Port of Astoria

Board of Commissioners

422 Gateway Ave, Suite 100
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Workshop Session

September 17, 2024 at 4:00 PM
422 Gateway Ave, Suite 100

The meeting location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired or for other accommodations for persons with disabilities should be made at least 48 hours before the meeting by calling the Port of Astoria at (503) 741-3300.
*This meeting will also be accessible via Zoom. Please see page 2 for login instructions.

Agenda

1. CALL TO ORDER
2. ROLL CALL
3. PLEDGE OF ALLEGIANCE
4. CHANGES/ADDITIONS TO THE AGENDA
5. PUBLIC COMMENT
   This is an opportunity to speak to the Commission for 3 minutes regarding any topic. In person, those wishing to speak must fill out a public comment form. Those participating via Zoom may raise their hands during the public comment period.
6. ADVISORY
   a. CBP Update
7. ACTION
   a. Byproduct Recovery Center Treatability Study 3
8. COMMISSION COMMENTS
9. EXECUTIVE DIRECTOR COMMENTS
10. UPCOMING MEETING DATES
    a. Regular Session – October 1, 2024 at 4:00 PM
    b. Workshop Session – October 15, 2024 at 4:00 PM
11. ADJOURN

Please Note:
Agenda packets are available online at: https://www.portofastoria.com/CommissionMeetings/AgendaMinutes.aspx
Please allow time for the normal posting procedure for agendas and meeting packets.

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HOW TO JOIN THE ZOOM MEETING:

Online: Direct link: https://us02web.zoom.us/j/86905881635?pwd=amhtTTBFcE9NUElxNy9hYTFPQTIzQT09
Or go to Zoom.us/join and enter Meeting ID: 869 0588 1635, Passcode: 422

Dial In: (669) 900-6833, Meeting ID: 869 0588 1635, Passcode: 422

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Port of Astoria

COMMISSION MEETING

BRIEFING DATE/TIME:	September 17th, 2024 / 16:00	
DEPARTMENT:	Operations / Business Development	
STAFF CONTACT:	Matt McGrath	
TOPIC:	Byproduct Recovery Center – Treatability Study	
PURPOSE:		Information only
Check all that apply	X	Decision needed
		Follow up from previous briefing

BACKGROUND & OVERVIEW OF SURROUNDING ISSUES:

On August 20, 2024, the Port Commission approved a proposal which outlined SLR International's completion of a Feasibility Study ("FS") for a potential Byproduct Recovery Center ("BRC"), which will complement seafood processing operations at the Port. Pursuant to and in tandem with that approval, the Port now seeks to complete a Treatability Study ("TS") for the BRC. Whereas the FS will be focused on components such as constructability, production rates, wastewater flow, permitting and the like, the TS to be completed by Aqua Terra Consultants ("ATC") is necessary for a holistic BRC evaluation. Consider the following from Steven Hammer, Manager of Process Engineering at SLR:

- The feasibility of meeting metals limits is unknown at this time. We have limited data on the metals in the tap water, the untreated wastewater, and wastewater that has been treated. Understanding the levels of metals in these three streams is very important to understanding the feasibility of the BRC to meet water quality based effluent limitations (WQBELs).

- It is also unknown how feasible it will be for the BRC to meet bacteria (Enterococcus) WQBELs. I understand that ATC's treatment technology holds promise for treating the wastewater for bacteria.

- ATCs technology will also reduce levels in wastewater of biochemical oxygen demand (BOD), total suspended solids (TSS), and oil and grease (O&G). In this way, it is similar to dissolved air flotation. However, it appears that it may be possible, with ATC's technology, to do this without the use of polyacrylamide polymer treatment chemicals, which can contain free acrylamide, which is toxic. Thus, the treatment sludge from ATCs equipment should have more potential use as byproduct, i.e. a goal of the BRC. Understanding the effectiveness of ATC's technology in removing these parameters and how much sludge would be generated is a key to evaluating the feasibility of its use at the BRC.

- SLR will require ATCs assistance in developing and evaluating cost estimates and conceptual designs for a treatment system that incorporates ATCs technology for the BRC.

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COMMISSION MEETING

DOCUMENTS ATTACHED:
Aqua-Terra Consultants – Treatability Study Scope **Treatability Solutions – Processor and Private Investments to date**
SUMMARY & FINANCIAL IMPACT:
Total cost of Treatability Study is $80,000.
NEXT STEPS/TIMEFRAME: *Based on the Commission's recommendation, describe the next steps required in order to bring this item to conclusion. Include the time frame for each step.*
Approve the TS Scope with ATC and begin work immediately. STAFF RECOMMENDATION: Da Yang Seafoods, Bornstein's Seafoods and Aqua Terra Consultants have invested over $3 million in attempts to meet fickle permit requirements mandated by DEQ. It is staff's recommendation to authorize this study to demonstrate alignment with the seafood processing industry's desire for long-term, sustainable, and environmentally conscious outcomes.

Port of Astoria By-Product Recovery Center (BRC) Treatability Study

Background:

Seafood processing plants in Oregon are facing new permit limits that will be difficult to meet. In particular are the limits for bacteria. At this moment in time, meeting these limits will require the removal of most of the organic material, oil and grease, and suspended solids from the process waters. Regardless of the disinfection process selected, the treated process water will need to be low in turbidity and high in UV transmittance. Using conventional wastewater treatment technologies, achieving the bacteria limit will be very costly, require more square footage than is available, and will likely produce a toxic sludge that must be land filled.

Aqua-Terra Consultants (ATC) was retained by one of the seafood processors to study and characterize their process waters generated by the multiple processing lines and products. The data indicates that there was significant variability in the quantity and quality of process waters which can adversely affect cost and performance of a treatment system. The same would be true if multiple plants combined their process waters for treatment at a centralized location and hence, the need for a Treatability Study for the combined process waters.

There are 3 seafood processing plants in Astoria and one seafood rendering plant that are all facing the same issues. The Port of Astoria is proposing to build and operate a By-Product Recovery Center (BRC) that would accommodate the process waters from all the plants that are near the Port. One centralized treatment plant will be more cost effective and efficient. It will also provide greater flexibility to blend the process waters to improve treatability.

As a first step, the Port is planning to retain the services of SLR International Corp. and Aqua-Terra Consultants. This proposal from ATC covers the Treatability Study. The objective is to determine how the process waters generated by each company affects the treatability of the combined process waters and to propose a preliminary by-product recovery system design for the BRC. The information from the Treatability Study will be incorporated by SLR into the BRC Infrastructure and Impact Study (Feasibility Study).

NOTE: In order to complete this Treatability Study this year, the sampling and testing must be completed before the end of the processing season which is generally mid-October. Availability of fish and shrimp decreases as the season winds down and may decrease the opportunities to sample during full production and/or multiple species processing.

Scope of Work:

- Sample the effluents from the seafood and rendering plants to determine the combined pollutant profiles. Five composite samples will be collected from each facility and will be blended by the percentage of the total flow for that sample day or based on historical flows. Some of the analyses will be run onsite and some will be sent to a certified lab.
- Jar test the individual plant effluents and the combined effluents to determine the treatability.
- Determine which effluents to treat separately for optimal treatment, if needed.
- Pilot test the best stream(s) for optimal treatment using Advanced Foam Separation (AFS) to determine the achievable pollutant reduction (note – this will depend on the feasibility of

sending sufficient effluent for blending from each plant to the Pilot Plant currently in Astoria.

- Prepare a preliminary design for the BRC treatment system based on the data collected.
- Determine the feasibility of combining the recovered solids from the treatment system with wood waste to make a high quality compost or using vermiculture to make a high quality soil amendment.

Budget:

The billable hours for the onsite sample collection, onsite analyses and testing	$38,400
The onsite testing reagents and certified lab fees	$15,000
The billable hours for data analysis and generating the study report	$26,600
TOTAL	**$80,000**

Costs for Research and Testing of Existing Technologies, and for Developing and Testing of a New Technology
2021 to 2024

DA YANG SEAFOOD

Year	Billable Conuktzing Time & Expenses (including chemicals, food and lodging)
2021	$71,204.72
2022	$291,277.22
2023	$466,418.93
2024	$84,134.56
	$913,035.43

Treatment Works Upgrade

New internally fed rotary screen:

$100,000.00

Total investment by Da Yang:

$1,013,035.43

AQUA-TERRA CONSULTANTS

Forfeited AFS Pilot Rental Cost:

D.A.F. Rental Costs ($10K per month for 3 month season)

2022	$30,000.00
2023	$30,000.00
2024	$30,000.00
	$90,000.00

ATC R&D No-Charge time:

2021	$27,770.00
2022	$87,755.00
2023	$77,092.50
2024 (Jan - June)	$0.00
	$192,617.50

Capital costs for lab equipment and Pilot Plant:

$250,000.00

Total Investment by ATC:

$532,617.50