeness crab."²

The effect of the vessel discharges allowed by the permit would be an increased BOD5 load that would reduce the dissolved oxygen in the deep water prior to transport into state waters and would continue to decrease the dissolved oxygen subsequent to the upwelling into state waters. The currents may also entrain some of the discharged solids which will decay further lowering dissolved oxygen. Thus, these discharges will result in lowering dissolved oxygen in state waters which is contrary to Oregon water quality standards. The Oregon water quality criteria for dissolved oxygen states (in OAR 340-041-0016) "No wastes may be discharged and no activities may be conducted that either alone or in combination with other wastes or activities will cause violation of the following standards: (6) For ocean waters, no measurable reduction in dissolved oxygen concentration may be allowed." Since the criterion is no measurable reduction in dissolved oxygen, no further biological oxygen demand (BOD5 load) should be allowed.

These proposed vessel discharges to federal waters should not be permissible due to their readily predictable impact on state waters in violation of the Oregon state water quality criteria for dissolved oxygen in state ocean waters.

2. Further, it is a basic tenet of the CWA and State statute that it is not permissible to issue permits allowing discharges containing parameters for which the receiving water is impaired. Oregon does not have jurisdiction over the federal receiving waters of this discharge. However, the documented frequent and severe incidences of hypoxia and anoxia indicate there is no assimilative capacity in the federal or the state waters for oxygen demanding organic matter. Lack of assimilative capacity should be grounds for no further degradation of these important waters. Aquatic life forms in state waters are already at risk due to known anoxic/hypoxic conditions. Requiring the vessels to discharge while moving only provides greater dispersal of the pollutants but does not reduce the organic load for which there is no assimilative capacity.

² Preliminary Draft EPA Offshore Seafood Fact Sheet, NPDES Permit WAG52000, draft 11-3-13; pp 4-13.

The Oregon state waters should be considered as impaired for Dissolved Oxygen with no assimilative capacity for oxygen lowering pollutants. The federal EPA should not issue a permit that will allow discharge of significant BOD5 in federal ocean waters known to travel on shore into impaired state waters.

3. The technology based standard of grind and dump fish solids is consistent with the Effluent Limitation Guidelines (ELGs) applicable to Remote Alaska. Those ELGs are significantly less stringent than the Effluent Limitation Guidelines applied anywhere else in US waters including the west coast. The acceptability of those guidelines in Alaskan waters rests with two reasons that do not apply to the coast of Oregon.

The Remote Alaskan ELGs are for *remote* areas: where there are no large human communities on shore and thus no anthropocentric sources of pollution. This is not true of Oregon where there are on shore activities including ocean outfalls from NPDES permitted sources. The area of Alaskan coast is vast and remote fishing is many more miles from on-shore support or treatment systems.

The tidal action in Alaska is very highly energetic hydraulically, far in excess of the Oregon conditions. Conversely, the hydraulics in Oregon, are typically not nearly as energetic and include areas characterized as sluggish.³ **In the absence of these bases, the Effluent Limitation Guidelines applicable to Remote Alaska are not reasonable guidelines for EPA to apply to the West Coast and Non-Alaskan fish processing industry.**

4. **Finally, proposing this permit with its permissive discharge limits and lack of required wastewater treatment represents an unfair advantage to ocean vessels over shore based processors and over smaller vessels operating within the territorial sea. The vessel permittees should be held to the equivalent of New Source Performance Standards or at very least the Best Practicable Control Technology for existing sources.**⁴

Thank you for considering our comments. If you have further questions, please contact Mer Wiren, P.E. at 503-229-5292.

Sincerely,



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³ Oregon Department of Fish and Wildlife, letters dated 10-8-15 and 12-9-16 regarding Stonewall Bank.

⁴ 40 CFR, Part 408, Subparts R, S, U, V, and AF.

