

April 4, 2012

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APR 06 2012

DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A Q PROGRAM

Mr. Michael Simons
Stationary Source Program Manager
Air Quality Division
Idaho Department of Environmental Quality
1410 North Hilton
Boise, ID 83056

SUBJECT: Changes to General Mills Blackfoot Air Quality Permit 011-00028 Issued February 2001

Dear Mr. Simon:

General Mills is requesting a modification to Air Quality Permit #001-00028 for its Blackfoot Grain Storage and Grain conditioning Plant. The original permit was issued to Koch in November 1997 and transfer to General Mills in February 2001. General Mills requests that the current Permit Condition 2.2 which limits plant operation to 335 t/day be increased to 500 t/day while the annual processing limit is decreased from the current 367,920 t/12-month to 180,000 t/12-month. This change will not result in the existing 42.23 lb/day PM-10 emission limit being exceeded. The basis for this assumption is that the original production limit of 336 t/day was based on an 8-hour operating schedule and was thus conservative. The proposed increase to 500 t/day is estimated to increase daily releases of PM-10 to 20.95 lb/day still well within the permitted limits. In addition, since the original permit was issued the actual releases from the bag house have been significantly reduced by rerouting the bag house exhaust back into the mill and not into the atmosphere. For further clarification please see the attached email from Kenneth Hanna Idaho Department of Environmental Quality to Gary McManus Portage Inc.

As part of this request please find enclosed DEQ forms: CSPTC Cover sheet, GI General Information and FRA NSPS/NESHAP Regulatory Review and Application. Also enclosed is the required Permit to Construct fees of \$1,000 for emissions <1 ton per year and \$ 250 for modifications with no engineering analysis. If you require additional information please feel free to contact Rudy.dewit@genmills.com

Sincerely,

Rudy DeWit

Attachment 1

Email From: Kenneth Hanna Idaho DEQ
To: Gary McManus Portage Inc.
Date: 2/15/2012

Subject: Changes to General Mills Blackfoot Air Quality Permit 011-00028 Issued February 2001

Gary, in the attached 1997 permit application, the second table in the "Potential Emissions Calculations" section of shows how the 1.969 lbs/hr emission rate was calculated. It was based on a grain loading emission factor for the grain conditioning facility baghouse where PM10 = 0.01 grains/scf. Then, based on a baghouse flow rate of 22,996 scfm, the baghouse emissions would be:

$$\text{PM10} = (0.01 \text{ grains/scf}) * (22,966 \text{ scf/min}) * (\text{lb}/7000 \text{ grains}) * 60 \text{ min/hr} = 1.969 \text{ lb/hr}$$

The current hourly emission rate limit in Permit Condition 1.2 for the grain conditioning baghouse is based on daily operations of 24-hours:

$$\text{PM10 Limit} = (1.969 \text{ lb/hr}) * (24 \text{ hr/day}) = 47.23 \text{ lb/day}$$

The current annual emission rate limit in Permit Condition 1.2 for the grain conditioning baghouse is based on annual operations of 8760 hour/yr:

$$\text{PM10 Limit} = (1.969 \text{ lb/hr}) * (8760 \text{ hr/year}) * (\text{ton}/2000 \text{ lb}) = 8.62 \text{ tons/yr}$$

The current operating requirement in Permit Condition 2.2, which was created for purposes of demonstrating compliance with the annual emission rate limit (i.e., 8.62 tons/yr) is based on annual operations of 8760 hours/year:

$$(1400 \text{ bushels/hr})(60 \text{ lb/bushel})(8760 \text{ hr/yr})(\text{ton}/2000 \text{ lb}) = 367,920 \text{ tons/yr}$$

The current operating requirement in Permit Condition 2.2, which was created for purposes of demonstrating compliance with the daily emission rate limit (i.e., 47.23 lb/day) is a conservative limit based on daily operations of 8 hours per day (less than 24 hours/day):

$$(1400 \text{ bushels/hr})(60 \text{ lb/bushel})(8 \text{ hr/day})(\text{ton}/2000 \text{ lb}) = 336 \text{ tons/day}$$

After reviewing the historical files, it is not apparent at this point why the operating limit is based on operations of 8 hours and the emission limit is based on 24 hours per day. What is important at this point is the established fact that compliance with applicable requirements has been demonstrated based on operations of 24-hours/day. On this basis, it is clear that the facility could actually process more than 336 tons/day (e.g. 460 tons/day) and still be in compliance with the 47.23 lb/day emission limit and all applicable requirements. Therefore, it is feasible that the operating limit may be increased as requested to 460 tons/day. This change would not result in an increase in allowable emissions since the existing daily emission limit in permit Condition 1.2 is based on 24 hours of operation and the new operating limit would be based on less than 24 hours. Since the change will not result in an increase in emissions, it would be a permit "revision" per Section 2.9.04 of the Rules. For this type of change, modeling would not be required and an opportunity for comment would not be required.

In summary, It was also observed that the 0.01 grains/scf emission factor is conservative because the permit application materials show that the baghouse emission factor is actually expected to be 0.0015 grains/scf (see page 5 of the 11-20-97 DEQ technical memorandum). When this conservative emissions factor is considered, and if the baghouse exhaust is now vented back inside the building instead of directly outside through a stack, the calculated emissions from the grain conditioning baghouse would be well below the daily emission rate limit of 47.23 lb/day at a production rate of 460 tons/day.

To change the permit, here is what the facility may do:

Send DEQ a cover letter explaining the requested change. To make it clear, the information shown above can be repeated or attached. It would be good to emphasize that the potential to emit PM10 will not increase as a result of the requested changes. In addition, include the following completed forms that are available on the DEQ permitting website: Form CSPTC; Form GI; Checklist 008; For FRA (since NSPS requirements apply, just explain on the form or elsewhere in the permit application how the requested permit revision will affect applicability of the NSPS. For example, if the revision will have no effect on applicability of the NSPS, then briefly state something to this effect). There is no need to include the emission inventory and modeling forms (Forms MI and EI) since emissions will not change.



DEQ AIR QUALITY PROGRAM
 1410 N. Hilton, Boise, ID 83706
 For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Cover Sheet for Air Permit Application – Permit to Construct **Form CSPTC**

Please see instructions on page 2 before filling out the form.

COMPANY NAME, FACILITY NAME, AND FACILITY ID NUMBER

1. Company Name	General Mills Operations LLC		
2. Facility Name	General Mills Blackfoot Elevator	3. Facility ID No.	NA
4. Brief Project Description - One sentence or less	Blackfoot General Mills' Air Quality Permit Revision.		

PERMIT APPLICATION TYPE

5. New Source New Source at Existing Facility PTC for a Tier I Source Processed Pursuant to IDAPA 58.01.01.209.05.c
 Unpermitted Existing Source Facility Emissions Cap Modify Existing Source: Permit No.: 011-00028 Date Issued: 11/20/97
 Required by Enforcement Action: Case No.: _____

6. Minor PTC Major PTC

FORMS INCLUDED

Included	N/A	Forms	DEQ Verify
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form CSPTC – Cover Sheet	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form GI – Facility Information	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU0 – Emissions Units General	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU1– Industrial Engine Information Please specify number of EU1s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU2– Nonmetallic Mineral Processing Plants Please specify number of EU2s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU3– Spray Paint Booth Information Please specify number of EU3s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU4– Cooling Tower Information Please specify number of EU3s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form EU5 – Boiler Information Please specify number of EU4s attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CBP– Concrete Batch Plant Please specify number of CBPs attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form HMAP – Hot Mix Asphalt Plant Please specify number of HMAPs attached: _____	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PERF – Portable Equipment Relocation Form	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form AO – Afterburner/Oxidizer	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CA – Carbon Absorber	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CYS – Cyclone Separator	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form ESP – Electrostatic Precipitator	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form BCE– Baghouses Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form SCE– Scrubbers Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form VSCE – Venturi Scrubber Control Equipment	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Form CAM – Compliance Assurance Monitoring	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Forms EI– Emissions Inventory	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PP – Plot Plan	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Forms MI1 – MI4 – Modeling (Excel workbook, all 4 worksheets)	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Form FRA – Federal Regulation Applicability	<input type="checkbox"/>

Instructions for Form CSPTC

This form is the cover sheet for an air quality permit application. It provides DEQ with basic information regarding the company and the proposed permitting action. This form helps DEQ efficiently determine whether the application is administratively complete. This form also provides the applicant with a list of forms available to aid the applicant to successfully submit a complete application.

Company Name, Facility Name, and Facility ID Number

- 1-3. Provide the name of your company, the name of the facility (if different than company name), and the facility identification (ID) number (Facility ID No.) in the boxes provided. The facility ID number is also known as the AIRS number or AIRS/AFS number (example: 095-00077). If you already have a permit, the facility ID number is located in the upper right hand corner of the cover page. The facility ID number must be provided unless your facility has not received one, in which case you may leave this box empty. **Use these same names and ID number on all forms.** This is useful in case any pages of the application are separated.
4. Provide a brief description of this permitting project in one sentence or less. Examples might be "Install/construct a new boiler" or "Increase the allowable process throughput." **This description will be used by DEQ as a unique identifier for this permitting project, in conjunction with the name(s) and ID number referenced in 1-3.** You will need to put this description, using the exact same words, on all other forms that are part of this project application. This is useful in case any pages of the application are separated.

Permit Application Type

5. Provide the reason you are submitting the permit application by checking the appropriate box (e.g., a new facility being constructed, a new source being constructed at an existing facility, an unpermitted existing source (as-built) applying for a permit for the first time, a permitted source to be modified, or the permit application is the result of an enforcement action, in which case provide the case number). If you are modifying an existing permitted source, provide the number and issue date of the most recent permit.

If this PTC is for a Tier I source issued pursuant to the procedures contained at IDAPA 58.01.01.209.05.c, the source or modification may operate upon submittal of a Tier I Administrative Amendment issued pursuant to IDAPA 58.01.01.381.

6. Indicate if the application is a minor permit to construct application or a major permit to construct application by checking the appropriate box (e.g., major PTC or minor PTC). If the permit to construct application is for a major new source or major modification, you must ensure that all necessary information required by IDAPA 58.01.01.202, and .204, or .205, as applicable, is provided.

Forms Included

Check the "Included" box for each form included in this permit to construct application. If there are multiples of a form for multiple units of that type, check the box and fill in the number of forms in the blank provided.

The "N/A" box should only be checked if the form is absolutely unnecessary to complete the application. Additional information may be requested.

Application Fee

All applicants for a PTC shall submit a PTC application fee of \$1000.00 to DEQ at the time of the original submission of the application as required by IDAPA 58.01.01.224. An application fee is not required for exemption applicability determinations, typographical errors, and name or ownership changes. An application fee can be paid by check, credit card, or Electronic Funds Transfer (EFT). If you choose to pay by credit card or EFT, call DEQs Fiscal Office to complete the necessary paperwork. Paper checks must be submitted with the original application as described below.

Submit Application

When complete, enclose a check for the application fee along with the hardcopy application certified by a responsible official (as defined in IDAPA 58.01.01.006.94), and send to:

Air Quality Program Office – Application Processing
Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706-1255



DEQ AIR QUALITY PROGRAM
 1410 N. Hilton, Boise, ID 83706
 For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

General Information **Form GI**

Revision 7
 2/18/10

Please see instructions on page 2 before filling out the form.

All information is required. If information is missing, the application will not be processed.

IDENTIFICATION

1. Company Name		2. Facility Name:	
General Mills Operations, LLC		General Mills Operations, Blackfoot, Idaho	
3. Brief Project Description:	General Mills is requesting to modify PTC #011-00028 for the Blackfoot General Mills Grain Storage and Grain Conditioning Plant. This modification will more closely represent current operating conditions.		

FACILITY INFORMATION

4. Primary Facility Permit Contact Person/Title	Mr. Rudy DeWit	General Manager
5. Telephone Number and Email Address	(208)785-4460	Rudy.Dewit@genmills.com
6. Alternate Facility Contact Person/Title	Amy Giarman	Grain Accountant
7. Telephone Number and Email Address	(208)785-4460	Amaiza.Giarman@genmills.com
8. Address to Which the Permit Should be Sent	467 W Hwy 26	
9. City/County/State/Zip Code	Blackfoot	Idaho 83221 Bingham County
10. Equipment Location Address (if different than the mailing address above)	Same as above	
11. City/County/State/Zip Code		
12. Is the Equipment Portable?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
13. SIC Code(s) and NAICS Code	Primary SIC: 5153	Secondary SIC: NAICS:
14. Brief Business Description and Principal Product	Grain storage and grain conditioning.	
15. Identify any adjacent or contiguous facility that this company owns and/or operates	None.	

16. Specify the reason for the application	<input checked="" type="checkbox"/> Permit to Construct (PTC)	
	<div style="border: 1px solid black; padding: 5px;"> <p>For Tier I permitted facilities only: If you are applying for a PTC then you must also specify how the PTC will be incorporated into the Tier I permit.</p> <p><input type="checkbox"/> Incorporate the PTC at the time of the Tier I renewal</p> <p><input type="checkbox"/> Co-process the Tier I modification and PTC</p> <p><input type="checkbox"/> Administratively amend the Tier I permit to incorporate the PTC upon your request (IDAPA 58.01.01.209.05.a, b, or c)</p> </div> <p><input type="checkbox"/> Tier I Permit</p> <p><input type="checkbox"/> Tier II Permit</p> <p><input type="checkbox"/> Tier II/Permit to Construct</p>	

CERTIFICATION

In accordance with IDAPA 58.01.01.123 (Rules for the Control of Air Pollution in Idaho), I certify based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

17. Responsible Official's Name/Title	Mr. Rudy DeWit	General Manager
18. Responsible Official's Signature		Date:

19. Check here to indicate that you would like to review the draft permit prior to final issuance.

Instructions for Form GI

This form is used by DEQ to identify a company or facility, equipment locations, and personnel involved with the permit application. Additional information may be requested.

- 1 – 3. Please fill in the same company name, facility name (if different), and brief project description as on Form CS. This is useful in case any pages of the application are separated.
4. Name of the primary person who should be contacted regarding this permit.
5. Telephone number and e-mail address of person listed in 4.
6. Name of the person who should be contacted if the person listed in 4 is not available.
7. Telephone number and e-mail address of person listed in 6.
- 8 - 9. Address to which DEQ should mail the permit.
- 10 – 11. Physical address at which the equipment is located (if different than 9).
12. If the equipment is portable (such as an asphalt plant), identify by marking "yes." If there are other locations where you know the portable equipment will be used, attach a Portable Equipment Relocation Form (PERF) to list those locations. An electronic copy of the PERF can be obtained from the DEQ website http://www.deq.idaho.gov/air/permits_forms/forms/ptc_relocation.pdf (or http://www.deq.idaho.gov/air/permits_forms/forms/ptc_relocation.doc for Word format).
Important note: In addition to being submitted with this PTC application, a PERF must also be completed and filed at DEQ at least 10 days in advance of relocating any of the equipment covered in this application.
13. Provide the Standard Industrial Classification (SIC) code and the North American Industry Classification System (NAICS) code for your plant. NAICS codes can be found at <http://www.census.gov/epcd/naics02/naicod02.htm>. If a secondary SIC code is applicable, provide it also.
14. Describe the primary activity and principal product of your business as it relates to the SIC code or NAISC code listed in line 13.
15. Please indicate if there are any other branches or divisions of this company located on adjacent or contiguous properties.
16. Check the box which describes the type of permit application.

For existing Tier I facilities that are applying for a PTC the applicant must specify how the PTC will be incorporated to the Tier I permit (IDAPA 58.01.01.209.05; Call the Air Permit Hotline if you have questions 1-877-573-7648).
- 17 – 18. Provide the name and title of the facilities responsible official. Responsible official is defined in IDAPA 58.01.01.006.97. The Responsible official must sign and date the application before it is submitted to DEQ.
19. If you would like to review a draft before the final permit is issued, check this box.



DEQ AIR QUALITY PROGRAM
 1410 N. Hilton, Boise, ID 83706
 For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

AIR PERMIT APPLICATION

Revision 6
 10/7/09

For each box in the table below, CTRL+click on the blue underlined text for instructions and information.

IDENTIFICATION

<p>1. Company Name:</p> <p>General Mills Operations, LLC</p>	<p>2. Facility Name:</p> <p>General Mills Operations, Blackfoot, Idaho</p>
<p>3. Brief Project Description: General Mills is requesting to modify PTC #011-00028 for the Blackfoot General Mills Grain Storage and Grain Conditioning Plant. This modification will more closely represent current operating conditions.</p>	

APPLICABILITY DETERMINATION

<p>4. List applicable subparts of the New Source Performance Standards (NSPS) (<u>40 CFR part 60</u>).</p> <p>Examples of NSPS affected emissions units include internal combustion engines, boilers, turbines, etc. The applicant must thoroughly review the list of affected emissions units.</p>	<p>List of applicable subpart(s): 40 CFR 60 Subpart DD</p> <p><input type="checkbox"/> Not Applicable</p>
<p>5. List applicable subpart(s) of the National Emission Standards for Hazardous Air Pollutants (NESHAP) found in <u>40 CFR part 61</u> and <u>40 CFR part 63</u>.</p> <p>Examples of affected emission units include solvent cleaning operations, industrial cooling towers, paint stripping and miscellaneous surface coating. <u>EPA has a web page dedicated to NESHAP</u> that should be useful to applicants.</p>	<p>List of applicable subpart(s): See cover letter.</p> <p><input checked="" type="checkbox"/> Not Applicable</p>
<p>6. For each subpart identified above, conduct a complete a regulatory analysis using the instructions and referencing the example provided on the following pages.</p> <p>Note - Regulatory reviews must be submitted with sufficient detail so that DEQ can verify applicability and document in legal terms why the regulation applies. Regulatory reviews that are submitted with insufficient detail will be determined incomplete.</p>	<p><input type="checkbox"/> A detailed regulatory review is provided (Follow instructions and example).</p> <p><input checked="" type="checkbox"/> DEQ has already been provided a detailed regulatory review. Give a reference to the document including the date.</p>

**IF YOU ARE UNSURE HOW TO ANSWER ANY OF THESE QUESTIONS, CALL THE AIR PERMIT HOTLINE AT
1-877-5PERMIT**

It is emphasized that it is the applicant's responsibility to satisfy all technical and regulatory requirements, and that DEQ will help the applicant understand what those requirements are prior to the application being submitted but that DEQ will not perform the required technical or regulatory analysis on the applicant's behalf.

Instructions for Form FRA

Item 4 & 5. It is important that facilities review the most recent federal regulations when submitting their permit application to DEQ. Current federal regulations can be found at the following Web site: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl.

Item 6. For each applicable subpart identified under items 4-5 conduct a complete regulatory analysis. The facility must follow the procedure given below or obtain permission from DEQ to provide the necessary information using an alternative procedure:

1. Retrieve a TEXT or PDF copy of the applicable federal regulation subpart(s) online at <http://www.gpoaccess.gov/cfr/retrieve.html>
2. Copy and paste the regulation(s) into your DEQ air permit application.
3. Highlight or underline sections in the regulation(s) that are applicable to the source(s).
4. Under each section of the subpart, explain why the source is subject to the section, or why the source is not subject to the section. When providing the explanation use a different font than the regulation (i.e. ***bold, italic***) so that it is easy for the reader to determine the text that the applicant has provided. An example NSPS regulatory analysis is attached. The applicant must provide all necessary information needed to determine applicability. If information is lacking or the analysis is incomplete the application will be determined incomplete.

EPA provides a web site dedicated to NSPS/NESHAP applicability determinations that may be useful to applicants. Follow this link to the applicability determination index [Clean Air Act Applicability Determination Index - Compliance Monitoring - EPA](#). Another useful source of information is the preamble to the regulation which is published in the Federal Register on the date the regulation was promulgated. Federal Registers may be found online at [Federal Register: Main Page](#). The date the regulation was published in the Federal Register is included in the footnotes of the regulation.

5. DEQ will assist in identifying the applicable requirements that the applicant must include in the application but will not perform the required technical or regulatory analysis on the applicant's behalf. Applicants should contact the Air Quality Permit Hotline (1-877-573-7648) to discuss NSPS/NESHAP regulatory analysis requirements or to schedule a meeting.
6. It also benefits facilities to document a non-applicability determination on federal air regulations which appear to apply to the facility but actually do not. A non-applicability determination will avoid future confusion and expedite the air permit application review. If you conduct an applicability determination and find that your activity is not NSPS or NESHAP affected facility an analysis should be submitted using the methods described above.
7. **It is not sufficient to simply provide a copy of the NSPS or NESHAP. The applicant must address each section of the regulation as described above and as shown in the example that is provided.**

EXAMPLE OF A NSPS REGULATORY ANALYSIS

[Title 40, Volume 6]
 [Revised as of July 1, 2008]
 From the U.S. Government Printing Office via GPO Access
 [CITE: 40CFR60]

TITLE 40--PROTECTION OF ENVIRONMENT

CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)

PART 60 STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES--
Table of Contents

Subpart H Standards of Performance for Sulfuric Acid Plants

Sec.60.80 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to each sulfuric acid production unit, which is the affected facility.

(b) Any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, is subject to the requirements of this subpart.

ACME Chemicals, Inc. is proposing to construct after August 17, 1971 a sulfuric acid plant which burns elemental sulfur as defined by 40 CFR 60.81(a). ACME is therefore affected by this subpart.

(Be sure to use the terms of the regulation to describe applicability; usually applicability is determined based on a specific date, definition of an affected facility, and rated input capacity. All of the applicability criteria must be addressed by the applicant.)

Note - if a determination of non-applicability is being submitted it is not necessary to address the remaining non-applicable regulatory sections. Be sure to provide the applicability determination in terms of the regulation (i.e. construction/modification date, rated input capacity, definition of affected facility).

Sec.60.81 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) Sulfuric acid production unit means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides and mercaptans, or acid sludge, but does not include facilities where conversion to sulfuric acid is utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds.

(b) Acid mist means sulfuric acid mist, as measured by Method 8 of appendix A to this part or an equivalent or alternative method.

ACME Chemicals, Inc. has read and understands these definitions and used them in providing this regulatory analysis.

Sec.60.82 Standard for sulfur dioxide.

(a) On and after the date on which the performance test required to be conducted by Sec.60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of 2 kg per metric ton of acid produced (4 lb per ton), the production being expressed as 100 percent H₂/SO₄/.

ACME Chemicals, Inc. is subject to this standard and has provided a documented emission inventory (or manufacturer guarantee) which shows compliance.

Sec.60.83 Standard for acid mist.

(a) On and after the date on which the performance test required to be conducted by Sec.60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which:

(1) Contain acid mist, expressed as H₂/SO₄/, in excess of 0.075 kg per metric ton of acid produced (0.15 lb per ton), the production being expressed as 100 percent H₂/SO₄/.

ACME Chemicals, Inc. is subject to this standard and has provided a documented emission inventory (or manufacturer guarantee) which shows compliance.

(2) Exhibit 10 percent opacity, or greater.

ACME Chemicals, Inc. understands that this will become a permit condition and has supplied a manufacturer guarantee that the sulfuric acid plant will comply with this standard.

Sec.60.84 Emission monitoring.

(a) A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the owner or operator. The pollutant gas used to prepare calibration gas mixtures under Performance Specification 2 and for calibration checks under Sec.60.13(d), shall be sulfur dioxide (SO₂/). Method 8 shall be used for conducting monitoring system performance evaluations under Sec.60.13(c) except that only the sulfur dioxide portion of the Method 8 results shall be used. The span value shall be set at 1000 ppm of sulfur dioxide.

(b) The owner or operator shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/ton). The conversion factor shall be determined, as a minimum, three times daily by measuring the concentration of sulfur dioxide entering the converter using suitable methods (e.g., the Reich test, National Air Pollution Control Administration Publication No. 999-AP-13) and calculating the appropriate conversion factor for each eight-hour period as follows:

$$CF=k[(1.000-0.015r)/(r-s)]$$

where:

CF=conversion factor (kg/metric ton per ppm, lb/ton per ppm).
 k=constant derived from material balance. For determining CF in metric units, k=0.0653. For determining CF in English units, k=0.1306.
 r=percentage of sulfur dioxide by volume entering the gas converter. Appropriate corrections must be made for air injection plants subject to the Administrator's approval.
 s=percentage of sulfur dioxide by volume in the emissions to the atmosphere determined by the continuous monitoring system required under paragraph (a) of this section.

(c) The owner or operator shall record all conversion factors and values under paragraph (b) of this section from which they were computed (i.e., CF, r, and s).

ACME Chemicals, Inc. is not proposing to utilize Sections 60.84(a)-(c) listed above to monitor emissions. Instead ACME Chemicals is utilizing 40 CFR 60.84(d) listed below to monitor emissions of sulfur dioxide.

(d) Alternatively, a source that processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen may use the following continuous emission monitoring approach and calculation procedures in determining SO₂/ emission rates in terms of the standard. This procedure is not required, but is an alternative that would alleviate problems encountered in the measurement of gas velocities or production rate. Continuous emission monitoring systems for measuring SO₂/, O₂/, and CO₂/ (if required) shall be installed, calibrated, maintained, and operated by the owner or operator and subjected to the certification procedures in Performance Specifications 2 and 3. The calibration procedure and span value for the SO₂/ monitor shall be as specified in paragraph (b) of this section. The span value for CO₂/ (if required) shall be 10 percent and for O₂/ shall be 20.9 percent (air). A conversion factor based on process rate data is not necessary. Calculate the SO₂/ emission rate as follows:

$$Es = (Cs / S) / [0.265 - (0.126 \%O_2) - (A \%CO_2)]$$

where:

Es=emission rate of SO₂/, kg/metric ton (lb/ton) of 100 percent of H₂/SO₄/ produced.

Cs=concentration of SO₂/, kg/dscm (lb/dscf).

S=acid production rate factor, 368 dscm/metric ton (11,800 dscf/ton) of 100 percent H₂/SO₄/ produced.

%O₂/=oxygen concentration, percent dry basis.

A=auxiliary fuel factor,

=0.00 for no fuel.

=0.0226 for methane.

=0.0217 for natural gas.

=0.0196 for propane.

=0.0172 for No 2 oil.

=0.0161 for No 6 oil.

=0.0148 for coal.

=0.0126 for coke.

%CO₂/= carbon dioxide concentration, percent dry basis.

Note: It is necessary in some cases to convert measured concentration units to other units for these calculations:

Use the following table for such conversions:

From--	To--	Multiply by--
g/scm.....	kg/scm.....	10 ⁻³
mg/scm.....	kg/scm.....	10 ⁻⁶
ppm (SO ₂).....	kg/scm.....	2.660x10 ⁻⁶
ppm (SO ₂).....	lb/scf.....	1.660x10 ⁻⁷

ACME Chemicals, Inc. has elected to use the monitoring requirements of the preceding section.

(e) For the purpose of reports under Sec.60.7(c), periods of excess emissions shall be all three-hour periods (or the arithmetic average of three consecutive one-hour periods) during which the integrated average sulfur dioxide emissions exceed the applicable standards under Sec.60.82.

ACME acknowledges that this section applies to the sulfuric acid plant.

Sec.60.85 Test methods and procedures.

(a) In conducting the performance tests required in Sec.60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in Sec.60.8(b). Acceptable alternative methods and procedures are given in paragraph (c) of this section.

(b) The owner or operator shall determine compliance with the SO₂/ acid mist, and visible emission standards in Sec. Sec. 60.82 and 60.83 as follows:

(1) The emission rate (E) of acid mist or SO₂/ shall be computed for each run using the following equation:

$$E=(CQsd/)/(PK)$$

where:

E=emission rate of acid mist or SO₂/ kg/metric ton (lb/ton) of 100 percent H₂/SO₄/ produced.

C=concentration of acid mist or SO₂/, g/dscm (lb/dscf).

Qsd/=volumetric flow rate of the effluent gas, dscm/hr (dscf/hr).

P=production rate of 100 percent H₂/SO₄/, metric ton/hr (ton/hr).

K=conversion factor, 1000 g/kg (1.0 lb/lb).

(2) Method 8 shall be used to determine the acid mist and SO₂/ concentrations (C's) and the volumetric flow rate (Qsd/) of the effluent gas. The moisture content may be considered to be zero. The sampling time and sample volume for each run shall be at least 60 minutes and 1.15 dscm (40.6 dscf).

(3) Suitable methods shall be used to determine the production rate (P) of 100 percent H₂/SO₄/ for each run. Material balance over the production system shall be used to confirm the production rate.

(4) Method 9 and the procedures in Sec.60.11 shall be used to determine opacity.

(c) The owner or operator may use the following as alternatives to

the reference methods and procedures specified in this section:

(1) If a source processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen, the following procedure may be used instead of determining the volumetric flow rate and production rate:

(i) The integrated technique of Method 3 is used to determine the O₂/ concentration and, if required, CO₂/ concentration.

(ii) The SO₂/ or acid mist emission rate is calculated as described in Sec.60.84(d), substituting the acid mist concentration for Cs/ as appropriate.

ACME Chemicals, Inc. acknowledges that performance tests shall be conducted as specified above.