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April 19, 2010

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RETURN RECEIPT REQUESTED

Attn: Pervinder K. Tandon
Arizona Department of Environmental Quality
Air Quality Division – Existing Source & General Permits Unit
1110 West Washington Street
Phoenix, Arizona 85007

RE: Significant Permit Revision Application:
Surge Pile to P2 Baghouse
Freeport-McMoRan Morenci Inc., Air Quality Permit #42474

Dear Mr. Tandon:

In accordance with A.A.C. R18-2-320, Freeport-McMoRan Morenci Inc. (FMMI) is submitting the attached significant permit revision application as a follow up to the notice submitted on February 16, 2010, for a facility change allowed without a permit revision, to address an air supply imbalance at the Surge Pile to P2 transfer point (Process #001-012). The change, being made for operational considerations, converts the baghouse into process equipment rather than a pollution control device, thereby making certain requirements of FMMI air quality permit #42474 no longer applicable. These include: the emission limit, opacity standard, air pollution control requirements, compliance assurance monitoring (CAM) requirements, and testing requirements that apply to the Surge Pile/P2 Baghouse.

If you have any questions or require more information, please contact me directly at the number listed above, or you may contact Russell Gossett of my staff at (928) 865-6529.

Sincerely,

Brent R. Fletcher
Manager Environmental Services
Southeaster Arizona Operations

Freeport-McMoRan Morenci Inc.

**Application for a Significant Permit Revision
Surge Pile/P2 Baghouse
Air Quality Permit #42474**

Submitted to:

Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, Arizona 85007

Submitted by:

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April 16, 2010

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1. INTRODUCTION

Freeport McMoRan Morenci Inc. (FMMI) operates a copper ore mining and processing facility in Morenci, Arizona. The four major operations at FMMI include: (a) an open-pit copper mine with three in-pit crushers and an ore conveyor system, (b) the Morenci copper ore concentrator, (c) the Metcalf Mine for Leach plant, and (d) the copper Solution Extraction and Electrowinning (SX/EW) plants. FMMI also has eight supporting operations. These operations include: (a) a lime slaking plant, (b) a copper concentrate bedding plant, (c) the Metcalf Combined Cycle Power Plant (CCPP), (d) the tailings system, (e) diesel and gasoline fuel storage tanks, (f) a concrete batch plant, (g) grizzlies, and (h) a concentrate leach plant.

FMMI submitted a notice, dated February 16, 2010, of a facility change allowed without a permit revision (pursuant to Arizona Administrative Code (A.A.C.) R18-2-317.D) to the Arizona Department of Environmental Quality (ADEQ) to address an air supply imbalance at the Surge Pile/P2 transfer point (Process #001-012). The notification proposed to redirect the cleaned air that was exhausted by the Surge Pile/P2 Baghouse to the atmosphere back to the vicinity of the Surge Pile/P2 transfer point in order to equalize the pressure differential inside the tunnel. This change was approved by ADEQ on February 23, 2010. The change, being made for operational considerations, converts the baghouse into process equipment rather than a pollution control device, thereby making certain requirements of the FMMI air quality permit #42474 no longer applicable. These include: the emission limit, opacity standard, air pollution control requirements, compliance assurance monitoring (CAM) requirements, and testing requirements that apply to the Surge Pile/P2 Baghouse.

In accordance with A.A.C. R18-2-320, this document represents FMMI's application for a significant permit revision to remove the above-referenced requirements pertaining to the Surge Pile/P2 Baghouse from the FMMI air quality permit. The information presented in this document includes all applicable information required by Appendix 1 of the Arizona Administrative Code (A.A.C. - *Standard Permit Application Form and Filing Instructions*). The required information is presented in the same order that it is requested in Appendix 1 of the A.A.C. The completed Standard Permit Application Form is provided in Appendix A of this application.

2. PROCESS DESCRIPTION

2.1 PRODUCTS AND PROCESSES

A process flow diagram of the major processes at FMML is presented in Figure B.1 of Appendix B. Run of mine (ROM) material is crushed by In-Pit Crusher No. 1 (IPC #1), conveyed to the in-pit Surge Pile, and transported by haul trucks from the Surge Pile to the Copper Leach Stockpiles. At the Copper Leach Stockpiles, a weak aqueous acid solution (raffinate) is applied to the ore to produce pregnant leach solution (PLS). The PLS is pumped to the SX area where the solution is mixed with an organic reagent and an organic diluent to produce an electrolyte rich solution suitable for the EW process. In the electrowinning cells, an electric current is passed through the solution to produce a copper cathode product ready for shipment.

Copper sulfide and oxide ore is crushed by In-Pit Crushers No. 2 and 3 (IPC #2 and IPC #3) and transported to the Morenci and Metcalf Mine for Leach (MFL) crushing stations, respectively. The crushed ore from the Metcalf MFL crushing station is agglomerated and sent to the Copper Leach Stockpiles. The crushed ore from the Morenci crushing station is transferred to the Morenci Concentrator for further processing, including milling and flotation. The resulting product of the Morenci Concentrator is called concentrate (either molybdenum or copper). A portion of the copper concentrate is transferred to the Concentrate Leach Plant where copper is extracted from the concentrate to produce additional copper-rich PLS solution to be processed by the SX/EW system. The remainder of the copper concentrate is shipped offsite to a smelter for processing into the final product. All molybdenum concentrate is shipped offsite for further processing.

In addition to producing crushed ROM material and copper sulfide ore, IPC #1 and IPC #2 are capable of producing crushed ore for the Metcalf MFL system. A process flow diagram of this process for the IPC#1 system is presented in Figure B.2. Crushed ore is conveyed from IPC #1 to the in-pit Surge Pile where it is reclaimed from the bottom of the pile by twin Vibrating Belt Feeders that feed Conveyor P2. The material transfer points from the Belt Feeders to Conveyor P2 are located inside the Surge Pile Tunnel directly below the Surge Pile. From Conveyor P2, the ore is conveyed to the Intermediate Ore Stockpile No. 1 (IOS #1) via Conveyors P4, P5, and P6 in series. Seven pan feeders reclaim the crushed ore from IOS #1 onto two reclaim belts that in turn provide the ore to the Metcalf MFL.

Particulate matter emissions caused by the material transfer of the crushed ore from the Vibrating Belt Feeders to Conveyor P2 are controlled by a 22,700 dscfm baghouse (FFDC for PN012) located in the Surge Pile Tunnel. The two pickup points for the baghouse are located in the tunnel at the two material drop locations approximately 280 feet from either exit of the Surge Pile Tunnel. The baghouse is located next to the Vibrating Belt Feeders, where it uses an induced draft fan to pull particulate matter entrained air from the pickup points into the exhaust hoods for transport to the baghouse.

Prior to the change described in Section 1 of this application, the treated and cleaned exhaust air from the baghouse was vented through a duct that extended out the back side of the Surge Pile Tunnel and exhausted to the atmosphere (see Figure B.3 of Appendix B). Because of the large exhaust rate of the baghouse, balancing the air flow and equalizing the pressure differential within the

tunnel was problematic. The change in ducting to redirect the treated and cleaned exhaust air that was previously vented to the atmosphere, back to the proximity of the pickup point in the tunnel (see Figure B.4 of Appendix B) equalized the pressure within the tunnel system, and optimized the capture and control of the baghouse system.

Currently, as stated in Air Quality Permit #42474, the Surge Pile/P2 Baghouse is subject to the following requirements:

- Permit Condition II.D.1.b., Voluntary Limitations:

The Permittee shall not allow the emissions of particulate matter (PM) or particulate matter with an aerodynamic diameter less than 10 microns (PM₁₀) from the baghouse associated with the transfer point from Surge Pile to P2 conveyor (process #001-012) to exceed 0.01 grains per dry standard cubic feet (gr/dscf).

- Permit Condition II.D.1.c., Opacity Standard:

The Permittee shall not cause, allow, or permit the opacity of emissions from any point source into the atmosphere to exceed 20 percent as measured by EPA Reference Method 9.

- Permit Condition II.D.2.a., Air Pollution Control Requirements

At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the baghouse associated with the Surge Pile to P2 conveyor (process #001-012) in a manner consistent with good air pollution control practices for minimizing particulate matter emissions.

- Permit Condition II.D.3.b., Compliance Assurance Monitoring Requirements

The Permittee shall meet the CAM plan requirements identified in Condition I.C.5.b for the baghouse listed in Condition II.D.2.a.

- Permit Condition II.D.4., Testing Requirements

The Permittee shall conduct performance test for PM and PM₁₀ on the stack of the Surge Pile to P2 baghouse (process #001-012) in the second year of the permit term. EPA Reference Method 5 in 40 CFR 60, Appendix A and EPA Reference Method 202 specified in 40 CFR 51, Appendix M shall be used to determine emissions of PM. All PM measured by the above referenced method shall be considered to have an aerodynamic diameter less than 10 microns. The performance test shall be used to demonstrate compliance with the limits in Condition II.D.1.b. Subsequent test shall be conducted in the 4th year of the permit term.

FMMI is currently in compliance with these requirements.

2.2 PROPOSED CHANGES

The change in the baghouse exhaust ducting that redirected the exhaust back to the pickup points was made for operational concerns in order to equalize the pressure within the Surge Pile Tunnel. Consequently the baghouse, in its new operational mode, represents process equipment. Furthermore, it no longer exhausts to the atmosphere and is not pollution control equipment.

Because the baghouse is not a control device, FMMI proposes to delete Permit Conditions II.D.1.b., II.D.1.c., II.D.3.b., and II.D.4. from Air Quality Permit #42474, as they no longer apply to the Surge Pile/P2 Baghouse. Additionally, Permit Condition II.D.2.a. is no longer applicable, as Permit Condition I.A.2. ensures all process equipment, including the Surge Pile/P2 Baghouse, are operated properly and maintained in good working order according to either vendor supplied operations and maintenance instructions or FMMI prepared Operation and Maintenance Plans.

2.3 ALTERNATE OPERATING SCENARIOS AND PRODUCTS

FMMI proposes no alternate operating scenarios or alternate operating scenario products for this significant permit revision.

2.4 PROCESS FLOW DIAGRAM

A generic process flow diagram of the existing major processes at FMMI is presented in Figure B.1 of Appendix B. The process flow diagram of IPC #1 and Subsequent Conveying and Stockpiling Processes is presented in Figure B.2 of Appendix B. Detailed process flow diagrams of the Surge Pile Tunnel and the Surge Pile/P2 Baghouse system before and after the changes made pursuant to the notification of a facility change allowed without a permit revision are presented in Figures B.3 and B.4, respectively of Appendix B. The dimensions of the vibrating feeders exhaust hoods and baghouse relative to the Surge Pile are obviously exaggerated in these diagrams.

2.5 MATERIAL BALANCE

Material balance methods were not used in the preparation of this application.

3. EMISSIONS RELATED INFORMATION

As described in the notification of a facility change allowed without a permit revision, the Surge Pile/P2 Baghouse exhaust is redirected to exhaust inside the Surge Pile Tunnel near the baghouse pickup points. This change eliminated the emission point from the Surge Pile/P2 Baghouse to the atmosphere. The particulate matter entrained in the baghouse exhaust is now mixed with particulate emissions resulting from the material transfers from the vibrating belt feeders to Conveyor P2 and recaptured by the Surge Pile/P2 Baghouse.

Since the baghouse captures the same volume of air as it exhausts and the exhaust point is located in a tunnel near the pickup points, the baghouse collection and exhaust process acts almost as a closed system (i.e. all baghouse exhaust is recaptured). There will, however, be additional air in the void spaces of the crushed ore that is discharged into the Surge Pile Tunnel as the ore is transferred from the Surge Pile to Conveyor P2. Since the Surge Pile Tunnel is open at both ends, the quantity of air that is not capable of being collected by the Surge Pile/P2 Baghouse (equal to the quantity of void air in the crushed ore) must exhaust through the openings of the tunnel. Therefore, the exits of the tunnel become sources of minor fugitive emissions.

The following sections provide:

- Identification and description of the added and deleted emission sources;
- Calculation of fugitive emissions from the tunnel; and
- A summary of the potential changes in emissions.

3.1 IDENTIFICATION AND DESCRIPTION OF EMISSION SOURCES

A summary of the added and deleted emission sources and the potential air pollutants associated with each emission source is presented in Table 3.1.

Table 3.1 Added and Deleted Emission Sources

Process Number	Emission Source	Potential Air Pollutants	Fugitive / Non-Fugitive Emission Point
<i>Deleted Emission Point</i>			
001-012	Surge Pile/P2 Baghouse	PM, PM ₁₀	Non-Fugitive
<i>Added Emission Source</i>			
001-020	Surge Pile Tunnel	PM, PM ₁₀	Fugitive

3.2 CALCULATION OF POTENTIAL EMISSIONS

The potential emissions from the added and deleted emission points are presented in Table 3.2.

Table 3.2 Potential Emissions of the Added and Deleted Emission Sources

Process Number	Emission Source	Regulated Air Pollutant	Potential Emissions	
			lb/hour	tons/year
<i>Deleted Emission Point</i>				
001-012	Surge Pile/P2 Baghouse	PM	2.00	8.50
		PM ₁₀	2.00	8.50
<i>Added Emission Source</i>				
001-020	Surge Pile Tunnel	PM	0.03	0.10
		PM ₁₀	0.03	0.10

PM emissions from the Surge Pile/P2 Baghouse are calculated using the baghouse flow rate (22,700 dscfm), the emission limitation (0.01 grains/dscf) from Permit Condition II.D.1.b., and assuming the baghouse operates continuously. Per Permit Condition II.D.4., PM₁₀ emissions are assumed to be equal to PM emissions.

PM and PM₁₀ emissions from the Surge Pile Tunnel are calculated using the flow rate of air out of the tunnel and assuming the particulate matter concentration of the air exiting the tunnel is equal to the Surge Pile/P2 Baghouse outlet grain loading (0.01 grains/dscf for PM and PM₁₀). The flow rate out of the tunnel is calculated using the following equations:

$$P = \frac{V_v}{V_T}$$

$$V_T = V_O + V_v$$

where:

- P = porosity (14%, a worst case estimate based on cubic packing using two grain sizes),
- V_v = volume of the void space (same units as V_T and V_O), and
- V_T = total volume (same units as V_v and V_O, includes the volume of the crushed ore and the volume of the void space)
- V_O = volume of the crushed ore (same units as V_v and V_T, estimated based on the material transfer rate from the Surge Pile to Conveyor P2 (maximum of 9,000 tons/hour, average of 7,143 tons/hour assuming continuous operation) and an average crushed ore density of 2,265 kg/m³).

Using the above equation and variables, V_v is determined in terms of volume of air per time, which is multiplied by the PM and PM₁₀ outlet grain loading of the baghouse to calculate the fugitive particulate matter emissions from the Surge Pile Tunnel.

The PM and PM₁₀ outlet grain loading of the Surge Pile/P2 Baghouse (0.01 grains/dscf = 22.88 mg/m³) is considered a conservative estimate of particulate concentrations in the Surge Pile Tunnel, as it exceeds the Occupational Safety and Health Administration (OSHA) standard for total dust of particulates not otherwise regulated (15 mg/m³ = 0.00655 grains/dscf) (OSHA Standard 1910.1000, Table Z-1). Consequently use of the outlet grain loading of the baghouse to calculate PM and PM₁₀ emissions from the Surge Pile Tunnel is considered in a worst case estimate of the fugitive emissions.

3.3 TOTAL POTENTIAL EMISSIONS AND POTENTIAL EMISSIONS CHANGES

A summary of the total FMMI emission changes due to the added and deleted emission sources is presented in Table 3.3. The overall net effect will be a decrease in PM and PM₁₀ emissions from the FMMI facility.

Regulated Air Pollutant	Emission Change	
	lb/hr	tpy
Non-Fugitive Source Emissions		
PM	-2.00	-8.50
PM ₁₀	-2.00	-8.50
Fugitive Source Emissions		
PM	0.03	0.10
PM ₁₀	0.03	0.10
Total Emissions (Fugitive and Non-Fugitive Sources)		
PM	-1.97	-8.40
PM ₁₀	-1.97	-8.40

4. APPLICABLE REQUIREMENTS AND PROPOSED EXEMPTIONS

4.1 APPLICABLE REQUIREMENTS

As described in Section 2.2, FMMI proposes to eliminate the five permit requirements pertaining to the Surge Pile/P2 Baghouse. However, permit requirements pertaining to process equipment at FMMI will now apply to the Surge Pile/P2 Baghouse. This includes operating the Surge Pile/P2 Baghouse in accordance with vendor supplied operations and maintenance instructions or, if not available, an Operation and Maintenance Plan prepared by FMMI.

The only applicable requirements that remain effective due to the changes are presented in Table 4.1. These regulatory requirements include all applicable requirements of the A.A.C. The regulatory requirements of the Code of Federal Regulations (CFR) do not apply to the sources addressed in this significant permit revision.

4.2 PROPOSED EXEMPTIONS

FMMI does not propose any exemptions to otherwise applicable requirements.

Table 4.1 Applicable Regulatory Requirements and Methods for Demonstrating Compliance

Emission Unit	Regulatory Citation for Applicable Requirements	Description of Requirements	Methods Used to Demonstrate Compliance
1. Surge Pile Tunnel	A.A.C. R-18-2-606	Implementation of reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne.	Maintenance of records of the proper maintenance of the Surge Pile/P2 Baghouse.
	A.A.C. R-18-2-614.B	Opacity \leq 40%	Performance of EPA Reference Method 9 Test.

5. PROCESS RATE INFORMATION AND OPERATING SCHEDULES

5.1 PROCESS RATES

The maximum annual and hourly process rates for all equipment and processes associated with this significant permit revision are presented in Table 5.1.

Table 5.1 Maximum Process Rates of New/Modified Emission Units/Processes

Emission Unit	Maximum Process Rates	
	Annual	Hourly
Surge Pile/P2 Baghouse ^a	1.193E10 dscf	1,362,000 dscf
Material Transfers from the Surge Pile to Conveyor P2 ^b	62.57 MMtons	9,000 tons

^a The maximum process rates are based on the baghouse flow rate of 22,700 dscfm and continuous operation (60 minutes/hour and 8,760 hours/year).

^b The maximum annual process rate is based on an average process rate of 7,143 tons/hour and continuous operation (8,760 hours/year). The maximum hourly process rate is 9,000 tons/hour.

5.2 FUELS AND FUEL USAGE RATES

This significant permit revision does not affect the type of fuel or the usage rate of any fuel at FMML.

5.3 RAW MATERIAL USAGE

This significant permit revision does not affect the usage rate of any raw material at FMML.

5.4 ANTICIPATED OPERATING SCHEDULE AND LIMITATIONS ON SOURCE OPERATIONS AND WORK PRACTICE STANDARDS AFFECTING EMISSIONS

The Surge Pile/P2 Baghouse and associated equipment will continue to be capable of 24 hours/day, 7 days/week operation. There are no other voluntary emission limitations on source operations included in this significant permit revision.

6. DESCRIPTION OF PROCESS AND CONTROL EQUIPMENT AND STACKS

6.1 DESCRIPTION OF PROCESS AND CONTROL EQUIPMENT

All process and control equipment associated with this significant permit revision are presented in Table 6.1. Information related to the make, model, serial number, date of manufacture, and size/production capacity of each piece of process and control equipment is also presented in Table 6.1.

6.2 STACK INFORMATION

Due to the stack of the Surge Pile/P2 Baghouse being relocated to within the Surge Pile Tunnel and being eliminated as an emission point, specification of the specific stack parameters is no longer applicable.

Table 6.1 Description of Process and Control Equipment

Equipment	Make	Model	Serial Number	Date of Manufacturer	Size/Production Capacity
Surge Pile/P2 Baghouse	Flex-Kleen	84WSBC256IIIIG	273-DCD-8-01/M35075	1988	22,700 dscfm
Vibrating Feeder No. 1	N/A	100' L x 96" W	N/A	1988	4,500 tons/hr
Vibrating Feeder No. 2	N/A	100' L x 96" W	N/A	1988	4,500 tons/hr
Conveyor P2	FMCGM	3920' L x 72" W	Custom Fabricated	1988	9,000 tons/hr

7. SITE DIAGRAM

FMMI is located in Morenci, Arizona, approximately 50 linear miles northeast of Safford, Arizona in Greenlee County. The general UTM coordinates of the facility, in meters, are 3657952 N, 656488 E, Zone 12.

The site diagram of the in-pit crushing and conveying system at FMMI, including the Surge Pile and Conveyor P2 is presented in Figure 7.1. The figure includes a directional arrow, the relative distance between equipment, equipment layout, and the relative location of the emission points described in this significant permit revision. All other detailed site diagrams of the FMMI facility and processes have been submitted in previous applications.

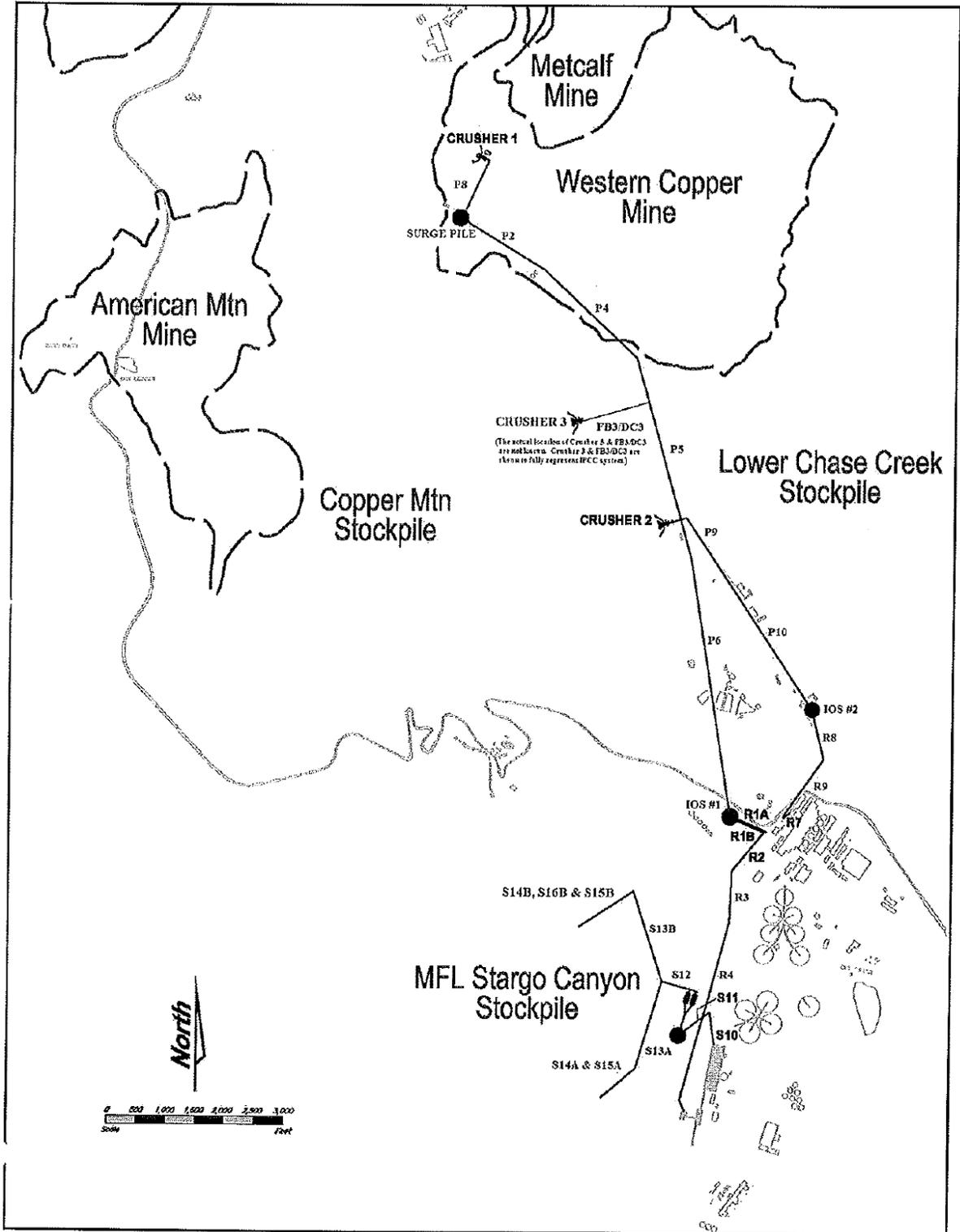


Figure 7.1 Site Diagram of the In-Pit Crushing and Conveying System

8. AIR POLLUTION CONTROL INFORMATION

8.1 DESCRIPTIONS OF METHODS FOR DEMONSTRATING COMPLIANCE

Table 4.1 presents the methods that will be used to demonstrate compliance with applicable regulatory requirements.

8.2 DESCRIPTIONS OF AIR POLLUTION CONTROL EQUIPMENT

The change in ducting to redirect the treated and cleaned exhaust from the atmosphere back to the pick-points in the tunnel re-classifies the Surge Pile/P2 Baghouse as process equipment. Although the baghouse is no longer a control device, the characteristics of the baghouse are presented in Table 8.1 for informational purposes.

Table 8.1 Detailed Information About the Surge Pile/P2 Baghouse

Process Number	001-012
Type of Equipment	Baghouse
Emission Points Controlled	Material Transfer Points from the Surge Pile to Conveyor P2
Pollutants Controlled	PM, PM ₁₀
Control Efficiency ^a	> 99%
Exhaust Flow Rate	22,700 dscfm
Outlet Grain Loading ^b	0.01 grains/dscf

^a The control efficiency is based on information presented in AP-42, Section 11.24.3 (08/82).

^b This significant permit revision proposes to eliminate the outlet grain loading as a permit condition.

8.3 AMBIENT AIR IMPACT ANALYSIS

An ambient air impact analysis is not required for this significant permit revision.

9. COMPLIANCE PLAN

9.1 COMPLIANCE WITH ARTICLES 6, 7, 8, 9, AND 17 OF THE A.A.C.

Articles 7, 8, 9, and 17 do not apply to this significant permit revision. Compliance with Article 6 will be demonstrated using the methods described in Table 4.1.

9.2 COMPLIANCE WITH ARTICLE 11 OF THE A.A.C., A.R.S. §49-426.03 AND A.R.S. §49-426.06

Article 11 does not apply to this significant permit revision. A.R.S. §49-426.03 (Arizona rule for the administration and enforcement of the federal hazardous air pollutants (HAPs) program established pursuant to Section 112 of the Clean Air Act) and A.R.S. §49-426.06 (Arizona program for control of HAPs) do not apply to this significant permit revision.

9.3 COMPLIANCE WITH A.A.C. R18-2-306.01

Voluntarily accepted permit requirements under A.A.C. R18-2-306.01 do not apply to this significant permit revision. FMML proposes to eliminate the voluntarily accepted permit requirements for the Surge Pile/P2 Baghouse based on reasoning presented in Section 2.2 of this application.

9.4 COMPLIANCE SCHEDULE

FMML is in compliance and will continue to comply with the applicable regulatory requirements presented in Table 4.1. For applicable requirements that become effective during the permit term, FMML will meet such requirements, in a timely manner, as required by the regulations.

9.5 SUBMISSION OF CERTIFIED PROGRESS REPORTS

FMML is currently in compliance with all applicable requirements. Consequently, the submittal of reports identifying progress made towards remedying violations is not required.

9.6 ACID RAIN REQUIREMENTS COMPLIANCE

The proposed revisions are not subject to the acid rain requirements of the Clean Air Act.

10. COMPLIANCE CERTIFICATION

A compliance certification signed by the responsible official of FMMI is included. The certification is based upon:

- The applicable requirements as set forth in Section 4 of this application;
- Compliance with all applicable requirements using the methods described in Section 4 of this application; and
- Compliance with enhanced monitoring and compliance certification requirements, if any, that become applicable during the permit term.

The attached certification is based on the belief that the statements and information presented in this application are true, accurate, and complete.

11. ACID RAIN PROGRAM COMPLIANCE AND NEW MAJOR SOURCE REQUIREMENTS

11.1 ACID RAIN COMPLIANCE PLAN

FMMI is not subject to the acid rain requirements of the A.A.C. Therefore, this plan is not applicable.

11.2 NEW MAJOR SOURCE REQUIREMENTS

The proposed revisions are neither a new major source nor a major modification. Therefore, these requirements do not apply.

12. CALCULATIONS

The calculation methodology used to determine emissions and/or emission changes due to the proposed revisions are discussed in Section 3.2.

APPENDIX A
STANDARD PERMIT APPLICATION FORM

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Quality Division
1110 West Washington • Phoenix, AZ 85007 • Phone: (602) 771-2338

STANDARD PERMIT APPLICATION FORM
(As required by A.R.S. § 49-426, and Chapter 2, Article 3, Arizona Administrative Code)

1. Permit to be issued to: (Business license name of organization that is to receive permit) Freeport-McMoRan Morenci Inc.
2. Mailing Address: 4521 U.S. Highway 191
City: Morenci State: Arizona ZIP: 85540
3. Previous Company Name: (if applicable) _____
4. Name (or names) of Owners/Principals: Freeport-McMoRan Copper & Gold, Inc.
Phone: 602-234-8100 Fax: 602-234-8337 Email: _____
5. Name of Owner's Agent: R. Hunter White
Phone: 928-865-4521, ext. 6211 Fax: 928-865-4822 Email: _____
6. Plant/Site Manager/Contact Person and Title: Brent R. Fletcher, Manager, Environmental Services SEAZ
Phone: 928-865-6484 Fax: 928-865-3861 Email: _____
7. Plant Site Name: Freeport-McMoRan Morenci Inc.
Plant Site Location/Address: 4521 U.S. Highway 191
City: Morenci County: Greenlee ZIP: 85540
Indian Reservation (if applicable, which one): _____
Latitude/Longitude, Elevation: 33° 03' 54" N. Lat., 109° 20' 32" W. Long., 4,100 feet
8. Equipment Purpose: Transfer crushed ore from the Surge Pile to Conveyor P2/Control particulate emissions from this process.
Equipment List/Description: Surge Pile/P2 Baghouse, Vibrating Feeder No. 1, Vibrating Feeder No. 2, Conveyor P2.
9. Type of Organization:
 Corporation Individual Owner
 Partnership Government Entity (Government Facility Code: _____)
 Other _____
10. Permit Application Basis: New Source Revision Renewal of Existing Permit
(Check all that apply.) Portable Source General Permit
For renewal or modification, include existing permit number (and exp. date): 42474
Date of Commencement of Construction or Modification: After issuance of permit.
Is any of the equipment to be leased to another individual or entity? Yes No
Standard Industrial Classification Code: 1021 State Permit Class: _____
11. Signature of Responsible Official of Organization: RH White
Official Title of Signer: Senior Vice President, Southeastern Arizona
12. Typed or Printed Name of Signer: R. Hunter White
Date: 4-20-10 Telephone Number: 928-865-4521, ext. 6211
Company Name: Freeport-McMoRan Morenci Inc.

COMPLIANCE CERTIFICATION AND CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS

This certification must be signed by the Responsible Official. Applications without a signed certification will be deemed incomplete.

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by ADEQ as public record. I also attest that I am in compliance with the applicable requirements of the Permit and will continue to comply with such requirements and any future requirements that become effective during the life of the Permit. I will present a certification of compliance to ADEQ no less than semiannually and more frequently if specified by ADEQ. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with Arizona Administrative Code, Title 18, Chapter 2 and any permit issued thereof.

Typed or Printed Company Name: Freeport-McMoRan Morenci Inc.

Official Title of Signer: Senior Vice President, Southeastern Arizona

Typed or Printed Name of Signer: R. Hunter White

Signature of Responsible Official:  Date: 4-20-10

EMISSION SOURCES

Estimated Potential to Emit as per R18-2-101(80).

Review of applications and issuance of permits will be expedited by supplying all necessary information on this Table.

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Date 04/15/10

REGULATED AIR POLLUTANT DATA					EMISSION POINT DISCHARGE PARAMETERS									
EMISSION POINT (1)		CHEMICAL COMPOSITION OF TOTAL STREAM	R. AIR POLLUTANT EMISSION RATE		UTM COORDINATES OF EMISSION PT. (5)			STACK SOURCES (6)					NONPOINT SOURCES (7)	
NUMBER	NAME	REGULATED AIR POLLUTANT NAME (2)	#/ HR. (3)	TONS/ YEAR (4)	ZONE	EAST (Mtrs)	NORTH (Mtrs)	HEIGHT ABOVE GROUND (feet)	HEIGHT ABOVE STRUC. (feet)	EXIT DATA			LENGTH (ft.)	WIDTH (ft.)
										DIA. (ft.)	VEL. (fps.)	TEMP. (°F)		
001-020	Surge Pile Tunnel	PM	0.03	0.10	12	652835.62	3663187.49	--	--	--	--	--	NA ^a	NA ^a
		PM ₁₀	0.03	0.10										

GROUND ELEVATION OF FACILITY ABOVE MEAN SEA LEVEL 4.300 feet

ADEQ STANDARD CONDITIONS ARE 293K AND 101.3 KILOPASCALS (A.A.C. R18-2-101)

General Instructions:

- | | | |
|---|--|---|
| <p>1. Identify each emission point with a unique number for this plant site, consistent with emission point identification used on plot plan, previous permits, and Emissions Inventory Questionnaire. Include fugitive emissions. Limit emission point number to eight (8) character spaces. For each emission point use as many lines as necessary to list regulated air pollutant data. Typical emission point names are: heater, vent, boiler, tank, reactor, separator, baghouse, fugitive, etc. Abbreviations</p> <p>2. Components to be listed include regulated air pollutants as defined in R18-2-101. Examples of typical component names are: Carbon Monoxide (CO), Nitrogen Oxides (NOX), Sulfur Dioxide (SO₂), Volatile Organic Compounds (VOC), particulate matter (PM), particulate less than 10 microns (PM₁₀), etc. Abbreviations are O.K.</p> | <p>3. Pounds per hour (#/HR) is maximum potential emission rate expected by applicant.</p> <p>4. Tons per year is annual maximum potential emission expected by applicant, which takes into account process operating schedule.</p> <p>5. As a minimum applicant shall furnish a facility plot plan as described in the filing instructions. UTM coordinates are required only if the source is major source or is required to perform refined modeling for the purposes of demonstrating compliance with ambient air quality guidelines</p> | <p>6. Supply additional information as follows if appropriate:</p> <p>(a) Stack exit configuration other than a round vertical stack. Show length and width for a rectangular stack. Indicate if horizontal discharge with a note.</p> <p>(b) Stack's height above supporting or adjacent structures if structure is within 3 "stack height above ground" of stack.</p> <p>7. Dimensions of nonpoint sources as defined in R18-2-101.</p> |
|---|--|---|

Please note that the PTE estimates provided on this form are for information purposes and are not intended to become permit limitations. Additionally, the PTE estimates presented are the maximum potential to emit resulting from the changes described in this significant permit revision application.

^a NA = Not Available

EQUIPMENT LIST

The following table should include all equipment utilized at the facility and be complete with all data requested. Be sure to notate the units (tons/hour, horsepower, etc.) when recording the Maximum Rated Capacity information. Be sure to notate the Serial Number and/or the Equipment ID Number. The date of manufacture must be included in order to determine if portions of the facility are NSPS applicable. Make additional copies of this form if necessary.

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Process Number
Surge Pile/P2 Baghouse	22,700 dscfm	Flex-Kleen	84WSBC256IIIIG	273-DCD-8-01/M35075	1988	001-012
Vibrating Feeder No. 1	4,500 tons/hr	N/A	100' L x 96" W	N/A	1988	001-012
Vibrating Feeder No. 2	4,500 tons/hr	N/A	100' L x 96" W	N/A	1988	001-012
Conveyor P2	9,000 tons/hr	FMCGM	3920' L x 72" W	Custom Fabricated	1988	001-013

APPENDIX B
PROCESS FLOW DIAGRAMS

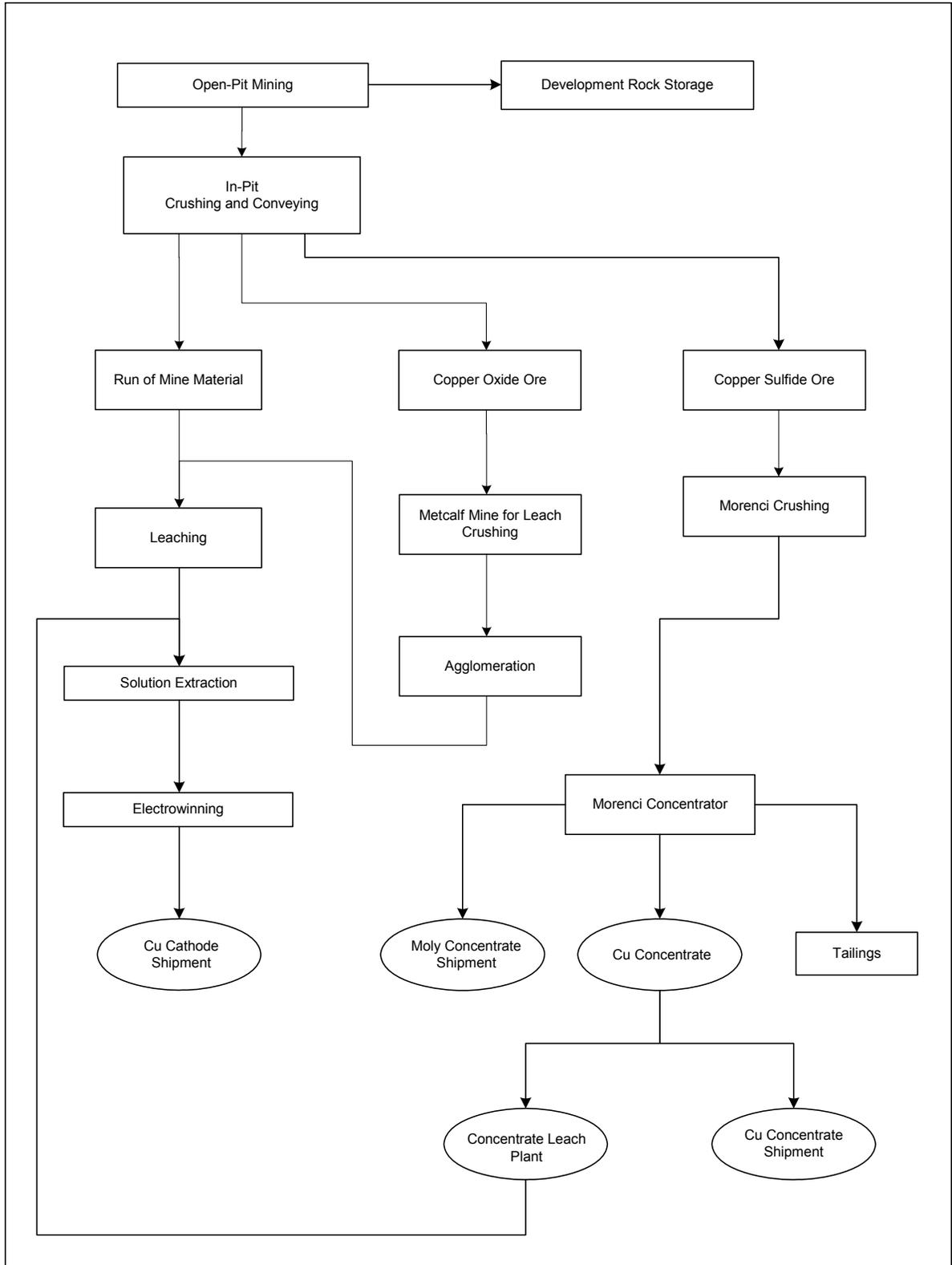


Figure B.1 Process Flow Diagram of the Major Operations at FMMI

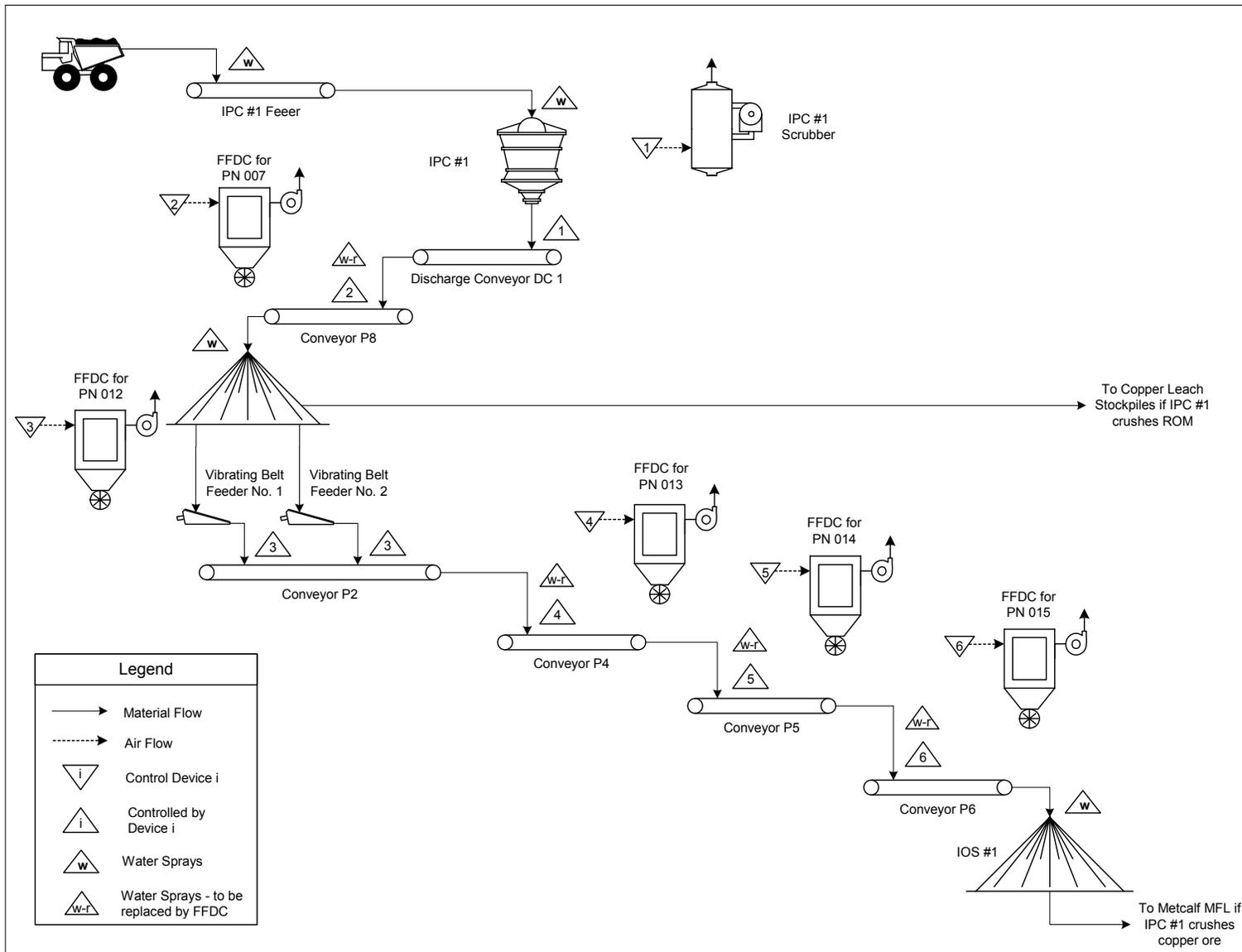


Figure B.2 Process Flow Diagram of IPC #1 and Subsequent Conveying and Stockpiling Processes

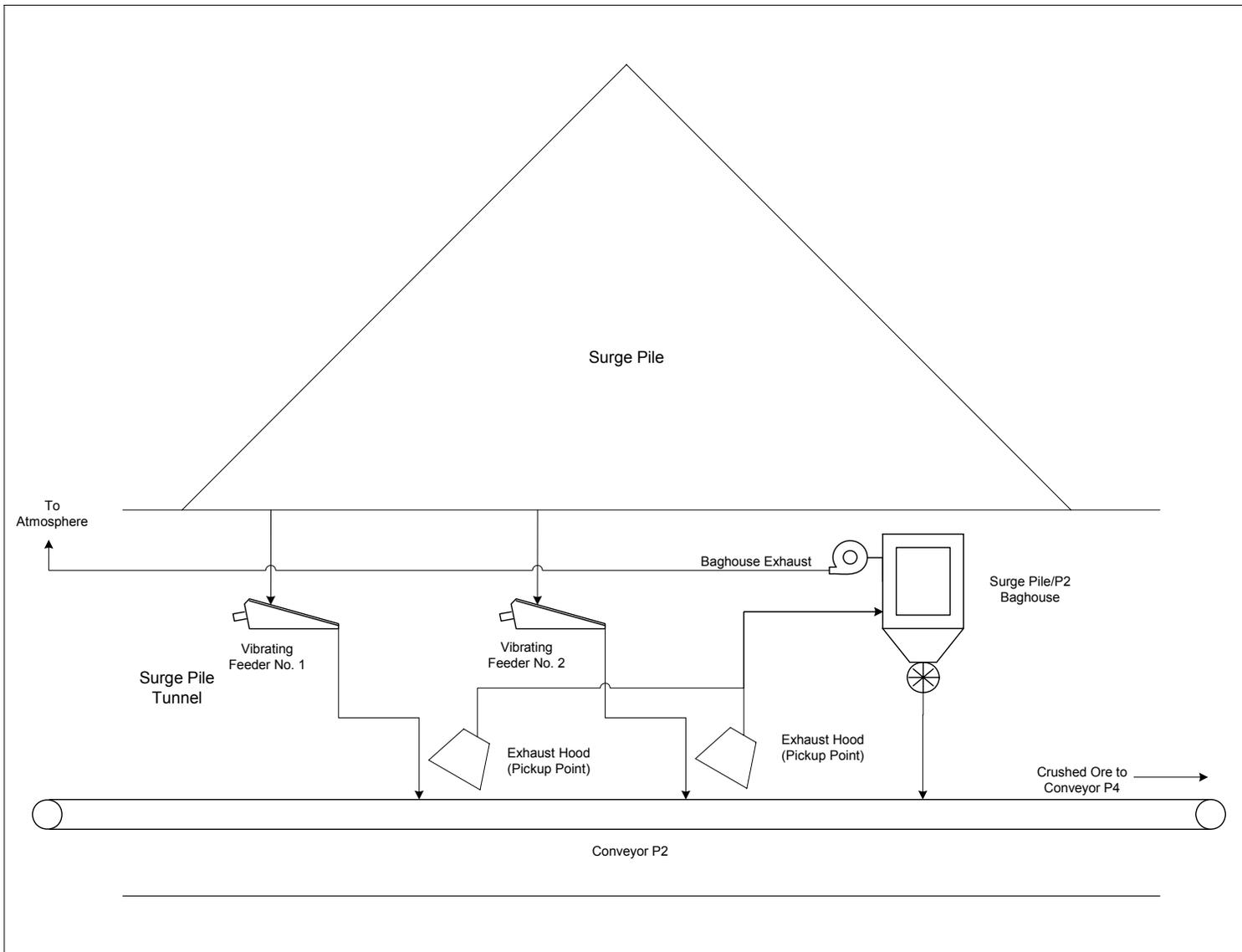


Figure B.3 Process Flow Diagram of Surge Pile/P2 Baghouse System Before the Notification

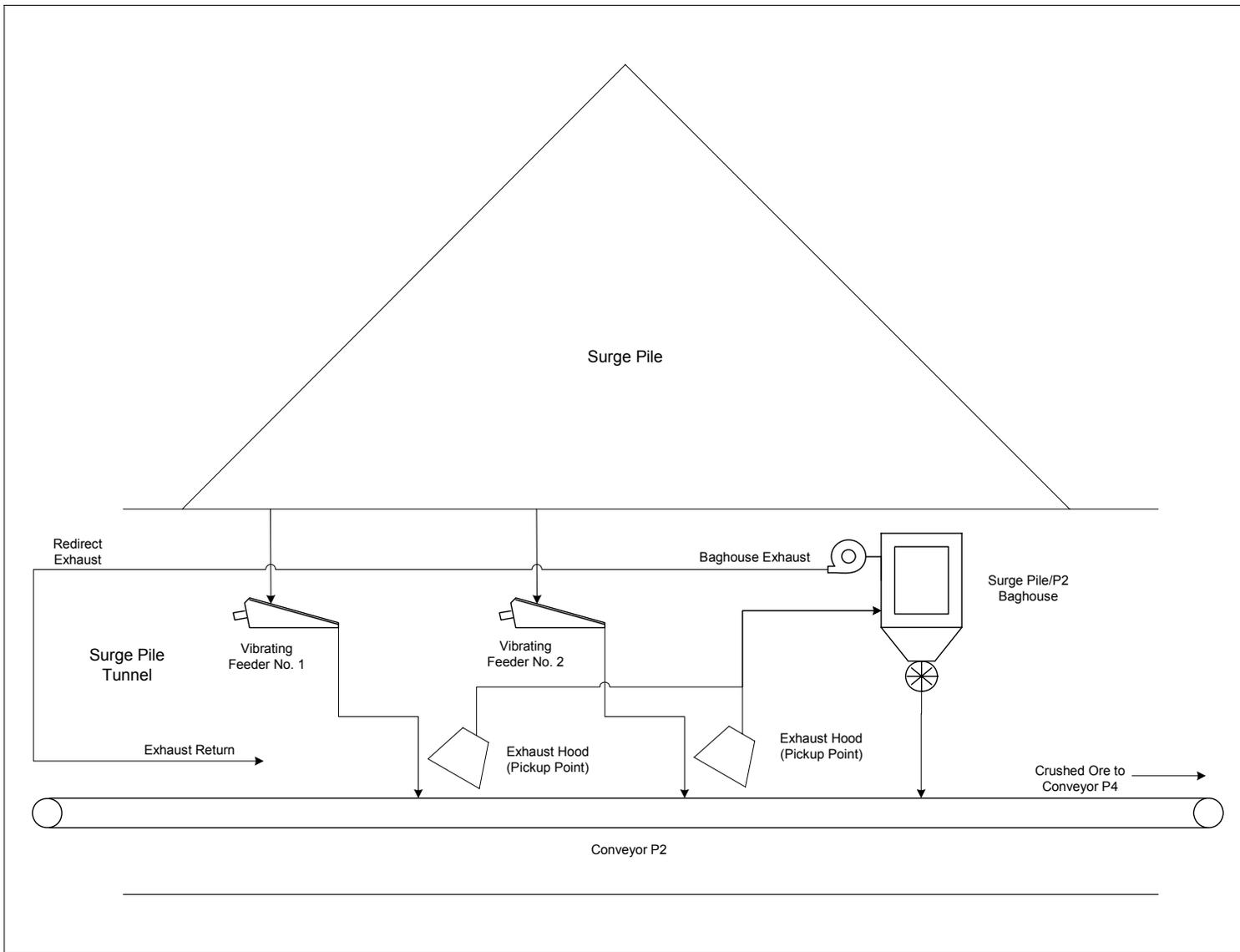


Figure B.4 Process Flow Diagram of Surge Pile/P2 Baghouse System After the Notification