

### Appendix 10.3 Calculations for Emissions Reductions for Reasonable Progress Goals

Facility/Unit	Unit	Fuel	2002 NOx (tons)	2002 SO2 (tons)	2002 heat input (MMBtu)	Post-control NO <sub>x</sub> rate (lb/MMBtu) <sup>1</sup>	Post-control SO <sub>2</sub> rate (lb/MMBtu) <sup>1</sup>	Post-control NOx (tons)	Post-control SO2 (tons)	NOx reduction (tons)	SO2 reduction (tons)	Proposed controls
Westar- Gordon Evans Unit 1	1	NG/FO	258.7	617.7	1,544,183	0.2745	0.00059	211.9	0.5	46.8	617.2	Natural gas only. <sup>2</sup>
Westar- Hutchinson Unit 4	4	NG/FO	267.1	734.3	1,902,245	0.1667	0.00059	158.5	0.6	108.5	733.7	Natural gas only. <sup>2</sup>
Westar- Jeffrey Unit 3	3	Coal/FO	10,807.4	23,206.0	65,507,710	0.15	0.15	4,913.1	4,913.1	5,894.3	18,292.9	Wet limestone scrubber rebuild, low NOx burner system and ESP rebuild.
Westar- Lawrence Unit 3	3	Coal/NG	728.4	1,965.4	5,467,803	0.18	---	1,965.4	1,965.4	728.4	0.0	Low NOx burner system and ESP rebuild.
Westar- Lawrence Unit 4	4	Coal/NG	1,986.5	1,430.0	11,138,048	0.18	0.15	1,002.4	835.4	984.1	594.7	Low NOx burner system, fabric filter baghouse and wet limestone scrubber rebuild. <sup>3</sup>
Westar- Lawrence Unit 5	5	Coal/NG	3,546.3	4,353.7	34,196,132	0.15	0.15	2,564.7	2,564.7	981.6	1,789.0	Low NOx burner system, fabric filter baghouse and wet limestone scrubber rebuild. <sup>3</sup>

Westar- Murray Gill Unit 1	1	NG/FO	0.0	0.0	0.0	0.2745	0.00059	0.0	0.0	0.0	0.0	Natural gas only. <sup>2</sup>
Westar- Murray Gill Unit 2	2	NG/FO	4.5	0.0	29,035	0.2745	0.00059	4.0	0.0	0.5	0.0	Natural gas only. <sup>2</sup>
Westar- Murray Gill Unit 3	3	NG/FO	181.6	452.1	1,082,863	0.2745	0.00059	148.6	0.3	33.0	451.8	Natural gas only. <sup>2</sup>
Westar- Murray Gill Unit 4	4	NG/FO	103.8	333.3	620,470	0.2745	0.00059	85.2	0.2	18.7	333.1	Natural gas only. <sup>2</sup>
Westar- Neosho Unit 7	7	NG/FO	0.0	0.0	220	0.1667	0.00059	0.0	0.0	0.0	0.0	Natural gas only. <sup>2</sup>
Westar- Tecumseh Unit 7	7/9	Coal/NG	1,530.6	2,692.7	7,684,021	0.18	---	691.6	2,692.7	839.0	0.0	Low NOx burner system and ESP rebuild.
Westar- Tecumseh Unit 8	8/10	Coal/NG	1,876.9	4,514.9	12,256,920	0.18	---	1,103.1	4,514.9	773.8	0.0	Low NOx burner system and ESP rebuild.
<i>Totals</i>										<i>10,408.7</i>	<i>22,812.5</i>	

<sup>1</sup> For coal-fired units, values are proposed 30-day rolling average excluding periods of start-up, shutdown and malfunction; for natural gas or fuel oil (NG/FO) fired units, original emission factor in lb/MMscf and converted using 1020 Btu per scf.

<sup>2</sup> Fuel oil firing is allowed in emergencies and during periods of periodic testing of the fuel oil handling and combustion equipment.

<sup>3</sup> Existing wet limestone scrubber will be rebuilt as necessary to achieve compliance with the proposed SO<sub>2</sub> limitation and to accommodate the installation of a fabric filter baghouse.

All coal-fired units are tangential boilers.