

**NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT**

Proposed Approval of Construction and Operation Permit

for **Phelps Dodge Magnet Wire Company**
in **Allen County**

CP 003-8609, Plt ID 003-00013

Notice is hereby given that the above company located at 4300 New Haven Avenue, Fort Wayne, Indiana 46803, has made application to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) for a permit to construct and operate eleven (11) quartz fabric ovens, four (4) lepel fabric ovens, one (1) applicator cleaning area, one (1) enamel production operation and two (2) Mag-VZ/6 ovens with thermal oxidizers and catalytic oxidizers for VOC control and baghouses and a mist eliminator for particulate matter control. The addition of these facilities represents a minor modification to an existing, permitted, major source. Based on 8,760 hours of operation per year, the VOC and particulate matter allowable emissions are 210 and 40.7 tons per year, respectively.

IDEM is aware that the eleven (11) quartz fabric ovens, four (4) lepel fabric ovens, one (1) applicator cleaning area and one (1) enamel production operation have been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Notice is hereby given that there will be a period of 30 days from the date of publication of this notice during which any interested person may comment on why this proposed permit should or should not be issued. Appropriate comments should be related to air quality issues, interpretation of the applicable state and federal rules, calculations made, technical issues, or the effect that the operation of this facility would have on any aggrieved individuals. A copy of the application and staff review is available for examination at the **Allen County Public Library located at 900 Webster Street, Fort Wayne, Indiana**. All comments, along with supporting documentation, should be submitted in writing to the IDEM, OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015. If appropriate adverse comments concerning the air pollution impact of this proposed source are received, together with a request for a public hearing, such a hearing may be held to give further consideration to this application.

Persons not wishing to comment at this time, but wishing to receive notice of future proceedings conducted related to this action, must submit a written request to the Office of Air Management (OAM), at the above address. All interested parties of record will receive a notice of the decision on this matter and will then have 15 days after receipt of the Notice of Decision to file a petition for administrative review. Procedures for filing such a petition will be enclosed with the Notice.

Questions should be directed to Mark L. Kramer, c/o OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 516-691-3395 or in Indiana at 1-800-451-6027 (ext 516-691-3395).

Paul Dubenetzky, Chief
Permit Branch
Office of Air Management

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Phelps Dodge Magnet Wire Company
4300 New Haven Avenue
Fort Wayne, Indiana 46803**

the equipment listed in Page 2 of this permit.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP 003-8609-00013	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

- (1) Eleven (11) quartz fabric ovens, known as 701/702, 703/704, 705/706, 707/708, 709/710, 804, 805, 808, 809, 810 and 811, equipped with a total of four (4) thermal oxidizers for VOC control, exhausted through stacks 0023, 0020, 0033 and 0024, each thermal oxidizer has a natural gas supplementary fuel input rate of 0.16 million British thermal units per hour, capacity: 33 pounds per hour of magnet wire for each of the 700 series ovens and 80 pounds per hour of magnet wire for each of the 800 series ovens.
- (2) Four (4) lepel fabric ovens, known as 802, 803, 806 and 807, equipped with a thermal oxidizer for VOC control, exhausted through stacks 0031, 0030, 0028 and 0027, thermal oxidizer with a natural gas supplementary fuel input rate of 0.16 million British thermal units per hour, capacity: 80 pounds per hour of magnet wire for each oven.
- (3) One (1) applicator cleaning area, consisting of tanks 1 through 7, exhausted through stacks 0299, 0300 and 0301, capacity: 150 gallons each for tanks 1 and 2, 650 gallons for tank 3, 500 gallons each for tanks 4 and 5, 400 gallons for tank 6 and 500 gallons for tank 7.
- (4) One (1) enamel production operation, consisting of seven (7) mixers known as mixer #1 through mixer #7, capacity: 500, 1,000, 1,500, 500, 1,500, 1,500 and 100 gallons, respectively, two (2) mixer/reactors known as mixer/reactors #13 and #14, capacity: 500 and 300 gallons, respectively, one (1) amideimide reactor, capacity: 2,000 gallons, four (4) reactors known as reactor #8, #9, #10 and #11, capacity: 2,000, 2,000, 750 and 3,000 gallons, respectively, one (1) amideimide cutting tank, capacity: 2,000 gallons and a cutting tank known as cutting tank #12, capacity: 6,000 gallons. The enamel operation is equipped with six (6) baghouse dust collectors and one (1) mist eliminator, exhausted through stacks 0260, 0374, 0262, 0261, 0377, 0272 and 0278, respectively, total capacity: 6,780 pounds of enamel per hour.
- (5) One (1) Mag-VZ/6 oven, known as No.1, and consisting of three (3) nine- (9-)line machines, equipped with three (3) catalytic oxidizers for VOC control, exhausted through stacks 383, 384, 385 as well as wire cooling stacks, 386, 387 and 388, capacity: 1,158 pounds per hour of magnet wire.
- (6) One (1) Mag-VZ/6 oven, known as No. 2, and consisting of three (3) nine- (9-) line machines, equipped with three (3) catalytic oxidizers for VOC control, exhausted through stacks 389, 390, 391 as well as cooling stacks 392, 393 and 394, capacity: 1,158 pounds per hour of magnet wire.

Construction Conditions

General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
2. That this permit to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

3. That pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.
4. That pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. That notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

6. That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:
 - (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
 - (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
 - (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees)
 - (e) The Permittee has submitted their Part 70 (T-003-6925) application on October 15, 1996 for the existing source. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.
7. That when the facility is constructed and placed into operation the following operation conditions shall

be met:

Operation Conditions

General Operation Conditions

1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
2. That the permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder.

Preventive Maintenance Plan

3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:
 - (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
 - (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
 - (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

Transfer of Permit

4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):
 - (a) In the event that ownership of these eleven (11) quartz fabric ovens, four (4) lepel fabric ovens, one (1) applicator cleaning area, one (1) enamel production operation and two (2) Mag-VZ/6 ovens is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
 - (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
 - (c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. That pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:
- (a) Violation of any conditions of this permit.
 - (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
 - (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
 - (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
 - (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM, or other public official having jurisdiction.

Malfunction Condition

7. That pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):
- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.
 - (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
 - (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
 - (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

Annual Emission Reporting

8. That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. A copy of this rule is enclosed. The annual statement must be submitted to:

Indiana Department of Environmental Management
Data Support Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

Opacity Limitations

9. That pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:
- (a) visible emissions shall not exceed an average of 40 percent opacity in 24 consecutive readings.
 - (b) visible emissions shall not exceed 60 percent opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

Particulate Matter (PM) Limitation

10. That pursuant to 326 IAC 6-3 (Process Operations), the six (6) baghouses and one (1) mist eliminator shall be in operation at all times when the enamel production process is in operation, and shall not exceed the allowable particulate matter (PM) emission rate of 9.29 pounds per hour.

Baghouse Operating Condition

11. That the six (6) baghouses and one (1) mist eliminator shall be operated at all times when the enamel production process is in operation.
- (a) An inspection shall be performed each calendar quarter of all the baghouses. Defective bags shall be replaced. A record shall be kept of the results of the inspection and the number of bags replaced.
 - (b) In the event that a bag's failure has been observed:
 - (i) The affected compartments will be shut down immediately until the failed units have been replaced.
 - (ii) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

Visible Emission Notations

12. That visible emission notations of all exhaust to the atmosphere from six (6) baghouses and one (1) mist eliminator shall be performed once per day. A trained employee will record whether emissions are normal or abnormal.
- (a) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting start up or shut down time.
 - (b) In the case of batch or discontinuous operation, readings shall be taken during that part of the operation specified in the facility's specific condition prescribing visible emissions.
 - (c) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal and abnormal visible emissions for that specific process.
 - (d) The Preventive Maintenance Plan for this facility shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

Fugitive Dust Emissions

13. That pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the Permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

Surface Coating Emission Limitations: Magnet Wire Coating Operations

14. Pursuant to 326 IAC 8-2-8, the volatile organic compounds emissions from one (1) quartz fabric enameling oven, known as #811; and the two (2) mag VZ/6 ovens, known as ovens #1 and #2, shall not exceed 1.7 pounds per gallons, excluding water, delivered to the coating applicator from magnet wire coating operations. This limit shall be met by the operation of the thermal oxidizers for the quartz fabric enameling oven, known as #811, and by the operation of the catalytic oxidizers for the two (2) mag VZ/6 ovens.

Volatile Organic Compound

15. That pursuant to 326 IAC 2-1-3(i)(8), records of surface coating quantities and organic solvent contents shall be maintained for a minimum period of 36 months and made available upon request of the Office of Air Management (OAM). Any change or modification which may increase potential emissions from the one (1) quartz fabric enamel oven #811, the applicator cleaning operation, and two (2) Mag-VZ/6 ovens to 39.0 tons per year from the aforementioned equipment shall obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

Cold Cleaner Operations

16. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the cold cleaning facility shall:

- (a) equip the cleaner with a cover;
- (b) equip the cleaner with a facility for draining cleaned parts;
- (c) close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) provide a permanent, conspicuous label summarizing the operation requirements;
- (f) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

Cold Cleaner Degreaser Operation and Control

17. (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) the solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) the solvent is agitated; or
 - (C) the solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent

is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Thermal Oxidizer Operation

18. That the thermal oxidizers shall operate at all times that the eleven (11) quartz fabric ovens and the four (4) lepel fabric ovens are operated. When operating, the thermal oxidizers shall maintain a minimum operating temperature of 1,150 degrees Fahrenheit or a temperature, fan amperage and duct velocity determined in the compliance testing to maintain a minimum 90 percent destruction of the volatile organic compound (VOC) captured.

Catalytic Oxidizer Operation

19. That the catalytic oxidizers shall operate at all times that the two (2) mag VZ/6 ovens are operated. When operating, the catalytic oxidizers shall maintain a minimum temperature rise across the bed or a minimum retention time determined by compliance testing to maintain a minimum 90 percent destruction of the volatile organic compound (VOC) captured.

Performance Testing

20. That pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance stack tests shall be performed for the five (5) thermal oxidizers and six (6) catalytic oxidizers for volatile organic compounds, including the capture and destruction efficiencies, within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-2.1 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.
- (a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.
 - (b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks

prior to the date.

- (c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.
- (d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.
- (e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

Open Burning

21. That the permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

Emergency Reduction Plans

22. Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on October 15, 1996.
- (b) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM, shall supply such a plan.
- (c) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (d) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (e) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE: IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATES ?____, 100 LBS/HR VOC ?____, 100 LBS/HR SULFUR DIOXIDE ?____ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ?____ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ Phelps Dodge Magnet Wire Company _____ PHONE NO. _____ 219 - 421 - 5570 _____

LOCATION: (CITY AND COUNTY) _____ Fort Wayne / Allen _____

PERMIT NO. _____ 003 - 8609 _____ AFS PLANT ID: _____ 003 - 00013 _____ AFS POINT ID: _____ INSP: _____

CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/ 19____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/ 19____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. The requirements of this rule (326 IAC 1-6) shall apply to the owner or operator of any facility which has the potential to emit twenty-five (25) pounds per hour of particulates, one hundred (100) pounds per hour of volatile organic compounds or SO₂, or two thousand (2,000) pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

326 IAC 1-2-39 “Malfunction” definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. (Air Pollution Control Board; 326 IAC 1-2-39; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2373)

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name: Phelps Dodge Magnet Wire Company
Source Location: 4300 New Haven Avenue, Fort Wayne, Indiana 46803
County: Allen
Construction Permit No.: CP 003-8609-00013
SIC Code: 3357
Permit Reviewer: Mark L. Kramer

The Office of Air Management (OAM) has reviewed five (5) applications from Phelps Dodge Magnet Wire Company relating to the construction and operation of eleven (11) quartz fabric ovens, four (4) lepel fabric ovens, one (1) applicator cleaning area, one (1) enamel production operation and two (2) Mag-VZ/6 ovens. The five (5) applications were combined into a single permit modification. The proposed new facilities represent a minor modification to an existing permitted major source. The modification consists of the following equipment:

- (1) Eleven (11) quartz fabric ovens, known as 701/702, 703/704, 705/706, 707/708, 709/710, 804, 805, 808, 809, 810 and 811, equipped with a total of four (4) thermal oxidizers for VOC control, exhausted through stacks 0023, 0020, 0033 and 0024, each thermal oxidizer has a natural gas supplementary fuel input rate of 0.16 million British thermal units per hour, capacity: 33 pounds per hour for each of the 700 series ovens and 80 pounds per hour for each of the 800 series ovens.
- (2) Four (4) lepel fabric ovens, known as 802, 803, 806 and 807, each equipped with a thermal oxidizer for VOC control, exhausted through stacks 0031, 0030, 0028 and 0027, each thermal oxidizer with a natural gas supplementary fuel input rate of 0.16 million British thermal units per hour, capacity: 80 pounds per hour for each oven.
- (3) One (1) applicator cleaning area, consisting of tanks 1 through 7, exhausted through stacks 0299, 0300 and 0301, capacity: 150 gallons each for tanks 1 and 2, 650 gallons for tank 3, 500 gallons each for tanks 4 and 5, 400 gallons for tank 6 and 500 gallons for tank 7.
- (4) One (1) enamel production operation, consisting of seven (7) mixers known as mixer #1 through mixer #7, capacity: 500, 1,000, 1,500, 500, 1,500, 1,500 and 100 gallons, respectively, two (2) mixer/reactors known as mixer/reactors #13 and #14, capacity: 500 and 300 gallons, respectively, one (1) amideimide reactor, capacity: 2,000 gallons, four (4) reactors known as reactor #8, #9, #10 and #11, capacity: 2,000, 2,000, 750 and 3,000 gallons, respectively, one (1) amideimide cutting tank, capacity: 2,000 gallons and a cutting tank known as cutting tank #12, capacity: 6,000 gallons. The enamel operation is equipped with six (6) baghouse dust collectors and one (1) mist eliminator, exhausted through stacks 0260, 0374, 0262, 0261, 0377, 0272 and 0278, respectively, total capacity: 6,780 pounds of enamel per hour.

- (5) One (1) Mag-VZ/6 oven, known as No.1, equipped with six (6) catalytic oxidizers for VOC control, exhausted through stacks 383, 386, 384, 387, 385 and 388, capacity: 1,158 pounds per hour.
- (6) One (1) Mag-VZ/6 oven, known as No. 2, equipped with six (6) catalytic oxidizers for VOC control, exhausted through stacks 389, 392, 390, 393, 391 and 394 capacity: 1,158 pounds per hour.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
0023	Quartz Fabric Enameling Oven	31.0	0.5	157	410
0020	Quartz Fabric Enameling Oven	28.5	0.5	98	860
0033	Quartz Fabric Enameling Oven	28.5	0.5	167	80
0024	Quartz Fabric Enameling Oven	28.5	0.25	49	940
0031	Lepel Fabric Oven	25.5	0.75	132	80
0030	Lepel Fabric Oven	26.5	0.75	132	80
0028	Lepel Fabric Oven	24.5	0.75	155	100
0027	Lepel Fabric Oven	26.0	0.75	132	100
0299	Applicator Cleaning Tanks	33.0	1.5	3,268	80
0300	Applicator Cleaning Tanks	33.0	1.25	2,085	80
0301	Applicator Cleaning Tanks	33.0	1.5	3,003	80
0260	Enamel Production Plant	27.0	1.0	2,400	70
0261	Enamel Production Plant	30.0	1.5	3,600	70
0262	Enamel Production Plant	32.0	1.5	3,600	70
0272	Enamel Production Plant	32.5	1.5	3,600	70
0278	Enamel Production Plant	36.0	1.5	1,000	70
0374	Enamel Production Plant	21.0	1.0	N/A	70
0375	Enamel Production Plant	17.0	0.12	2,400	70
0376	Enamel Production Plant	17.0	0.75	N/A	70
0377	Enamel Production Plant	27.0	1.0	3,600	70
0395	Enamel Production Plant	27.0	0.25	N/A	70
383	Mag VZ/6 Enameling Oven No.1	79.0	0.46	279	1,171

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
386	Mag VZ/6 Enameling Oven No.1	71.0	0.57	643	205
384	Mag VZ/6 Enameling Oven No.1	79.0	0.46	279	1,171
387	Mag VZ/6 Enameling Oven No.1	71.0	0.57	643	205
385	Mag VZ/6 Enameling Oven No.1	79.0	0.46	279	1,171
388	Mag VZ/6 Enameling Oven No.1	71.0	0.57	643	205
389	Mag VZ/6 Enameling Ovens No.2	79.0	0.46	279	1,171
392	Mag VZ/6 Enameling Oven No.2	71.0	0.57	643	205
390	Mag VZ/6 Enameling Oven No.2	79.0	0.46	279	1,171
393	Mag VZ/6 Enameling Oven No.2	71.0	0.57	643	205
391	Mag VZ/6 Enameling Oven No.2	79.0	0.46	279	1,171
394	Mag VZ/6 Enameling Oven No.2	71.0	0.57	643	205

Enforcement Issue

IDEM is aware that these facilities have been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

All facilities except the two (2) Mag-VZ/6 ovens are already in operation, were identified in their Title V permit application and are subject to IDEM's transition policy regarding discovery of unpermitted/unregistered facilities.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on May 21, 1997, with additional information received on July 22, 1997.

Emissions Calculations

See pages 1 through 18 of Appendix A (Emissions Calculation Spreadsheets) for detailed calculations.

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/yr)	Potential Emissions (tons/yr)
Particulate Matter (PM)	40.7	10,862
Particulate Matter (PM ₁₀)	40.7	10,862
Sulfur Dioxide (SO ₂)	0.002	0.002
Volatile Organic Compounds (VOC)	210	587
Carbon Monoxide (CO)	0.140	0.140
Nitrogen Oxides (NO _x)	0.329	0.329
Single Hazardous Air Pollutant (HAP)	50.6	50.6
Combination of HAPs	131	131

- (a) Allowable VOC emissions are determined from the applicability of rule 326 IAC 2-2 (PSD rules) See attached spreadsheets for detailed calculations.
- (b) The allowable emissions based on the rules cited are less than the potential emissions, therefore, the allowable emissions are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of VOC are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.
- (d) Allowable emissions (as defined in the Indiana Rule) of a single hazardous air pollutant (HAP) are greater than 10 tons per year and the allowable emissions of any combination of the HAPs are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, a construction permit is required.

County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

- (b) Allen County has been classified as attainment or unclassifiable for the remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	0.06
PM ₁₀	0.06
SO ₂	0.00
VOC	752
CO	70.5
NO _x	1,000

This existing source is a major stationary source because at least one attainment regulated pollutant is emitted at a rate of 250 tons per year. These emissions were obtained from the AIRs Facility Quick Look Report dated September 18, 1996.

Proposed Modification

Potential emissions from the proposed modifications (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limits, where applicable) are grouped by pre- and post-PSD applicability dates in order to properly assess PSD applicability.

- Constructed During January 1977

Pollutant	PM (tons/yr)	PM ₁₀ (tons/yr)	SO ₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO _x (tons/yr)
Quartz Fabric Enameling Ovens	0.00	0.00	0.00	5.63	0.00	0.00
Lepel Fabric Ovens	0.00	0.00	0.00	1.66	0.00	0.00
Enamel Production	15.8	15.8	0.00	20.4	0.00	0.00

These modifications pre-date the PSD applicability date of August 7, 1980. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

2. Constructed After August 7, 1980

Each modification has been reviewed with regard to PSD applicability separately, since each was constructed at least a year apart.

(a) Quartz Fabric Enameling Oven #811 - Constructed During January 1992.

Pollutant	PM (tons/yr)	PM ₁₀ (tons/yr)	SO ₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO _x (tons/yr)
Proposed Modification	0.00	0.00	0.00	0.94	0.00	0.00
Contemporaneous Increases	0.00	0.00	0.00	0.00	0.00	0.00
Contemporaneous Decreases	0.00	0.00	0.00	0.00	0.00	0.00
Net Emissions	0.00	0.00	0.00	0.94	0.00	0.00
PSD or Offset Significant Level	25	15	40	40	100	40

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

(b) Applicator Cleaning - Constructed During January 1991

Pollutant	PM (tons/yr)	PM ₁₀ (tons/yr)	SO ₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO _x (tons/yr)
Proposed Modification	0.00	0.00	0.00	18.6	0.00	0.00
Contemporaneous Increases	0.00	0.00	0.00	0.00	0.00	0.00
Contemporaneous Decreases	0.00	0.00	0.00	0.00	0.00	0.00
Net Emissions	0.00	0.00	0.00	18.6	0.00	0.00
PSD or Offset Significant Level	25	15	40	40	100	40

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

(c) Mag-VZ/6 Ovens No. 1 and No. 2 to be Constructed During October 1997 and May 1998.

Pollutant	PM (tons/yr)	PM₁₀ (tons/yr)	SO₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO_x (tons/yr)
Proposed Modification	0.00	0.00	0.00	23.3	0.00	0.00
Contemporaneous Increases	0.00	0.00	0.00	0.00	0.00	0.00
Contemporaneous Decreases	0.00	0.00	0.00	0.00	0.00	0.00
Net Emissions	0.00	0.00	0.00	23.3	0.00	0.00
PSD or Offset Significant Level	25	15	40	40	100	40

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T-003-6925-00013) application on October 15, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 63 applicable to this facility. All NSPS Subpart K standards do not apply to the small tanks with capacities of less than 40 cubic meters (10,567 gallons).

State Rule Applicability

326 IAC 2-6 (Emission Reporting)

The facilities covered by this modification are subject to 326 IAC 2-6 (Emission Reporting), because of their potential to emit more than 100 tons per year of VOC. Pursuant to this rule, the owner/operator of these facilities must annually submit an emission statement of the facilities. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1-2 (Visible Emission Limitations)

The visible emissions shall not exceed an average of 40 percent opacity in 24 consecutive readings and shall not exceed 60 percent opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

326 IAC 6-3 (Process Operations)

The enamel production operations constructed in January 1977 are subject to 326 IAC 6-3, Process Operations. 326 IAC 6-3-2 Particulate Emission Limitations limit the particulate matter to $E = 4.10 P^{0.67}$ or 9.29 pounds per hour (40.7 tons per year) for a process weight of 3.39 tons per hour. This 40.7 tons per year allowable emission rate is greater than the aforementioned potential PM emission rate after controls of 15.8 tons per year. Thus, the enamel production operations comply with this rule.

326 IAC 8-1-6 (Best Available Control Technology)

Only one (1) of the quartz fabric ovens was constructed after January 1, 1980. This one (1) oven does not have the potential to emit more than 25 tons per year of VOC. Therefore, 326 IAC 8-1-6 is not applicable. In addition, the applicator cleaning operation constructed in 1991 does not have the potential to emit more than 25 tons per year of VOC and therefore, 326 IAC 8-1-6 is not applicable.

Since the two (2) Mag-VZ/6 ovens have the potential to emit more than 25 tons per year of VOC, 326 IAC 8-1-6 is applicable to these facilities. The proposed six (6) catalytic oxidizers per oven with a 95 percent VOC control efficiency is BACT for these facilities.

The other quartz fabric ovens, the lepel fabric ovens and the enamel production operations were constructed prior to January 1, 1980, and thus 326 IAC 8-1-6 does not apply.

326 IAC 8-3-2 (Cold Cleaner Operations)

The applicator cleaning operations are subject to the requirements of 326 IAC 8-3-2. This rule requires that the cleaner be equipped with a cover and a facility for draining cleaned parts as well as that waste solvent be stored only in covered containers.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

The applicator cleaning operation is subject to the requirements of 326 IAC 8-3-5(a). This rule requires that the owner or operator of a cold cleaner degreaser facility shall ensure that the degreaser is equipped with a cover that must be designed so that it can be easily operated with one (1) hand if certain conditions exist. The degreaser must be equipped with a facility for draining cleaned articles.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 189 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) These proposed modifications will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the Clean Air Act. The concentrations of these air toxics were modeled and found to be (in worst case possible) as follows: The concentrations of these air toxics were compared to the Permissible Exposure Limits (PEL)

developed by the Occupational Safety and Health Administration (OSHA). The Office of Air Management (OAM) does not have at this time any specific statutory or regulatory authority over these substances.

Air Toxics Emissions

Pollutant	Rate (lb/hr)	Rate @ 8,760 hr/yr (tons/yr)	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	OSHA PEL ($\mu\text{g}/\text{m}^3$)	% OSHA PEL
Toluene	81.8	0.0876	3.1	375,000	0.001
Xylene	9.37	25.9	926	435,000	0.21
Ethyl benzene	2.80	0.1885	6.7	435,000	0.002
Cresol	3.78	8.84	317	22,000	1.44
Phenol	2.27	10.6	379	19,000	2.00
Ethylene Glycol	0.045	0.180	6.5	125,000	0.005

(b) See attached spreadsheets for detailed air toxic calculations.

Conclusion

The construction of these eleven (11) quartz fabric ovens, four (4) lepel fabric ovens, one (1) applicator cleaning area, one (1) enamel production operation and two (2) Mag-VZ/6 ovens will be subject to the conditions of the attached proposed **Construction Permit No. CP 003-8609-00013**.

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for New Construction and Operation

Source Name: Phelps Dodge Magnet Wire Company
Source Location: 4300 New Haven Avenue, Fort Wayne, Indiana 46803
County: Allen
Construction Permit No.: CP 003-8609-00013
SIC Code: 3357
Permit Reviewer: Mark L. Kramer

On August 28, 1997, the Office of Air Management (OAM) had a notice published in the Fort Wayne Journal Gazette, Fort Wayne, Indiana, stating that Phelps Dodge Magnet Wire Company had applied for a construction permit to construct and operate eleven (11) quartz fabric ovens, four (4) lepel fabric ovens, one (1) applicator cleaning area, one (1) enamel production operation and two (2) Mag-VZ/6 ovens with thermal and catalytic oxidizer controls for volatile organic compounds. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAM, has decided to make the following changes to the Construction Permit:

1. Performance testing, Condition No. 20, has been added to the Permit to require testing of the five (5) thermal and six (6) catalytic oxidizers. Testing of these VOC controls is required to determine the capture and destruction efficiencies as well as determine what temperature is required for the thermal oxidizers and the minimum temperature rise or minimum retention time across the bed for the catalytic oxidizers to meet the 90 percent destruction efficiency. The condition is as follows:

Performance Testing

20. That pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance stack tests shall be performed for the five (5) thermal oxidizers and six (6) catalytic oxidizers for volatile organic compounds, including the capture and destruction efficiencies, within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-2.1 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.

- (a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.
- (b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.
- (c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.
- (d) Whenever the results of the stack test performed exceed the level specified in this

permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.

- (e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

2. Condition No. 18 has been revised by eliminating the words “(the most recent compliance test, if available)” to reflect the requirement for a new stack test for the thermal oxidizers. The revised condition is as follows:

Thermal Oxidizer Operation

18. That the thermal oxidizers shall operate at all times that the eleven (11) quartz fabric ovens and the four (4) lepel fabric ovens are operated. When operating, the thermal oxidizers shall maintain a minimum operating temperature of 1,150 degrees Fahrenheit or a temperature, fan amperage and duct velocity determined in the compliance testing to maintain a minimum 90 percent destruction of the volatile organic compound (VOC) captured.

3. Condition #19 has been added to the Permit to require that the catalytic oxidizers controlling VOC emissions from the two (2) mag VZ/6 ovens are operated at all times that the ovens are in operation. In addition, operating parameters to be determined by the stack test have been required. The condition is as follows:

Catalytic Oxidizer Operation

19. That the catalytic oxidizers shall operate at all times that the two (2) mag VZ/6 ovens are operated. When operating, the catalytic oxidizers shall maintain a minimum temperature rise across the bed or a minimum retention time determined by compliance testing to maintain a minimum 90 percent destruction of the volatile organic compound (VOC) captured.

On September 24, 1997, Timothy D. Shown, Phelps Dodge Magnet Wire Company, submitted comments on the proposed construction permit. The comments and corresponding responses are as follows:

COMMENT 1:

Corrections on Page 2 of the permit:

The following changes need to be made to the capacities and the number of control devices (oxidizers) specified on this page.

- ! State oven capacities (raw material process rates) in items (1), (2), (5), and (6) in pounds per hour of magnet wire as opposed to pounds per hour.

- ! Revise item (2) to read as “four (4) lepel fabric ovens, known as 802, 803, 806 and 807, equipped with a thermal oxidizer for VOC control, exhausted through stacks 0031, 0030, 0028, and 0027, thermal oxidizer with a natural gas supplementary fuel input rate of 0.16 million British thermal units per hour, capacity: 80 pounds of magnet wire per hour for each oven.”
- ! Rephrase items (5) and (6) to read as “one (1) Mag VZ/6 oven, known as --, and consisting of three (3) 9-line machines, equipped with catalytic oxidizer controls, exhausted though stacks _____.”

(Note: As a point of clarification, please be advised that stacks 386, 387, 388 (MAG No. 1) and stacks 392, 393, 394 (MAG No. 2) are wire cooling stacks that function to cool the wire as it exits the enamel application and curing process. These stacks have no controls as there is no fume load to these stacks and as such require no controls.)

RESPONSE 1:

The above changes have been implemented in the permit and the revised equipment list is as follows:

- (1) Eleven (11) quartz fabric ovens, known as 701/702, 703/704, 705/706, 707/708, 709/710, 804, 805, 808, 809, 810 and 811, equipped with a total of four (4) thermal oxidizers for VOC control, exhausted through stacks 0023, 0020, 0033 and 0024, each thermal oxidizer has a natural gas supplementary fuel input rate of 0.16 million British thermal units per hour, capacity: 33 pounds per hour of magnet wire for each of the 700 series ovens and 80 pounds per hour of magnet wire for each of the 800 series ovens.
- (2) Four (4) lepel fabric ovens, known as 802, 803, 806 and 807, equipped with a thermal oxidizer for VOC control, exhausted through stacks 0031, 0030, 0028 and 0027, thermal oxidizer with a natural gas supplementary fuel input rate of 0.16 million British thermal units per hour, capacity: 80 pounds per hour of magnet wire for each oven.
- (3) One (1) applicator cleaning area, consisting of tanks 1 through 7, exhausted through stacks 0299, 0300 and 0301, capacity: 150 gallons each for tanks 1 and 2, 650 gallons for tank 3, 500 gallons each for tanks 4 and 5, 400 gallons for tank 6 and 500 gallons for tank 7.
- (4) One (1) enamel production operation, consisting of seven (7) mixers known as mixer #1 through mixer #7, capacity: 500, 1,000, 1,500, 500, 1,500, 1,500 and 100 gallons, respectively, two (2) mixer/reactors known as mixer/reactors #13 and #14, capacity: 500 and 300 gallons, respectively, one (1) amideimide reactor, capacity: 2,000 gallons, four (4) reactors known as reactor #8, #9, #10 and #11, capacity: 2,000, 2,000, 750 and 3,000 gallons, respectively, one (1) amideimide cutting tank, capacity: 2,000 gallons and a cutting tank known as cutting tank #12, capacity: 6,000 gallons. The enamel operation is equipped with six (6) baghouse dust collectors and one (1) mist eliminator, exhausted through stacks 0260, 0374, 0262, 0261, 0377, 0272 and 0278, respectively, total capacity: 6,780 pounds of enamel per hour.
- (5) One (1) Mag-VZ/6 oven, known as No.1, and consisting of three (3) nine- (9-)line machines, equipped with three (3) catalytic oxidizers for VOC control, exhausted through stacks 383,

384, 385 as well as wire cooling stacks, 386, 387 and 388, capacity: 1,158 pounds per hour of magnet wire.

- (6) One (1) Mag-VZ/6 oven, known as No. 2, and consisting of three (3) nine- (9-) line machines, equipped with three (3) catalytic oxidizers for VOC control, exhausted through stacks 389, 390, 391 as well as cooling stacks 392, 393 and 394, capacity: 1,158 pounds per hour of magnet wire.

COMMENT 2:

Revise permit Condition No. 15 to read as "That pursuant to 326 IAC 8-1-6, the catalytic oxidizer controls for the two MAG VZ/6 ovens are BACT and shall be operated at all times that each MAG VZ/6 oven is in operation."

RESPONSE 2:

Condition No.15 has been deleted from the permit because 326 IAC 8-1-6 is not applicable due to the applicability of 326 IAC 8-2-8. Operation Condition No. 14 has been added to the permit to address 326 IAC 8-2-8, (see Response 3, below).

COMMENT 3:

Add one condition to the permit that will state the applicability of magnet wire coating rule (326 IAC 8-2-8) to quartz fabric oven #811, and the two MAG VZ/6 ovens. Per 326 IAC 8-2-1 Sec. 1(a)(4), it appears that the magnet wire coating rule is applicable to the aforementioned ovens. We request that the additional permit condition that you may propose be stated as follows:

That pursuant to 326 IAC 8-2-8, the VOC emissions from one (1) quartz fabric enameling oven known as oven #811; two (2) MAG VZ/6 ovens known as oven #s 1 and 2 shall not exceed 2.2 pounds per gallon of coating solids as applied. Compliance with the said emission limit shall be demonstrated using record keeping procedures specified in 326 IAC 8-1-2. The records shall be maintained onsite and retained for a period of not less than 36 months and shall be made available upon request by the OAM.

RESPONSE 3:

Operation Condition No. 14 has been added to the Permit to address the applicability of 326 IAC 8-2-8 for magnet wire coating operations for oven #811 and mag VZ/6 ovens #1 and #2. This rule states the VOC content limit in terms of pounds per gallon excluding water rather than pounds per gallon of coating solids. Condition No. 14 is as follows:

Surface Coating Emission Limitations: Magnet Wire Coating Operations

14. Pursuant to 326 IAC 8-2-8, the volatile organic compounds emissions from one (1) quartz fabric enameling oven, known as #811; and the two (2) mag VZ/6 ovens, known as ovens #1 and #2, shall not exceed 1.7 pounds per gallons, excluding water, delivered to the coating applicator from magnet wire coating operations. This limit shall be met by the operation of the thermal oxidizers for the quartz fabric enameling oven, known as #811, and by the operation of the catalytic oxidizers for the two (2) mag VZ/6 ovens.

After all changes, the Operation Conditions have been renumbered.

**Appendix A: Emission Calculations
Baghouse Operations**

**Company Name: Phelps Dodge Magnet Wire Company
Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, IN 46803
CP: 003-8609
Plt ID: 003-00013
Reviewer: Mark L. Kramer
Date: May 21, 1997**

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Emission Rate before Controls (lbs/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lbs/hr)	Emission Rate after Controls (tons/yr)
0260	99.9%	0.015	2400.0	308.6	1351.54	0.309	1.35
0374	99.9%	0.015	2400.0	308.6	1351.54	0.309	1.35
0262	99.9%	0.015	3600.0	462.9	2027.31	0.463	2.03
0261	99.9%	0.015	3600.0	462.9	2027.31	0.463	2.03
0377	99.9%	0.015	3600.0	462.9	2027.31	0.463	2.03
0272	99.9%	0.015	3600.0	462.9	2027.31	0.463	2.03
0278*	90.0%	0.133	1000.0	11.4	49.93	1.140	4.99
			Sum	2479.97	10862.27	3.61	15.8

* Mist eliminator

Methodology

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (sq. ft.) ((cub. ft./min.)/sq. ft.) (60 min/hr) (lb/7000 grains)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Allowable Rate of Emissions

Process Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hr)	Allowable Emissions (tons/yr)
6780	3.39	9.29	40.7

Methodology

Allowable Emissions = 4.10(Process Weight Rate)^0.67

**Appendix A: Emission Calculations
 Natural Gas Combustion Only
 MM Btu/hr < 0.3
 Residential Furnaces**

Company Name: Phelps Dodge Magnet Wire Company
Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, IN 46803
CP: 003-8609
Plt ID: 003-00013
Reviewer: Mark L. Kramer
Date: May 21, 1997

Eleven Quartz Fabric Enameling Ovens - Thermal Oxidizers

Thermal Oxidizers Supplemental Fuel Use 701/702, 703/704, 705/706 = 0.16 MMBtu/hr
 Thermal Oxidizers Supplemental Fuel Use 707/708, 709/710 = 0.16 MMBtu/hr
 Thermal Oxidizers Supplemental Fuel Use 810/811 = 0.16 MMBtu/hr
 Thermal Oxidizers Supplemental Fuel Use 804, 805, 808, 809 = 0.16 MMBtu/hr

Four Lepel Fabric Ovens - Thermal Oxidizers

Thermal Oxidizers Supplemental Fuel Use 801, 803, 806, 807 = 0.16 MMBtu/hr

Heat Input Capacity
 MMBtu/hr

Potential Throughput
 MMCF/yr

0.80

7.0

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	11.2	11.2	0.6	94.0	7.3	40.0
Potential Emission in tons/yr	0.039	0.039	0.002	0.329	0.026	0.140

Methodology

MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas
 Emission Factors for NOx: uncontrolled = 94
 Emission Factors for CO: uncontrolled = 40
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
 Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Company Name: Phelps Dodge Magnet Wire Company
Address City IN Zip: 4300 New Haven Avenue, Fort Wayne, IN 46803
CP: 003-8609
Plt ID: 003-00013
Reviewer: Mark L. Kramer
Date: May 21, 1997

Emission Source	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
	Potential VOC tons/year	Potential VOC tons/year	Potential Toluene tons/year	Potential Toluene tons/year	Potential Xylene tons/year	Potential Xylene tons/year	Potential Ethyl Benzene tons/year	Potential Ethyl Benzene tons/year	Potential Cresol tons/year	Potential Cresol tons/year	Potential Phenol tons/year	Potential Phenol tons/year	Potential Ethylene Glycol tons/year	Potential Ethylene Glycol tons/year
Quartz Fabric Ovens* control eff = 90% (CONSTRUCTED 1/77&1/92)	65.7	6.57	0.657	0.0657	22.7	2.27	1.71	0.171	0.00	0.00	0.00	0.00	0.00	0.00
Lepel Fabric Ovens control eff = 90% (CONSTRUCTED 1/77)	16.6	1.66	0.219	0.0219	4.77	0.477	0.175	0.0175	0.00	0.00	0.00	0.00	0.00	0.00
Applicator Cleaning No controls (CONSTRUCTED 1/91)	18.6	18.6	0.00	0.00	4.82	4.82	0.00	0.00	6.35	6.35	8.10	8.10	0.00	0.00
Enamel Production No controls (CONSTRUCTED 1/77)	20.4	20.4	0.00	0.00	18.3	18.3	0.00	0.00	1.14	1.14	0.79	0.79	0.18	0.18
Mag-VZ/6 Ovens control eff = 95%	466	23.3	0.00	0.00	0.00	0.00	0.00	0.00	27.0	1.35	33.6	1.68	0.00	0.00
	Uncontrolled Potential PM tons/year	Controlled Potential PM tons/year												
Enamel Production No controls (CONSTRUCTED 1/77)	10,862	15.8												
Total HAPS		tons/yr	0.876	0.0876	50.59	25.867	1.885	0.1885	34.49	8.84	42.49	10.57	0.18	0.18
		lbs/hr	0.200	0.020	11.550	5.906	0.430	0.043	7.874	2.018	9.701	2.413	0.041	0.041
		g/sec	0.0252	0.0025	1.4553	0.7441	0.0542	0.0054	0.9922	0.2543	1.2223	0.3041	0.0052	0.0052

* of the 11 total Quartz Fabric Ovens all were constructed during 1/77 except oven #811 which was constructed during 1/92
 The uncontrolled and controlled potential VOC emissions from Oven #811 are 9.38 and 0.94 tons per year, respectively
 This reduces the uncontrolled and controlled VOC emissions from the remaining 10 Quartz Fabric Ovens to 56.3 and 5.63 tons per year, respectively