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

Outfall Location	Alvord Lake Subbasin
Timeframe when limit applies	June through October
Excess Thermal Load 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 design average effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

2) Grande Ronde Basin

Outfall Location	Upper Grande Ronde Subbasin
Timeframe when limit applies	June through 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 design average effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

3) Klamath Basin

Outfall Location	Upper Klamath and Lake Drainage
Timeframe when limit applies	June through 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 design average effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

4) Rogue Basin

Outfall Location	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 design average effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

Outfall Location	Lower Sucker Creek Watershed
Timeframe when limit applies	June through 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 design average effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

Outfall Location	Upper Sucker Creek Watershed
Timeframe when limit applies	June through 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 design average effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

Outfall Location	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 design average 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

Outfall Location	Snake River/Hells Canyon Subbasin
Timeframe when limit applies	May through 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 design average effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)

6) Willamette Basin

Outfall Location	Lower Willamette Subbasin (Columbia Slough and Fairview Creek watersheds)		
Timeframe when limit applies	Year round		
File No.	Permit No.	Common Name	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: 1. Relative to the BBNC.			

Outfall Location	Tualatin Subbasin			
Timeframe when limit applies	June through October			
File No.	Permit No.	Common Name	Site Potential Temperature (^{o}F)	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 design average effluent flow from facility for all outfalls (MGD) T_{SP} is the applicable system potential temperature (from the TMDL)			