

**EXH. RJR-21
DOCKET UE-22 ___/UG-22 ___
2022 PSE GENERAL RATE CASE
WITNESS: RONALD J. ROBERTS**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

**Docket UE-22 ___
Docket UG-22 ___**

**TWENTY-FIRST EXHIBIT (NONCONFIDENTIAL) TO THE
PREFILED DIRECT TESTIMONY OF**

RONALD J. ROBERTS

ON BEHALF OF PUGET SOUND ENERGY

JANUARY 31, 2022



Paste Plant Dewatering Project

SYSTEM DESCRIPTION SUMMARY

JANUARY 12, 2021

System Process Design Steps

1. Thicker underflow pumps located in the 3&4 Paste Plant will pump thickened tailings from the PPSM's to either of two agitated filter feed tanks. One filter feed tank and agitator will be operating, while the other tank and agitator will be standby for maintenance operations.
2. One operating filter feed pump will draw thickened tailings from the operating filter feed tank and pump the slurry to the recessed chamber pressure filters. Two of the filters will be operating and two will be standby. The filter feed pump will only feed one of the two operating filters at a time. When not feeding a filter, the pump will recirculate slurry to the feed tank. To reach the target cake moisture, the filtration cycle will have a form step followed by an air blow drying step.
3. An air compressor will provide compressed air to the filter air receiver. The filter cycles will be staggered to allow the air receiver to be recharged for the air blow drying step for the second operating filter.

System Process Design Steps

4. After the air blow drying step, a core wash and core blow cycle push the slurry from the pressure filter core. The core wash slurry is recycled back to the operating filter feed tank through an air separator. When the core wash and core blow are complete, the pressure filters will open to discharge the dry filter cake onto their respective under-filter conveyor.
5. The under-filter conveyors are reversible to transfer the filter cake to one of two takeaway conveyors depending on which take away conveyor is operating. The takeaway conveyor will then transfer the filter cake to their respective truck load out bin which will be used to load haul trucks for material disposal.
6. During the filtration cycle, the filtrate will gravity flow to the agitated filtrate tank. The filtrate return pumps deliver the filtrate to the Clearwell Pond (A Cell). The filtrate pumps will also utilize the filtrate during the core wash cycle and for plant washdown and flushing lines and pumps.
7. The filter clothes are cleaned using a high-pressure cloth wash. The wash water tank will be filled with clean water to be used in the cloth wash cycle. The water then gravity flows to a small settling tank to allow solids to settle before the water is reused in the cloth wash system.

