BRUSH
CERAMIC PRODUCTS

Mr. Mukonde Chama
Pima County Department of Environmental Quality
33 N. Stone Avenue, Suite 730
Tucson, Arizona 85701
July 30, 2007

RE: Emissions Prevention Plan submission for Air Quality Operating Permit # 1571.

Dear Mr. Chama,

Please find the enclosed Emissions Prevention Plan, first submitted 1/31/2007, final revision as required by III.C. of part B. Brush Ceramic Products has included all comments suggested by PDEQ and agree that this plan submitted on 7/30/2007 is final and complete.

Brush Ceramic Products also agrees to wave the 30 day review period prior to public notice.

If I can provide further information, please let me know.

Sincerely,

Michael Berakis, CIH
Manager, EHS

PDEQ
JUL 2007
RECEIVED

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BRUSH CERAMIC PRODUCTS

EMISSIONS PREVENTION PLAN

Document number: **EV-3-0004**	Revision: **A**
Page 1 of 3	Original Issue date: 08-08-07
Prepared by/Author: Mike Berakis	Approved by: John Scheatzle

1.0 PURPOSE

1.1 The facility's operations are subject to the National Emission Standard for Hazardous Air Pollutants (NESHAPS) for Beryllium (40 CFR 61, Subparts A and C).

1.2 Air Quality Operating Permit number 1571 is in place to ensure Brush Ceramic Products continues to monitor and report the functionality of air pollution control (APC) equipment. It also requires a comprehensive inspection and preventive maintenance program be in place. The APC systems are directly tied to the operation of a process and must be treated as any other piece of production equipment. For successful operation, each system will require:

- Routine Inspection
- Preventative Maintenance
- Quick Response to Malfunctions

2.0 SCOPE

2.1 This is a written procedure to ensure Brush Ceramic Products identifies all exhaust vents, doorways, and outside ductwork associated with APC equipment at the facility, and monitors these areas to prevent the release of beryllium emissions outside the facility.

3.0 REFERENCES /APPLICABLE DOCUMENTS

3.1 PDEQ Air Quality Operating Permit number 1571 issued November 2006
3.2 EV-3-0009 Dust Collector Drum Change Procedure dated 10/12/2006
3.3 EV-3-0011 40K Final Safety Filter Change Procedure 10/12/2006
3.4 EV-3-0012 15K Final Safety Filter Change Procedure 10/12/2006
3.5 EV-3-0013 6.5 Final Safety Filter Change Procedure 10/12/2006
3.6 EV-3-0014 40K SSM (start up shutdown malfunction) plan dated 7/02/2007
3.7 EV-3-0015 15K SSM plan dated 7/02/2007
3.8 EV-3-0016 Torit SSM plan dated 7/02/2007
3.9 EV-3-0017 EF-1 SSM plan dated 7/02/2007
3.10 EV-3-0018 Clearance sampling for BeO procedure dated 2/07/2007
3.11 EV-3-0019 BeO powder spill response procedure dated 2/07/2007
3.12 EV-4-0059 40K maintenance log dated 2/07/2007
3.13 EV-4-0060 15K maintenance log dated 2/07/2007
3.14 EV-4-0061 Torit maintenance log dated 2/07/2007
3.15 EV-4-0062 EF-1 maintenance log dated 2/07/2007
3.16 EV-4-0069 APC Inspection log dated 7/19/2007
3.17 Attachment 1 Monitoring locations for APCs
3.18 Attachment 2 Powered exhaust vent locations
3.19 Attachment 3 Exits, doorway, and equipment access locations

4.0 DEFINITIONS

4.1 The 40,000 cubic feet per minute capacity HEPA filtered APC system (40K) that includes two eighty cartridge filter houses and one two stage final safety filter house.

4.2 The 15,000 cubic feet per minute capacity HEPA filtered APC system (15K) that includes one sixty cartridge filter house and one three stage final safety filter house.

4.3 The 7,000 cubic feet per minute capacity HEPA filtered APC system (Torit) that includes one multi-stage wet separator filter, one primary filter bank, and one final safety filter bank.

4.4 The 6,500 cubic feet per minute capacity HEPA filtered APC system (EF1) that includes one primary filter bank and one final safety filter bank.

4.5 All exhaust ductwork originating from the building to the APC equipment and from the APC equipment to the final stack.

4.6 All exits, doorways, or equipment access ways directly adjacent to the production areas listed in Attachment 2.

4.7 Powered exhaust vents 1 – 8 as listed in permit 1571 and shown in Attachment 3.

5.0 PROCEDURE

5.1 Daily inspections

5.1.1 Pressure drop readings shall be recorded from the 40K, 15K, EF1, and the Torit APC systems each day the units are in operation. Readings shall be recorded on the APC Monitoring Log, EV-4-0069 and kept for a period of five years. The record shall include the date, time readings were made, the specific segment of the collection system to which the pressure drop applies, the value of the pressure drop noted on the gauge and the name or initials of the person making the reading.

5.1.2 Acceptable operating limits are outlined in the table below:

Dust Collection System Component	Segment	Operating Range (in. water gauge)	Failure Indication (in. water gauge)
40,000 CFM (A)	East Primary Cartridges	1.5 – 2.5	<0.1, >7.0
40,000 CFM (B)	West Primary Cartridges	1.5 – 2.5	<0.1. >7.0
40,000 CFM (D)	Final filters	0.4 – 2.4	<0.1, >7.0
15,000 CFM (C)	Primary Cartridges	1.5 – 2.5	<0.1, >7.0
15,000 CFM (E)	Final filters	0.4 – 1.5	<0.1, >7.0
7,000 CFM (F)	Final filters	0.4 – 2.4	<0.1, >7.0
6,500 CFM (G)	All Filters	1.5 – 4.0	<0.1, >7.0

5.1.3 If any APC system segment reading falls outside of the listed operating range, the Start up Shut down Malfunction plan for the corresponding unit shall be followed (EV-4-0059, EV-4-0060, EV-4-0061, and EV-4-0062).

5.1.4 The upper value in the operating range shall act as the trigger point for scheduling a filter / cartridge change. The change procedure for the corresponding unit shall be followed (EV-3-0011, EV-3-0012, EV-3-0013).

5.2 Weekly inspections

5.2.1 The physical components of the APC systems shall be visually inspected. This inspection shall include but not be limited to:

- Ductwork outside the facility, to ensure mechanical integrity
- Expansion joints, to look for cracks or other leaks
- Structures, to look for cracks, excessive corrosion and general overall condition

5.2.2 The 8 powered exhaust vents listed in Table III of permit 1571 shall be inspected for physical integrity, condition, operation, and the absence of any visible emission or evidence of emission on the area surrounding the vent.

5.2.3 All doorways specified in Attachment 3 of this plan (any exit that is directly from a beryllium processing area) shall be inspected to ensure good physical integrity, proper operating condition, and the absence of any visible emission or evidence of emission in the area surrounding the doorway.

5.2.4 Collection drum levels will be inspected for the level of material collected and integrity of the drum.

5.2.4.1 When dust collection drums are ¾ full, as found by light tapping on the side of the drum, the drum will be scheduled for change out following EV-3-0009 as soon as practicable by initiating a work order. The work order notification number must be listed on EV-4 - 0069.

5.2.5 Weekly inspections shall be recorded on the APC inspection log EV-4-0069 and maintained for a period of five years. Records shall include the date, initials of the person making the inspection, system problems / corrective actions, or incident number reference for any issues found.

5.2.6 Any work, start up, shut down, filter change, or repair done on the APC equipment shall be recorded in the respective system maintenance log (EV-4-0059, EV-4-0060, EV-4-0061, and EV-4-0062).

5.2.7 Upon discovery, any problem, full drum, or discrepancy found during a weekly inspection will be recorded on an APC inspection log EV-4-0069 Closure of the discrepancy will be managed in the work order system or under the incident response program. Repetitive annotations on subsequent weekly inspection logs are not necessary once a problem or discrepancy has been identified.

5.3 Incidental response

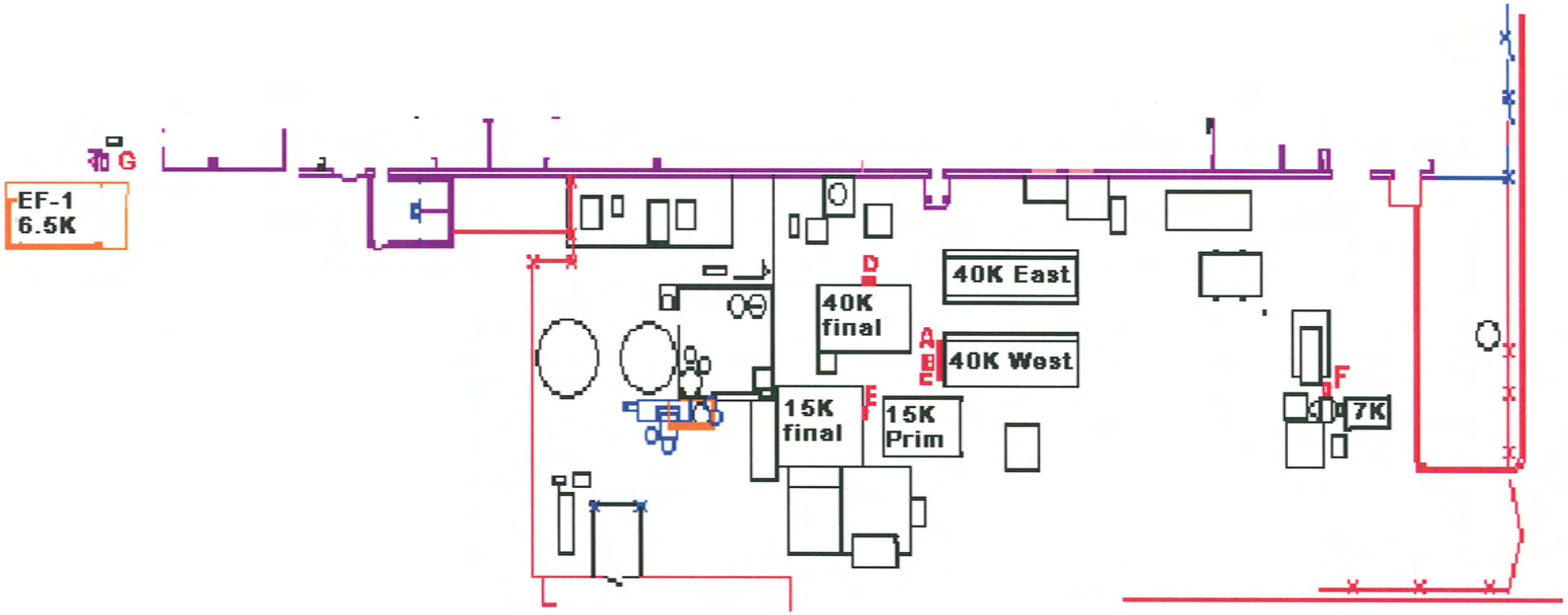
5.3.1 Any possible emissions or visible BeO outside production areas, notify EH&S and follow EV-3-0018 Clearance sampling for BeO.

5.3.2 Any in plant spill or upset condition follow BeO powder spill response procedure EV-3-0019 to prevent any beryllium emissions from escaping the facility.

6.0 RECORDS/DOCUMENTATION

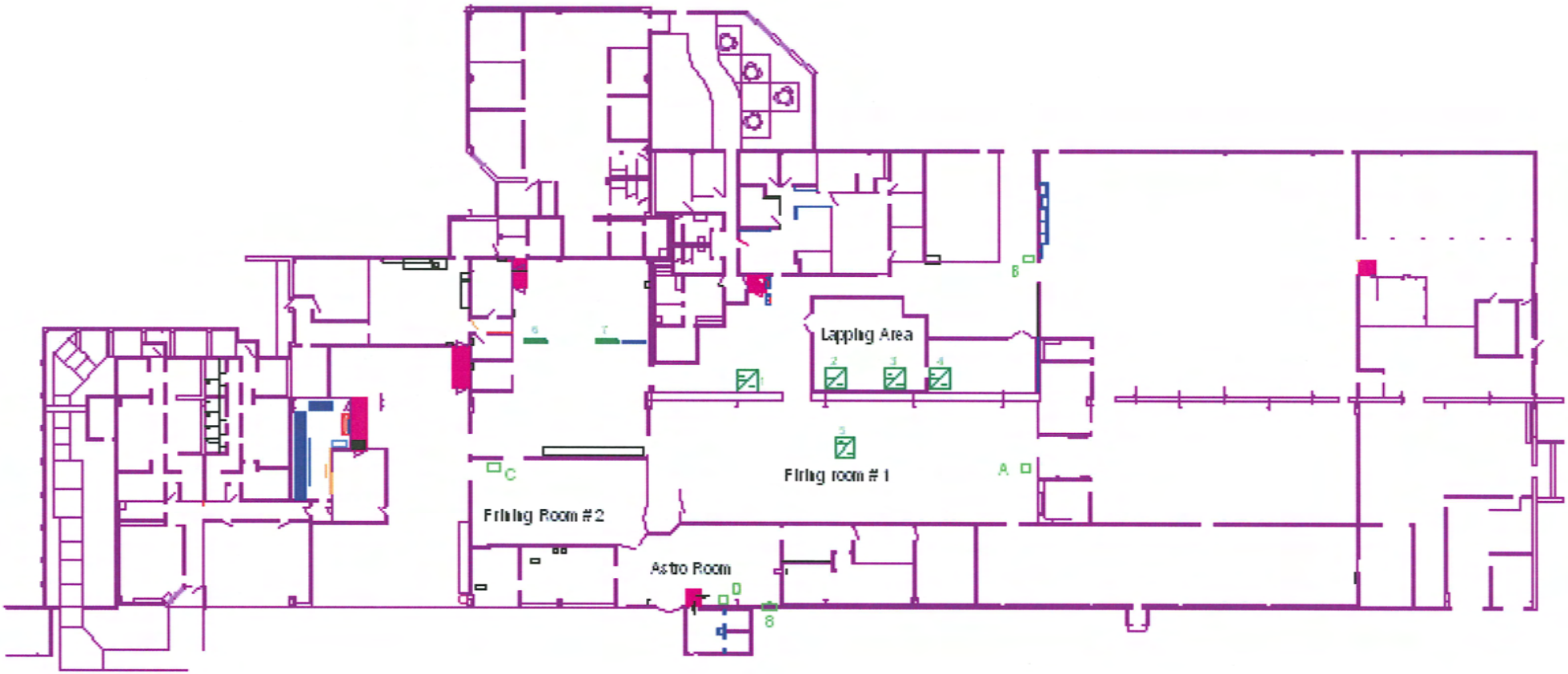
7.0 REVISION HISTORY

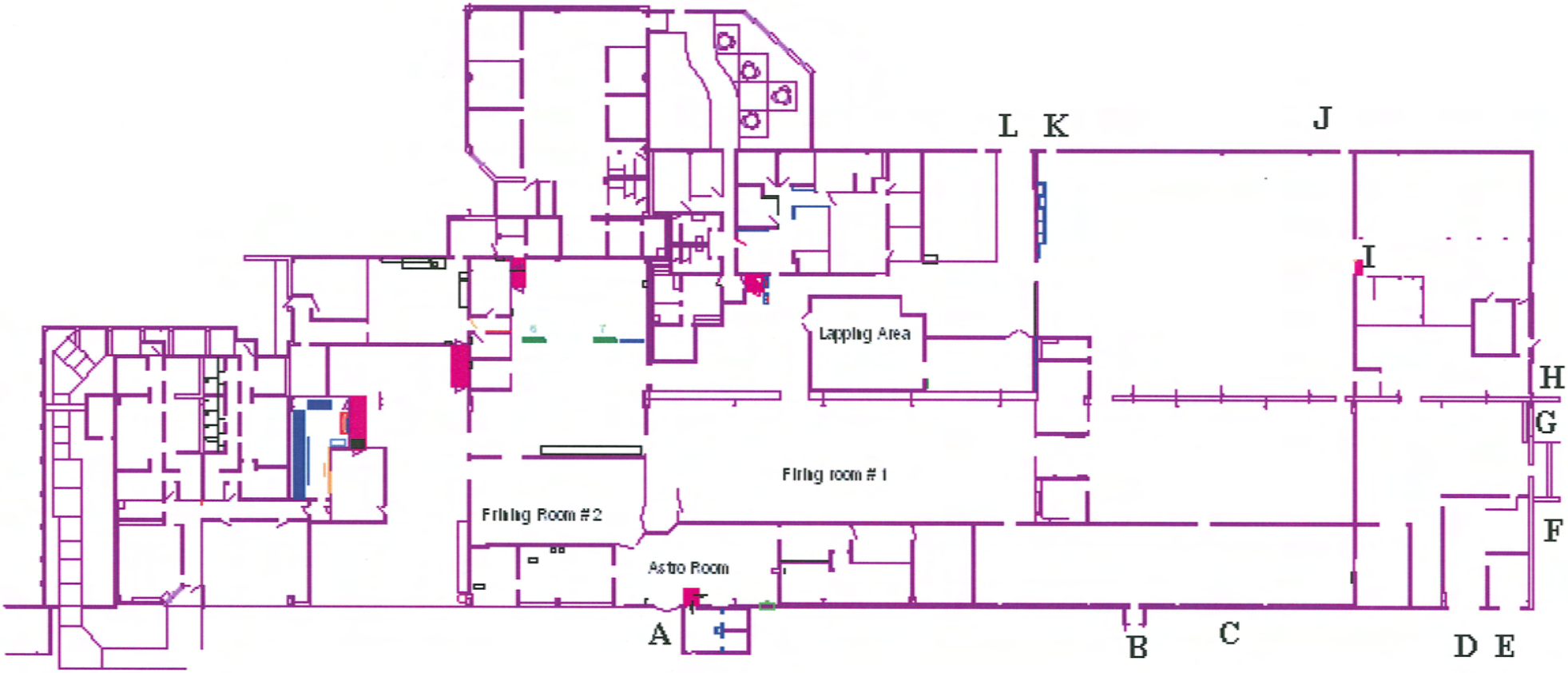
Attachment # 1 Emissions Prevention Plan
Monitoring locations for APCs (A-G)



40K - East Primary	"A"	Operating range 1.5 - 2.5
40K - West Primary	"B"	Operating range 1.5 - 2.5
40K - Final Filters	"D"	Operating range 0.4 - 2.4
15K - Primary	"C"	Operating range 1.5 - 2.5
15K - Final Filters	"E"	Operating range 0.4 - 1.5
7K - Final Filters	"F"	Operating range 0.4 - 2.4
6.5K - All Filters	"G"	Operating range 1.5 - 4.0

Attachment #2 Emissions Prevention Plan
Powered exhaust vent locations



Power for fans designated by letters A - D
"A" located in firing room #1 controls vents 1,4,5
"B" Located adjacent to pressing area controls vents 2,3
"C" Located in firing room #2 controls vents 6,7
"D" Located in Astro room controls vent 8

Attachment # 3 Emissions Prevention Plan
Exits, doorway and equipment access locations