

## **APPENDIX A-6.12-1**

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**Concentrations of Metals in JOS Biosolids and Standards for Reuse of Biosolids**

Table 1  
40 CFR PART 503  
STANDARDS FOR THE USE OR DISPOSAL OF BIOSOLIDS  
CONCENTRATION STANDARDS

JWPCP BIOSOLIDS  
1993 AVERAGE/MAXIMUM METAL CONCENTRATIONS

Pollutant	40 CFR PART 503		JWPCP BIOSOLIDS	
	Ceiling Conc. (mg/kg)	Pollutant Conc. (mg/kg)	1993 Average Conc. (mg/kg)	1993 Maximum Conc. (mg/kg)
Arsenic	75	41	9.3	10.8
Cadmium	85	39	16	17.9
Chromium	3,000	1,200	188	273
Copper	4,300	1,500	488	553
Lead	840	300	95	110
Mercury	57	17	3.4	6.68
Molybdenum	75	- <sup>1</sup>	39	41
Nickel	420	420	99	121
Selenium	100	36	28	41.3
Zinc	7,500	2,800	1,140	1,340

Table 2  
40 CFR PART 503  
STANDARDS FOR THE USE OR DISPOSAL OF BIOSOLIDS  
LOADING RATE STANDARDS

Pollutant	Cumulative Pollutant Loading Rates (kilogram/hectare)	Annual Pollutant Loading Rates (kilogram/hectare)
Arsenic	41	2.0
Cadmium	39	1.9
Chromium	3,000	150
Copper	1,500	75
Lead	300	15
Mercury	17	0.85
Molybdenum	- <sup>1</sup>	- <sup>1</sup>
Nickel	420	21
Selenium	100	5.0
Zinc	2,800	140

<sup>1</sup> Molybdenum standards were removed from Tables 2 and 3 effective February 19, 1994 per Federal Register Notice dated February 25, 1994.

Table 3  
**JOINT WATER POLLUTION CONTROL PLANT  
 BIOSOLIDS CAKE - TITLE 22 SOLUBLE METALS  
 MG/L**

	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb
Mean <sup>1</sup>	0.027	0.063	24.1	ND	ND	2.6	ND	ND	0.2
Maximum	0.050	0.108	28.2	<0.1	<0.1	2.95	<0.4	<0.2	0.37
STLC	15	5.0	100	0.75	1.0	5	80	25	5.0

	Hg	Mo	Ni	Se	Ag	Ti	V	Zn
Mean <sup>1</sup>	0.0011	ND	1.58	0.024	ND	ND	0.6	10.0
Maximum	0.0019	<0.3	1.68	0.037	<1.0	<0.013	0.7	13.2
STLC	0.2	350	20	1.0	5	7.0	24	250

<sup>1</sup> Mean of detected values

<sup>2</sup> ND = Not Detected

STLC = Soluble Threshold Limit Concentration