

US EPA ARCHIVE DOCUMENT

**APPENDIX D**

**OSI Slatersville Project XL Emissions Summary**

		<b>1995 Baseline (lb/yr)</b>	<b>With XL (lb/yr)</b>	<b>Reductions</b>
<b>Copper Air Emissions</b>	Methyl Chloride	220,000	4,400	215,600
	Methanol	57,000	1,140	55,860
	Dimethyl Ether	-	765	(765)
	<b>Subtotal Copper</b>	<b>277,000</b>	<b>6,305</b>	<b>270,695</b>
<b>Wastewater Treatment Unit (WWTU) Air Emissions</b>				
Surface Impoundments (SI)	Methyl Chloride	590	590	-
	Methanol	8,420	8,420	-
	Dimethyl Ether	0,960	-	9,950
	Ethyl Chloride	2,990	2,990	-
	Toluene	17,890	17,890	-
	Other VOC's	7,530	7,530	-
	<b>Total SI</b>	<b>47,370</b>	<b>37,420</b>	<b>9,950</b>
Collection system and tanks	Methyl Chloride	1,430	1,430	0
	Methanol	3,150	3,150	0
	Dimethyl Ether	28,340	-	28,340
	Ethyl Chloride	12,070	12,070	0
	Toluene	44,840	44,840	0
	Other VOC's	3,100	3,100	0
	<b>Total Other WWTU</b>	<b>92,930</b>	<b>64,590</b>	<b>28,340</b>
	<b>Subtotal WWTU</b>	<b>140,300</b>	<b>102,010</b>	<b>38,290</b>
	<b>Total Air Emissions</b>	<b>417,300</b>	<b>108,216</b>	<b>308,985</b>
<b>Copper Discharges to WWTU (lb/yr)</b>	Methyl Chloride	1,000	1,000	0
	Methanol(from scrubber)	380,000	380,000	0
	Methanol(from condenser)	350,000	-	350,000
	Dimethyl Ether	51,000	-	51,000
	Acetic Acid	8,000	8,000	0
	<b>Total Organic</b>	<b>790,000</b>	<b>389,000</b>	<b>401,000</b>
<b>Waste reuse (lb/yr)</b>	Methanol	-	500,000	500,000
<b>Sludge Generation due to Copper Operation **</b>		<b>1,177,300</b>	<b>510,000</b>	<b>567,300</b>

\* 150,000 lb methanol incinerated in 1995; therefore Total Organic from Copper was 940,000 lb (790,000 + 150,000)

\*\* Sludge for 1995 (Baseline) would have been 1,425,000 if the additional 150,000 lb of methanol had been sewered

- Copper Air Emissions      WV Air Emissions Inventory reported values for 1995 calculated from known production rates and raw material balance.
- WWTU Air Emissions        EPA's Water 8 model used to estimate loss from collection system and WWTU (inground tanks and surface impoundments).  
Influent concentrations calculated from known discharges to process sewer.
- Copper discharges to      Raw material balance and stoichiometric ratios used to calculate amount generated by copper
- Waste Reuse (Methanol)    Raw material balance and stoichiometric ratios used to calculate amount generated by copper and historical data on collected amounts.
- Sludge Generation         Calculated using WWTU loading, loss to air and biodegradability factors.