

Golder Associates Inc.

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September 28, 2007

Barb Neilsen
Freeport McMoRan, Inc.

**RE: ADDENDUM TO DRAFT REPORT
MILL BUILDING FLOOR AND BIN INVESTIGATION
FORMER SATRALLOY SITE – JEFFERSON COUNTY, OH**

Golder Associates Inc. (Golder) is pleased to present this supplemental information as an Addendum to the *Report of Mill Building Floor and Bin Investigation Former Satralloy Site in Jefferson County, Ohio* dated August 24, 2007 (Site). The information contained in this Addendum was collected to support and / or close data gaps identified during a previous investigation conducted at the Site during August 2006.

Golder staff visited the Site on September 21, 2007 to collect additional measurements / observations regarding the "special samples" within the buildings and the materials located in the bins located behind each building. The supplemental information gathered during this Site visit is summarized in the attached tables:

- Table 12: Supplemental Information on South Mill Building Samples
- Table 13: Supplemental Information on North Mill Building Samples
- Table 14: Dimensions and Contents of South Mill Building Bins
- Table 15: Dimensions and Contents of North Mill Building Bins

Photographs of select "Special Sample" Locations are included in Attachments 1.

We appreciate the opportunity to provide environmental services to Freeport-McMoRan, Inc. If you have any questions or are in need of additional information, please call me at (425) 883-0777.

Sincerely,
Golder Associates Inc.

Lee Holder
Senior Project Manager

**Table 12: Supplemental Information on South Mill Building Samples
(Based on Table 2 of the original report)**

Sample ID	Grid Cell Location	Measured Extent of sampled material (L x W x H)	Description
S-Special #1	S-2	5 cubic yards (estimate)	White to Gray pile of "gravel."
S-Special #2	S-7	20 ft. x 8 ft. (surficial*)	Dark-colored stained soil.
S-Special #3	S-9	68 ft. x 35 ft. x 12 ft.	Black stained soil pile.
S-Special #4	S-8	20 cubic yards (estimate)	Gray soil / material with dark staining piled in bin. Bin dimensions are 21 ft. x 18 ft. x 5ft. (LxWxH) Material fills about 1/3 of bin.
S-Special #5	S-1	10 cubic yards (estimate)	Powder-like substance in conveyor room.
S-Special #6	S-7	24 ft. x 15 ft. (surficial)	Very similar in appearance to S-Special #2 and from the same Grid Cell.
S-Special #7	S-6	2 cubic yards (estimate)	Stained soil pile in corner of building.
S-Special #8	S-11 and surrounding cells.	Intermittent throughout center of building. Largest patch is 129 ft. x 20 ft. (surficial*)	Orange-brown surface layer on muck
S-Special #9	S-14 and surrounding cells.	Intermittent in Cells S-14, -15 and -16. Covers virtually all areas of cells S-17 and -18.	Dark Stained / Burnt soil and debris surrounding large concrete foundations of furnaces.

Notes:

* - Impact observed on soil surface inside building. Vertical penetration of impacted soil was not measured.

**Table 13: Supplemental Information on North Mill Building Samples
(Based on Table 3 of the original report)**

Sample ID	Grid Cell Location	Measured Extent of sampled material (L x W x H)	Description
N-Special #1	N-23	60 ft. x 60 ft. area (surficial*)	Bright Yellow (almost Fluorescent) powder. A portion of the material appears to be residual dripped from the large vats above.
N-Special #2	N-23	Same as N-Special #1	Appears to be same material as N-Special #1
N-Special #3	N-20	6 broken "sacks" of this material, approximately 1 cubic yard in each sack.	Black sandy material (looks like and is packaged like Activated Carbon)
N-Special #4	N-15	51 ft. x 24 ft. (surficial*)	Gray Powder / soil
N-Special #5	N-26, 15 & 16	60 ft. x 60 ft. (surficial*)	Stained soil. Looks more like moisture than an "oily stain" (Lawhon description was "oily stain")
N-Special #6	N-9	Unknown	According to Lawhon "Flue Dust" was present in this grid cell. Golder did not observe any material resembling dust here.

Notes:

* - Impact observed on soil surface inside building. Vertical penetration of impacted soil was not measured.

Table 14: Dimensions and Contents of South Mill Building Bins

Bin Number	Dimensions (L x W x H)	Contents	Estimated Volume of Contents (Cubic Yards)
SB-1	95 ft. x 20 ft. x 30 ft.	Gray / White powder and some vegetation	30
SB-2	95 ft. x 20 ft. x 30 ft.	White powder	70
SB-3	95 ft. x 20 ft. x 30 ft.	White Powder	70
SB-4	95 ft. x 20 ft. x 30 ft.	White Powder with some vegetation	Not Measured
SB-5	95 ft. x 20 ft. x 30 ft.	Gray / White powder and some vegetation	40
SB-6	95 ft. x 20 ft. x 30 ft.	Gray / White powder and some vegetation	50
SB-7	95 ft. x 20 ft. x 30 ft.	Gray / White powder and some vegetation	50
SB-8	95 ft. x 20 ft. x 30 ft.	Gray / White powder and some vegetation	40
SB-9	95 ft. x 20 ft. x 30 ft.	Gray / White powder and some vegetation	40
SB-10	Contains hopper only	N/A	N/A
SB-11	95 ft. x 20 ft. x 30 ft.	Gray / White powder and some vegetation	50-60
SB-12	95 ft. x 20 ft. x 30 ft.	Gray / White powder and some vegetation	30
SB-13	95 ft. x 20 ft. x 30 ft.	Gray / White powder and some vegetation	Not Measured

Table 15: Dimensions and Contents of North Mill Building Bins

Bin Number	Dimensions (L x W x H)	Contents	Estimated Volume of Contents (Cubic Yards)
NB-1	95 ft. x 20 ft. x 30 ft. (contains hopper)	White powder	20
NB-2	95 ft. x 20 ft. x 30 ft.	White powder	1-3
NB-3	95 ft. x 20 ft. x 30 ft.	Scrap metal with mounded soil	30
NB-4	95 ft. x 20 ft. x 30 ft.	Concrete floor under mounded soil and vegetation	10
NB-5	95 ft. x 20 ft. x 30 ft.	Concrete floor, empty	N/A
NB-6	95 ft. x 20 ft. x 30 ft.	Scrap metal, partial concrete floor	N/A
NB-7	95 ft. x 20 ft. x 30 ft.	Concrete floor, vegetation	N/A
NB-8	95 ft. x 20 ft. x 30 ft.	Concrete floor, building tiles, vegetation	N/A
NB-9	95 ft. x 20 ft. x 30 ft.	Concrete floor, mounded soil with vegetation	20
NB-10	95 ft. x 20 ft. x 30 ft.	Concrete floor, mounded soil with vegetation	20
NB-11	95 ft. x 20 ft. x 30 ft.	Concrete floor, some vegetation	N/A
NB-12	Contains hopper only		
NB-13	95 ft. x 20 ft. x 30 ft.	Concrete floor, some vegetation	N/A
NB-14	95 ft. x 20 ft. x 30 ft.	Gray / white powder	40
NB-15	95 ft. x 20 ft. x 30 ft.	Gray / white powder	1500
NB-16	95 ft. x 20 ft. x 30 ft.	Gray / white powder	1500
NB-17	95 ft. x 20 ft. x 30 ft.	Gray / white powder	1500
NB-18	95 ft. x 20 ft. x 30 ft.	Gray / white powder and vegetation	40
NB-19	95 ft. x 20 ft. x 30 ft.	Gray / white powder	1500
NB-20	95 ft. x 20 ft. x 30 ft.	Gray / white powder	1500
NB-21	95 ft. x 20 ft. x 30 ft.	Gray / white powder	1500

Attachment 1
Photographs of Special Samples



N-Special #1



N-Special #1



N-Special #1 - Yellow residue dripping from I-beam and equipment above.



N-Special #3 - Broken sack of black sandy material.



S-Special #1



S-Special #2



S-Special #3 – Large pile of black-stained soil.



S-Special #4 – Stained Soil Pile



S-Special #5 – Stained soil beneath former conveyor.



S-Special #6



S-Special #7 – Small stained soil pile in corner.



S-Special #8 – Orange-Brown-Stained soil on floor (left foreground).



S-Special #9 – Black-stained soil around furnace foundation.



S-Special #9 – Black-stained soil around furnace foundation.

