Appendix A: Additional Excess Thermal Load Limitations

During the term of this permit, a registrant must comply with the applicable temperature excess thermal load limit in the tables below corresponding to the facility's discharge location.

Contents

1) Closed Lake Basin

Alvord Lake Subbasin	
Timeframe when limit applies	June – October
Effluent Limit Needed to Address Excess Thermal Load	$Q_{ed} * (0.14*S_{25} - T_{SP}) * 3.78541$ Where: S_{25} is the critical dilution provided by DEQ at the time of permit assignment Q_{ed} is the maximum design effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

2) Grande Ronde Basin

Upper Grande Ronde Subbasin	
Timeframe when limit applies	June – October
Effluent Limit Needed to Address Excess Thermal Load	$Q_{ed} * (0.14*S_{25} - T_{SP}) * 3.78541$ Where: S_{25} is the critical dilution provided by DEQ at the time of permit assignment Q_{ed} is the maximum design effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

3) Klamath Basin

Upper Klamath and Lake Drainage	
Timeframe when limit applies	June – October
Effluent Limit Needed to Address Excess Thermal Load	Q_{ed} * (0.14*S_{25} - T_{SP}) * 3.78541 Where: S_{25} is the critical dilution provided by DEQ at the time of permit assignment Q_{ed} is the maximum design effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

4) Rogue Basin

Applegate Subbasin	
Timeframe when limit applies	Year-round
Effluent Limit Needed to Address Excess Thermal Load	Q_{ed} * (0.14*S_{25} - T_{SP}) * 3.78541 Where: S_{25} is the critical dilution provided by DEQ at the time of permit assignment Q_{ed} is the maximum design effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

Lower Sucker Creek Watershed	
Timeframe when limit applies	June – September
Effluent Limit Needed to Address Excess Thermal Load	Q_{ed} * (0.14*S_{25} - T_{SP}) * 3.78541 Where: S_{25} is the critical dilution provided by DEQ at the time of permit assignment Q_{ed} is the maximum design effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

Upper Sucker Creek Watershed	
Timeframe when limit applies	June – September
Effluent Limit Needed to Address Excess Thermal Load	Q_{ed} * (0.14*S_{25} - T_{SP}) * 3.78541 Where: S_{25} is the critical dilution provided by DEQ at the time of permit assignment Q_{ed} is the maximum design effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

Lobster Creek Watershed	
Timeframe when limit applies	Year-round
Effluent Limit Needed to Address Excess Thermal Load	Q_{ed} * (0.14*S_{25} - T_{SP}) * 3.78541 Where: S_{25} is the critical dilution provided by DEQ at the time of permit assignment Q_{ed} is the maximum design effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

5) Snake River/Hells Canyon Subbasin

Snake River/Hells Canyon Subbasin	
Timeframe when limit applies	May – September
Effluent Limit Needed to Address Excess Thermal Load	Q_{ed} * (0.14*S_{25} - T_{SP}) * 3.78541 Where: S_{25} is the critical dilution provided by DEQ at the time of permit assignment Q_{ed} is the maximum design effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

6) Willamette Basin

Lower Willamette Subbasin (Columbia Slough and Fairview Creek Watersheds)			
Timeframe when limit applies	Year-round		
File No.	Permit No.	Common Name	Specific Excess Thermal Load (Million Kcal/day)[1]
52638	10451	Herbert Malarkey Roofing Company	5.77
103832	12073	Ventura Foods, LLC	4.03
65610	10618	Owens-Illinois Glass Container Inc. (Owens Brockway)	3.90
103774	12024	Miller Paint Co Inc	1.30
Note: Basis for the TMDL temperature is BBNC.			

Tualatin Subbasin				
Timeframe when limit applies	June – October			
File No.	Permit No.	Common Name	Site Potential Temperature (°F)	Specific Excess Thermal Load (Million Kcal/day)
103777	12029	Pacific Foods	62	1.1
103448	11779	Epson Portland Inc	61.1	0.082
87628	10833	Tektronix	61.1	0.15
108322	14334	Maxim Wafer Fab Operations	61.1	0.13
107618	13556	Henningsen	57.8	0.013
Effluent Limit Needed to Address Excess Thermal Load for New Discharges	$Q_{ed} * (0.14*S_{25} - T_{SP}) * 3.78541$ Where: S_{25} is the critical dilution provided by DEQ at the time of permit assignment Q_{ed} is the maximum design effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)			