

## **APÉNDICE B**

### **ACCIONES DE MITIGACIÓN DE LA CONTAMINACIÓN EN EL COMPLEJO Y ESTIMADOS DE EMISIONES**

REVISED DRAFT

To: George McVehil

Cc: Jose Mogrovejo

From: Dan Vornberg

Date June 12, 2005

Subject: Fugitive and Stack Lead Dust Reduction Projects Estimates

Attached are descriptions of the air pollution reduction projects identified in the DRP modernization plan document.

The project numbers are 8.1, 8.2, 8.3, 8.4, 8.5, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 10.1, and 10.2. The sulfuric acid plant projects are also described in project 7.3 originally planned to complete in 2011 and now because of the Supreme Decree 46 must be completed by the end of 2010 if the extension provided for in that Supreme Decree is approved. In addition projects 7.1.1 relating to the installation of tuyere controls on lead blast furnace # 2 in years 2205 and 2006 is included.

Table of Lead Emissions

	2002 MT/yr	2005 MT/yr	2007 MT/yr	2011 MT/yr	Notes
Main Stack	656	450	395	375	
Sinter plant scrubber	116	116	4	4	
Sinter plant fugitives	30	30	5	5	
Blast furnace	60	40	10	10	Building Enclosure 2005
Dross Plant	40	40	10	10	Building Enclosure 2006
Casting Anodes	4	4	0	0	With ventilation of dross plant 2006
Slimes Plant	10	10	10	1	Ag circuit modernization
Lead Electrolytic	4	4	4	1	Ventilate casting equipment
Copper converter aisle	40	40	40	10	Partial enclosure
Copper Roaster	60	60	60	15	Enclose 2 close 2 roasters

NJ Zinc Roaster .	10	0	0	0	Closed 12/31/04
Total Fugitives	374	344	143	56	
Grand Total	1030	794	538	431	

REVISED DRAFT

To: George McVehil

Cc: Jose Mogrovejo

From: Dan Vornberg

Date: August 3, 2005

Subject: Fugitive and Stack Arsenic Dust Reduction Projects Estimates

Attached are descriptions of the air pollution reduction projects identified in the DRP modernization plan document.

The project numbers are 8.1, 8.2, 8.3, 8.4, 8.5, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 10.1, and 10.2. The sulfuric acid plant projects are also described in project 7.3 originally planned to complete in 2011 and now because of the Supreme Decree 46 must be completed by the end of 2010 if the extension provided for in that Supreme Decree is approved. In addition projects 7.1.1 relating to the installation of tuyere controls on lead blast furnace # 2 in years 2205 and 2006 is included.

Table of Arsenic Emissions

	2002 MT/yr	2005 MT/yr	2007 MT/yr	2011 MT/yr	Notes
Main Stack	607	388	316	194	
Sinter plant scrubber	6.25	6.25	0.22	0.22	
Sinter plant fugitives	1.62	1.62	0.27	0.27	
Blast furnace	3.46	2.3	0.58	0.58	Building Enclosure 2005
Dross Plant	9.9	9.9	2.48	2.48	Building Enclosure 2006
Casting Anodes	0.23	0.23	0	0	With ventilation of dross plant 2006
Slimes Plant	0.58	0.58	0.58	0.058	Ag circuit modernization
Lead Electrolytic	0.23	0.23	0.23	0.058	Ventilate casting equipment
Copper converter aisle	13.9	13.9	13.9	3.47	Partial enclosure
Copper Roaster	60	60	60	15	Enclose 2 close 2 roasters

NJ Zinc Roaster	1.15	0	0	0	Closed 12/31/04
Total Fugitives	96	94	78	22	
Grand Total	703	482	394	216	

REVISED DRAFT

To: George McVehil

Cc: Jose Mogrovejo

From: Dan Vornberg

Date: August 3, 2005

Subject: Fugitive and Stack Cadmium Dust Reduction Projects Estimates

Attached are descriptions of the air pollution reduction projects identified in the DRP modernization plan document.

The project numbers are 8.1, 8.2, 8.3, 8.4, 8.5, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 10.1, and 10.2. The sulfuric acid plant projects are also described in project 7.3 originally planned to complete in 2011 and now because of the Supreme Decree 46 must be completed by the end of 2010 if the extension provided for in that Supreme Decree is approved. In addition projects 7.1.1 relating to the installation of tuyere controls on lead blast furnace # 2 in years 2005 and 2006 is included.

Table of Cadmium Emissions

	2002 MT/yr	2005 MT/ yr	2007 MT/yr	2011 MT/yr	Notes
Main Stack	45	25	22.5	12.5	
Sinter plant scrubber	2.8	2.8	0.097	0.097	
Sinter plant fugitives	0.74	0.74	0.12	0.12	
Blast furnace	3.75	2.5	0.63	0.63	Building Enclosure 2005
Dross Plant	0.2	0.2	0.05	0.05	Building Enclosure 2006
Casting Anodes	0.02	0.02	0	0	With ventilation of dross plant 2006
Slimes Plant	0.05	0.05	0.05	0.005	Ag circuit modernization
Lead Electrolytic	0.02	0.02	0.02	0.005	Ventilate casting equipment
Copper converter aisle	0.2	0.2	0.2	0.05	Partial enclosure

Copper Roaster	2.4	2.4	2.4	0.6	Enclose 2 close 2 roasters
NJ Zinc Roaster	1	0	0	0	Closed 12/31/04
Total Fugitives	11.18	8.93	3.57	1.56	
Grand Total	56	34	26.1	13.6	