



## New York State Department of Environmental Conservation

### Permit Review Report

Permit ID: 9-1402-00565/00177

Modification Number: 1

3/5/02 08:54:39

#### Facility Identification Data

Name: GENERAL MILLS OPERATIONS INC  
Address: 54 SOUTH MICHIGAN AVENUE  
City: BUFFALO  
Zip: 14203

#### Owner/Firm

Name: GENERAL MILLS INC  
City: MINNEAPOLIS  
State: MN Country: USA Zip: 55440  
Owner Classification: Corporation/Partnership

#### Permit Contacts

Division of Environmental Permits:  
Name: JEFFREY E. DIETZ

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54 SOUTH MICHIGAN AVENUE  
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### Permit Description

#### Introduction

The Title V operating air permit is intended to be a document containing only enforceable terms and conditions as well as any additional information, such as the identification of emission units, emission points, emission sources and processes, that makes the terms meaningful. 40 CFR Part 70.7(a)(2) requires that each Title V permit have an accompanying "...statement that sets forth the legal and factual basis for the draft permit conditions". The purpose for this permit review report is to satisfy the above requirement by providing pertinent details regarding the permit/application data and permit conditions in a more easily understandable format. This report will also include background narrative and explanations of regulatory decisions made by the reviewer. It should be emphasized that while the permit review report is based on information found in the accompanying permit, it is not an enforceable document and therefore, has no legal standing.

#### Summary Description of Proposed Project

General Mills Operations, Inc. (General Mills) has requested this minor permit modification to revise the NO<sub>x</sub> emission factor of 0.3664 lb NO<sub>x</sub>/MMBTU for the Solar Gas Turbine specified in the current Title V permit to 0.320 lb NO<sub>x</sub>/MMBTU. This emission factor, in conjunction with the emission factors for the other combustion sources, is used to calculate NO<sub>x</sub> emissions to verify compliance with the 91.5 tpy limit on the potential to emit NO<sub>x</sub> from the Co-Gen/Boiler House Plant. It is used in the same way to verify compliance with the 99 tpy facility-wide CAP on NO<sub>x</sub> emissions, which allows General Mills to avoid the requirements of 6NYCRR227-2, NO<sub>x</sub> RACT. The turbine's emission factors were determined



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during the stack test performed on May 16, 1989, when the unit was installed. During that test, an emission rate of 0.3197 lbs NOx/MMBTU was observed, while the turbine was operating at 100% capacity. The emission factor that will be replaced is the maximum emission rate which occurred at 75% capacity during the stack test.

The turbine maintenance program that Solar offers involves the exchange of the existing turbine with a rebuilt turbine every three to five years. Although it is the same model turbine, there is some concern that the emission factors may vary. A stack test of the turbine NOx emission rate is required following the issuance of this permit modification to verify that the emission factor of 0.320 lb NOx/MMBTU is still valid.

General Mills normally operates the Solar turbine at 100% capacity, to maximize electricity generation for sale to the Niagara Mohawk Power Corporation. Since the NOx emission factor requested is valid only at maximum power output, the operation of the gas turbine shall be restricted to 100 % load, at all times.

**Attainment Status**

GENERAL MILLS OPERATIONS INC is located in the town of BUFFALO in the county of ERIE. The attainment status for this location is provided below. (Areas classified as attainment are those that meet all ambient air quality standards for a designated criteria air pollutant.)

<b>Criteria Pollutant</b>	<b>Attainment Status</b>
Particulate Matter (PM)	ATTAINMENT
Particulate Matter < 10µ in diameter (PM10)	ATTAINMENT
Sulfur Dioxide (SO2)	ATTAINMENT
Ozone*	MARGINAL NON-ATTAINMENT
Oxides of Nitrogen (NOx)**	ATTAINMENT
Carbon Monoxide (CO)	ATTAINMENT

\* Ozone is regulated in terms of the emissions of volatile organic compounds (VOC) and/or oxides of nitrogen (NOx) which are ozone precursors.

\*\* NOx has a separate ambient air quality standard in addition to being an ozone precursor

**Facility Description**

General Mills Operations, Inc. (General Mills) owns and operates a flour processing plant, a cereal processing plant and a cogeneration/boiler house plant located at 54 South Michigan Avenue in Buffalo, New York. Although these three plants are located on adjacent properties, are under common control,



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and are considered to be one title V facility, they operate somewhat independent of each other. At their request, General Mills was issued three separate Title V permits, one for each plant. This permit is specifically for the Co-Generation/Boiler House Plant which generates steam and electricity to operate processes at the Cereal and Flour Plants. The Cogeneration/Boiler House includes a 3.8 MW stationary gas turbine and a waste heat boiler, which produces electricity and steam used by General Mills. Any excess electricity is sold to the Niagara Mohawk Power Corporation. When additional steam is required to operate processes at the Cereal Plant, two auxiliary mid-sized boilers are also utilized to produce steam.

**Permit Structure and Description of Operations**

The Title V permit for GENERAL MILLS OPERATIONS INC is structured in terms of the following hierarchy: facility, emission unit, emission point, emission source and process.

A facility is defined as all emission sources located at one or more adjacent or contiguous properties owned or operated by the same person or persons under common control. The facility is subdivided into one or more emission units (EU). Emission units are defined as any part or activity of a stationary facility that emits or has the potential to emit any federal or state regulated air pollutant. An emission unit is represented as a grouping of processes (defined as any activity involving one or more emission sources (ES) that emits or has the potential to emit any federal or state regulated air pollutant). An emission source is defined as any apparatus, contrivance or machine capable of causing emissions of any air contaminant to the outdoor atmosphere, including any appurtenant exhaust system or air cleaning device. [NOTE: Indirect sources of air contamination as defined in 6 NYCRR Part 203 (i.e. parking lots) are excluded from this definition]. The applicant is required to identify the principal piece of equipment (i.e., emission source) that directly results in or controls the emission of federal or state regulated air pollutants from an activity (i.e., process). Emission sources are categorized by the following types:

- combustion - devices which burn fuel to generate heat, steam or power
- incinerator - devices which burn waste material for disposal
- control - emission control devices
- process - any device or contrivance which may emit air contaminants that is not included in the above categories.

GENERAL MILLS OPERATIONS INC is defined by the following emission unit(s):

Emission unit U00452 - This Emission Unit consists of a "packaged" cogeneration unit. A 3.8 MW Solar Centaur H stationary gas turbine with a maximum design heat input capacity of 52.3 MMBTU/hr and a Deltak waste heat boiler with a maximum design heat input capacity of 53.6 MMBTU/hr (when the turbine is in service) are utilized to generate electricity and steam. The maximum design heat input capacity of the Deltak boiler operated with the turbine out of service is 90.8 MMBTU/hr. The Deltak boiler is equipped with Coen CPF 33 register type burners, capable of firing No. 2 oil, No. 6 oil or natural gas. However, the Deltak boiler is currently only supplied natural gas and is not connected to any fuel oil sources. The electricity and steam generated are used by General Mills and any excess electricity is sent to the " grid" and sold to the Niagara Mohawk Power Corporation. This emission unit is fueled solely with natural gas.

Emission unit U00452 is associated with the following emission points (EP):



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0452A, 0452B

It is further defined by the following process(es):

Process: 52A is located at Ground Floor, Building 77 - This process consists of the operation of the Solar Centaur H gas turbine and, if needed, the Deltak waste heat boiler, both fueled solely with natural gas. The maximum throughput of natural gas to the turbine and the waste heat boiler are 52,300 cfh and 53,600 cfh, respectively. Sources of emissions from this process are: sulfur dioxide, nitrogen oxides, carbon monoxide, particulates, PM-10 and volatile organic compounds.

There are 2 emission stacks associated with Process 52A. When the demand for steam at the Cereal Plant is large, heat created during the generation of electricity in the turbine is sent to the Deltak boiler to produce process steam, exhausting emissions through EP 0452B. If the process steam demand is reduced, the heat from the turbine is diverted to Emission Point 0452A, by-passing the Deltak waste heat boiler.

Emission unit U00451 - This emission unit consists of two mid-sized boilers, a Babcock Wilcox FJ-18-36 and a Cleaver Brooks DLD-68E, with maximum design heat input capacities of 58.8 MMBTU/hr and 66.9 MMBTU/hr respectively. The B&W boiler, installed in June of 1950, was originally a coal fired boiler. This boiler was retrofitted with a dual fuel Coen CO 160 FYR burner in May of 1968. The Cleaver Brooks boiler began operation on March 26, 1976 and is equipped with a dual fuel CB Model CN-5 burner. Both boilers exhaust into a common stack, emission point 0451A. The two boilers are used to supplement the waste heat boiler identified in Emission Unit U-00452 that produces steam for use in the Cereal Plant. Each boiler is capable of burning natural gas or No. 6 fuel oil.

Emission unit U00451 is associated with the following emission points (EP):

0451A, It is further defined by the following process(es):

Process: 51A is located at FIRST, Building 21 - Process 51A consists of the operation of the Babcock Wilcox FJ-18-36 and/or Cleaver Brooks DLD-68E boilers with natural gas to generate steam for the Cereal Plant.

Process: 51B is located at FIRST, Building 21 - Process 51B consists of the operation of the Babcock Wilcox FJ-18-36 and/or Cleaver Brooks DLD-68E boilers with No. 6 fuel oil to generate steam for the Cereal Plant. Sources of emissions from this process include sulfur dioxide, nitrogen oxides, carbon monoxide, particulates, PM-10 and volatile organic compounds.

### Title V/Major Source Status

GENERAL MILLS OPERATIONS INC is subject to Title V requirements. This determination is based on the following information:

General Mill's facility-wide potential to emit (PTE) SO<sub>2</sub>, PM and PM-10 exceeds the major source thresholds of 100 tons per year (tpy) each, listed in 6NYCRR Subpart 201-6, Title V Facility Permits.

General Mills chose not to cap their actual emissions of SO<sub>2</sub>, PM, and PM-10 to less than the applicability thresholds. Therefore, General Mills is considered major for these contaminants and subject to the provisions of Title V. Facility-wide emissions of volatile organic compounds (VOCs) are capped below the 50 tpy major source threshold at 49 tpy to avoid the requirements of 6NYCRR212.10, VOC RACT. Facility-wide emissions of NO<sub>x</sub> are capped below the 100 tpy major source threshold at 99 tpy to avoid the requirements of 6NYCRR227-2, NO<sub>x</sub> RACT. Emissions of NO<sub>x</sub> from the Co-Gen/Boiler House Plant are capped at 91.5 tpy to avoid the requirements of 40CFR52.21. Emissions of SO<sub>2</sub> from the Co-Gen/Boiler House Plant are capped at 167.0 tpy also to avoid the requirements of 40CFR52.21.

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**Program Applicability**

The following chart summarizes the applicability of GENERAL MILLS OPERATIONS INC with regards to the principal air pollution regulatory programs:

<b>Regulatory Program</b>	<b>Applicability</b>
PSD	YES
NSR (non-attainment)	NO
NESHAP (40 CFR Part 61)	NO
NESHAP (MACT - 40 CFR Part 63)	NO
NSPS	YES
TITLE IV	NO
TITLE V	YES
TITLE VI	NO
RACT	NO
SIP	YES

**NOTES:**

**PSD** Prevention of Significant Deterioration (40 CFR 52) - requirements which pertain to major stationary sources located in areas which are in attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

**NSR** New Source Review (6 NYCRR Part 231) - requirements which pertain to major stationary sources located in areas which are in non-attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

**NESHAP** National Emission Standards for Hazardous Air Pollutants (40 CFR 61) - contaminant and source specific emission standards established prior to the Clean Air Act Amendments of 1990 (CAAA) which were developed for 9 air contaminants (inorganic arsenic, radon, benzene, vinyl chloride, asbestos, mercury, beryllium, radionuclides, and volatile HAP's)

**MACT** Maximum Achievable Control Technology (40 CFR 63) - contaminant and source specific emission standards established by the 1990 CAAA. Under Section 112 of the CAAA, the US EPA is required to develop and promulgate emissions standards for new and existing sources. The standards are to be based on the best demonstrated control technology and practices in the regulated industry, otherwise known as MACT. The corresponding regulations apply to specific source types and



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contaminants.

**NSPS** New Source Performance Standards (40 CFR 60) - standards of performance for specific stationary source categories developed by the US EPA under Section 111 of the CAAA. The standards apply only to those stationary sources which have been constructed or modified after the regulations have been proposed by publication in the Federal Register and only to the specific contaminant(s) listed in the regulation.

**Title IV** Acid Rain Control Program (40 CFR 72 thru 78) - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

**Title VI** Stratospheric Ozone Protection (40 CFR 82, Subparts A thru G) - federal requirements that apply to sources which use a minimum quantity of CFC's (chlorofluorocarbons), HCFC's (hydrofluorocarbons) or other ozone depleting substances or regulated substitute substances in equipment such as air conditioners, refrigeration equipment or motor vehicle air conditioners or appliances.

**RACT** Reasonably Available Control Technology (6 NYCRR Parts 212.10, 226, 227-2, 228, 229, 230, 232, 233, 234, 235, 236) - the lowest emission limit that a specific source is capable of meeting by application of control technology that is reasonably available, considering technological and economic feasibility. RACT is a control strategy used to limit emissions of VOC's and NOx for the purpose of attaining the air quality standard for ozone. The term as it is used in the above table refers to those state air pollution control regulations which specifically regulate VOC and NOx emissions.

**SIP** State Implementation Plan (40 CFR 52, Subpart HH) - as per the CAAA, all states are empowered and required to devise the specific combination of controls that, when implemented, will bring about attainment of ambient air quality standards established by the federal government and the individual state. This specific combination of measures is referred to as the SIP. The term here refers to those state regulations that are approved to be included in the SIP and thus are considered federally enforceable.

**Compliance Status**

Facility is in compliance with all requirements

**SIC Codes**

SIC or Standard Industrial Classification code is an industrial code developed by the federal Office of Management and Budget for use, among other things, in the classification of establishments by the type of activity in which they are engaged. Each operating establishment is assigned an industry code on the basis of its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Larger facilities typically have more than one SIC code.

<b>SIC Code</b>	<b>Description</b>
2043	CEREAL BREAKFAST FOODS



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SCC Codes

SCC or Source Classification Code is a code developed and used by the USEPA to categorize processes which result in air emissions for the purpose of assessing emission factor information. Each SCC represents a unique process or function within a source category logically associated with a point of air pollution emissions. Any operation that causes air pollution can be represented by one or more SCC's.

SCC Code	Description
1-02-004-02	EXTERNAL COMBUSTION BOILERS - INDUSTRIAL INDUSTRIAL BOILER - RESIDUAL OIL 10-100MMBTU/HR **
1-02-006-02	EXTERNAL COMBUSTION BOILERS - INDUSTRIAL INDUSTRIAL BOILER - NATURAL GAS 10-100 MMBtu/Hr
2-02-002-03	INTERNAL COMBUSTION ENGINES - INDUSTRIAL INDUSTRIAL INTERNAL COMBUSTION ENGINE - NATURAL GAS Turbine: Cogeneration

Facility Emissions Summary

In the following table, the CAS No. or Chemical Abstract Series code is an identifier assigned to every chemical compound. [NOTE: Certain CAS No.'s contain a 'NY' designation within them. These are not true CAS No.'s but rather an identification which has been developed by the department to identify groups of contaminants which ordinary CAS No.'s do not do. As an example, volatile organic compounds or VOC's are identified collectively by the NY CAS No. 0NY998-00-0.] The PTE refers to the Potential to Emit. This is defined as the maximum capacity of a facility or air contaminant source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or air contamination source to emit any air contaminant, including air pollution control equipment and/or restrictions on the hours of operation, or on the type or amount or material combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in federally enforceable permit conditions. The PTE Range represents an emission range for a contaminant. Any PTE quantity that is displayed represents a facility-wide emission cap or limitation for that contaminant. If no PTE quantity is displayed, the PTE Range is provided to indicate the approximate magnitude of facility-wide emissions for the specified contaminant in terms of tons per year (tpy). The term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. 0NY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

Cas No.	Contaminant Name	PTE	
		lbs/yr	Range
000630-08-0	CARBON MONOXIDE	88932	
000074-83-9	METHYL BROMIDE (HAP)	30000	
000074-87-3	METHYL CHLORIDE (HAP)	2000	
0NY210-00-0	OXIDES OF NITROGEN	198000	

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ONY075-00-0	PARTICULATES	1577820
ONY075-00-5	PM-10	1577820
007446-09-5	SULFUR DIOXIDE	336000
ONY998-00-0	VOC	98000

Regulatory Analysis

Location Facility/EU/EP/Process/ES	Regulation	Short Description	Condition
FACILITY	40CFR 52-A.21	Prevention of Significant Deterioration	49, 1-8, 1-6, 1-7
U-00452/-/52A/0452A	40CFR 60-A.	General provisions	55
U-00452/-/52A/0452A	40CFR 60-A.1	General provisions - Applicability	56
U-00452/-/52A/0452A	40CFR 60-A.10	General provisions - State authority	59
U-00452/-/52A/0452A	40CFR 60-A.12	General provisions - Circumvention	60
U-00452/-/52A/0452A	40CFR 60-A.4	General provisions - Address	69
U-00452/-/52A/0452A	40CFR 60-A.7	General provisions - Notification and recordkeeping	57
U-00452/-/52A/0452A	40CFR 60-A.9	General provisions - Availability of information	58
U-00452/-/52A/0452A	40CFR 60-GG.332(a)(2)	NOx Standard units >=10 and <=100 (mmBtu/hr) or with a base load <= 30 MW and 100 mmBtu/hr.	61
U-00452/-/52A/0452A	40CFR 60-GG.332(k)	Exemption from Section 332(a) of this Subpart.	62
U-00452/-/52A/0452A	40CFR 60-GG.333(b)	Standard for Sulfur Dioxide	63
U-00452/-/52A/0452A	40CFR 60-GG.334(b)(2)	Non-bulk Storage Sulfur Monitoring Requirements	1-12, 1-11
U-00452/-/52A/0452A	40CFR 60-GG.334(c)	Excess Emission Reports	66
U-00452/-/52A/0452A	40CFR 60-GG.335(d)	Test Methods and Procedures	67
U-00452/-/52A/0452A	40CFR 60-GG.335(e)	Test Methods and Procedures	68
FACILITY	40CFR 82-F.	Protection of Stratospheric Ozone - recycling and emissions reduction	50
FACILITY	6NYCRR 200.1	Definitions.	1
FACILITY	6NYCRR 200.3	False Statement.	2
FACILITY	6NYCRR 200.5	Sealing.	3
FACILITY	6NYCRR 200.6	Acceptable ambient air quality.	4
FACILITY	6NYCRR 200.7	Maintenance of equipment.	5
FACILITY	6NYCRR 201-1.10(b)	Permitting - public access to records kept for Title V permitting	11
FACILITY	6NYCRR 201-1.2	Permitting - unpermitted emission sources	6
FACILITY	6NYCRR 201-1.4	Unavoidable noncompliance and violations	1-13
FACILITY	6NYCRR 201-1.5	Emergency defense	8
FACILITY	6NYCRR 201-1.7	Recycling and Salvage	9
FACILITY	6NYCRR 201-1.8	Prohibition of reintroduction of collected contaminants to the air	10

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FACILITY	6NYCRR 201-3.2(a)	Exempt Activities - Proof of eligibility	12
FACILITY	6NYCRR 201-3.3(a)	Trivial Activities - proof of eligibility	13
FACILITY	6NYCRR 201-5.	State Facility Permit General Provisions	70, 71
FACILITY	6NYCRR 201-5.3(b)	Permit Content and Terms of Issuance - permit conditions	72
FACILITY	6NYCRR 201-6.	Title V Permits and the Associated Permit Conditions	22, 26, 51, 52, 15, 17, 18, 20, 23, 24, 25, 14, 16, 19, 21
FACILITY	6NYCRR 201-6.5(c)(3)(ii)	Permit conditions for Recordkeeping and Reporting of Compliance Monitoring	1-1
FACILITY	6NYCRR 201-6.5(e)	Compliance Certification	1-2
FACILITY	6NYCRR 201-6.5(f)	Operational flexibility	1-3
FACILITY	6NYCRR 201-6.5(g)	Permit shield	30, 31
FACILITY	6NYCRR 202-1.1	Required emissions tests.	32
FACILITY	6NYCRR 202-2.1	Emission Statements - Applicability	33
FACILITY	6NYCRR 202-2.5	Emission Statements - record keeping requirements.	34
FACILITY	6NYCRR 211.2	General Prohibitions - air pollution prohibited.	73
FACILITY	6NYCRR 211.3	General Prohibitions - visible emissions limited	35
FACILITY	6NYCRR 215.	Open Fires	36
FACILITY	6NYCRR 225-1.2(d)	Sulfur-in-fuel limitations - Table 2	38, 37
FACILITY	6NYCRR 225-1.8(a)	Reports, sampling and analysis.	40, 39
FACILITY	6NYCRR 225-1.8(d)	Reports, sampling, and analysis	41
U-00451/-/51B	6NYCRR 227.2(b)(1)	Particulate emissions.	1-9, 1-10
U-00451/0451A/51B	6NYCRR 227-1.2(b)	Particulate Emissions from 2 or More Connected Furnaces.	53
FACILITY	6NYCRR 227-1.3	Smoke Emission Limitations.	1-5, 1-4
FACILITY	6NYCRR 227-1.6	Corrective Action.	44
FACILITY	6NYCRR 227-1.7	General Emission Data.	45
FACILITY	6NYCRR 227-2.	Reasonably available control technology for NOx	47, 46

**Applicability Discussion:**

Mandatory Requirements: The following facility-wide regulations are included in all Title V permits:

6NYCRR Part 200-.5

Allows for the sealing of non-compliant air contamination sources



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#### 6NYCRR Part 200-.6

Acceptable ambient air quality - prohibits contravention of ambient air quality standards without mitigating measures

#### 6NYCRR Part 200-.7

Anyone owning or operating an air contamination source which is equipped with an emission control device must operate the control consistent with ordinary and necessary practices, standards and procedures, as per manufacturer's specifications and keep it in a satisfactory state of maintenance and repair so that it operates effectively

#### 6NYCRR Part 201-1.2

Any existing emission source that is required to be permitted or registered but has not done so, must apply for the necessary permit or registration. The source is subject to all regulations that were applicable at the time the original permit or registration was required as well as any subsequent applicable requirements that came into effect since.

#### 6NYCRR Part 201-1.4

This regulation specifies the actions and recordkeeping and reporting requirements for any violation of an applicable state enforceable emission standard that results from a necessary scheduled equipment maintenance, start-up shutdown, malfunction or upset in the event that these are unavoidable.

#### 6NYCRR Part 201-1.5

An enforcement action may be avoided if the facility can demonstrate that an emergency situation occurred which resulted in an emission limitation or permit violation. The following information would constitute evidence of an emergency situation: a properly signed operating log recorded during the actual event which; identifies the cause(s) of the emergency, indicates that all equipment was operating properly at the time, the person responsible took all reasonable steps to minimize the exceedance or violation, and that the department was notified of the emergency within 2 working days of the event.

#### 6NYCRR Part 201-1.7

Requires the recycle and salvage of collected air contaminants where practical

#### 6NYCRR Part 201-1.8

Prohibits the reintroduction of collected contaminants to the air

#### 6NYCRR Part 201-1.10(b)

Any permit application, compliance plan, permit, and monitoring and compliance certification report that is submitted as part of the Title V permit process must be made available to the public as per requirements set forth under 6 NYCRR Part 616 - Public Access to Records and section 114(c) of the Clean Air Act Amendments of



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#### 6NYCRR Part 201-3.2(a)

An owner and/or operator of an exempt emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains exempt emission sources or units, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

#### 6NYCRR Part 201-3.3(a)

The owner and/or operator of a trivial emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains trivial emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

#### 6NYCRR Part 201-5

General Provisions - this requirement applies to those permit terms and conditions which are not federally enforceable; specifies that permittees must maintain emission units and control devices in compliance with all rules; authorizes reasonable access for inspections for department representatives; requires that on-site monitoring recordkeeping be made available for review for at least 5 years.

Permit Exclusion Provisions - specifies those actions, such as administrative orders, suits, claims for natural resource damages, etc that are not affected by the state-only portion of the permit, unless they are specifically addressed by it.

#### 6NYCRR Part 201-5.3(b)

Lists those contaminants subject to contaminant specific requirements

#### 6NYCRR Part 201-6

General provisions for Title V permits including:

Applicable Criteria, Limits, Terms, Conditions and Standards - requires that facility operations take place in accordance with approved criteria, emission limits, terms, conditions and standards as specified in the permit and that any documents required by the federally enforceable portion of the permit be certified by a responsible official

Cessation or Reduction of Permitted Activity Not a Defense - specifies that the cessation or reduction of a permitted activity to maintain compliance is not a



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defense in an enforcement action

Compliance Requirements - lists the information that must be included in any required compliance monitoring records and reports; and requires; compliance with any approved compliance schedule; the submittal of risk management plans as per 112(r) of the Act if necessary; and the submittal of compliance progress reports on a semiannual basis, at a minimum

Federally-Enforceable Requirements - specifies what permit terms and conditions, in general, are federally enforceable

Fees - requires the permittee to pay any required fees

Monitoring, Related Recordkeeping and Reporting Requirements - requires all compliance monitoring and recordkeeping to be conducted according to the terms and conditions of the permit and any Q/A requirements; any monitoring or support information is to be retained for minimum of 5 years.

Permit Revocation, Modification, Reopening, Reissuance or Termination and Associated Information Submission Requirements - specifies that the permit may be modified, revoked, reopened and reissued, or terminated for cause; and the permittee must furnish information regarding the permit to the department upon reasonable request

Permit Shield - sets forth criteria under which the permit shield applies and what authority the department maintains in pursuing violations

Property Rights - specifies that the permit does not convey any property rights

Reopening Cause - sets forth criteria and procedures for reopening a permit

Right to Inspect - establishes authority whereby department representatives may enter and inspect a facility

Severability - establishes that the permit continues to be valid in instances where any provisions, parts or conditions of the permit are found to be invalid or are the subject of a challenge

#### 6NYCRR Part 201-6.5(e)

Sets forth the general requirements for compliance certification content; specifies an annual submittal frequency; and identifies the EPA and appropriate regional office address where the reports are to be sent.

#### 6NYCRR Part 201-6.5(g)

Permit Exclusion Provisions - specifies those actions, such as administrative orders, suits, claims for natural resource damages, etc that are not affected by the federally enforceable portion of the permit, unless they are specifically addressed by it.

#### 6NYCRR Part 202-1.1



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Specifies that emissions tests may be required to ascertain compliance with any air pollution codes and rules.

#### 6NYCRR Part 202-2.1

Requires that emission statements shall be submitted on or before April 15th each year for emissions of the previous calendar year.

#### 6NYCRR Part 202-2.5

Specifies the emission statement records that must be maintained for a 5 year period.

#### 6NYCRR Part 211-.2

General air pollution prohibition

#### 6 NYCRR Part 211.3

Restricts the opacity of visible emissions from any air contamination source.

#### 6 NYCRR Part 215

Prohibits open fires at industrial and commercial sites.

#### 40 CFR Part 82, Subpart F

Requires affected permittees to comply with the recycling and emissions reduction standards specified by this rule when using ozone depleting substances identified under Title VI of the Act. Specifically, these regulations apply to the following persons or activities:

- a. Persons opening appliances for maintenance, service, repair, or disposal
- b. Equipment used during the maintenance, service, repair, or disposal of appliances
- c. Persons performing maintenance, service, repair, or disposal of appliances
- d. Persons disposing of small appliances, motor vehicle air conditioners or MVAC's, and MVAC-like appliances
- e. Persons owning commercial or industrial process refrigeration equipment
- f. Owners/operators of appliances normally containing 50 or more pounds.

If applicable, the above persons or activities may be required to comply with certain disposal, recycling, or recovery practices, leak repair practices, recordkeeping and/or technician certification requirements.

### **Facility Specific Requirements**

In addition to Title V, GENERAL MILLS OPERATIONS INC has been determined to be subject to the following regulations:

#### 40CFR 52-A.21

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This citation applies to facilities that are subject to Prevention of significant deterioration of air quality (PSD) provisions; ie: facilities that are located in an attainment area and that emit pollutants which are listed in 40 CFR 52.21(b)(23)(i) .

This Title V permit contains four monitoring conditions under 40CFR52.21, PSD. Two conditions describe capping requirements, the third condition restricts the turbine load to 100% and the fourth requires a stack test of the NOx emission rate from the turbine.

In 1989 , General Mills modified their Boiler House by the addition of a co-generator. This included the installation of a stationary gas turbine and a waste heat boiler. Due to that modification, a PSD applicability determination was conducted. The outcome was that General Mills was subject to PSD requirements for SO2 and NOx emissions. At that time, General Mills chose to cap the Co-Gen/Boiler House emissions at less than 91.6 tpy NOx and less than 167.1 tpy SO2 to avoid the requirements of PSD.

General Mills must use an emission factor for NOx to determine the tons of NOx exhausting from the turbine on a 12-month rolling total basis to verify compliance with the PSD CAP for NOx. The emission factor that General Mills has requested to use was determined during the initial performance test of the turbine conducted on May 16, 1989 at 100% capacity. Since the maximum emission rate of NOx (0.3664 lb NOx/MMBTU) determined during the initial performance test occurred at 75% operating capacity, it is necessary to restrict the operation of the gas turbine to 100% capacity. This will not result in a change in operation because General Mill's normally operates the turbine at full capacity to maximize electricity production and subsequent sale to the Niagara Mohawk Power Corporation.

In lieu of onsite maintenance, Solar Turbine, Inc. routinely exchanges General Mills turbine with a factory rebuilt turbine every three to five years. A stack test must be conducted on exchanged turbines to verify possible changes in the emission rate of NOx. A stack test of the NOx emitted from the turbine, currently in use, is due subsequent to the issuance of this permit modification.

#### 40CFR 60-A.

General Mills operates a stationary gas turbine which is subject to Subpart GG, New Source Performance Standards specified in 40CFR60. Any emission source which is subject to an NSPS is also subject to the general requirements of 40CFR60 specified in Subpart A. This condition requires the facility to review the General Provisions and comply with all applicable requirements.

#### 40CFR 60-A.1

This section defines applicability for 40CFR60, excluding Subparts B and C and the necessity for a NSPS source to obtain a title V permit.

#### 40CFR 60-A.10

This section allows the State to adopt and enforce emission standards which are equal to or more stringent than the NSPS applicable to the facility. It also requires owners or operators of the affected facility to obtain the necessary permits prior to initiating construction, a modification or the operation of such facility.

#### 40CFR 60-A.12

This regulation prohibits an owner or operator from concealing emissions in violation of applicable

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standards by any means.

40CFR 60-A.4

This condition lists the USEPA Region 2 address for the submittal of all communications to the "Administrator". In addition, all such communications must be copied to NYSDEC Bureau of Enforcement and Compliance Assurance and the NYSDEC Regional Office.

40CFR 60-A.7

This condition details the notification requirements for any source subject to a New Source Performance Standard including dates of construction, reconstruction, anticipated and actual initial start-up, physical or operational changes and opacity observations.

40CFR 60-A.9

This rule citation allows the public access to any information submitted to the EPA Administrator (or state contact), in conjunction with a project subject to this section of the regulation.

40CFR 60-GG.332 (a) (2)

This regulation provides the equation to be used to determine the allowable emissions of oxides of nitrogen (NOx) from a gas turbine with a heat input greater than 10 million BTU per hour and less than 100 million BTU per hour.

40CFR 60-GG.332 (k)

This section exempts gas turbines when firing an emergency fuel.

40CFR 60-GG.333 (b)

This regulation limits the amount of sulfur in the fuel burned in a gas turbine to 0.8% by weight and requires the monitoring of the sulfur content of fuel.

40CFR 60-GG.334 (b) (2)

This regulation requires the owner or operator of a gas turbine which is supplied its fuel without intermediate bulk storage to determine and record the sulfur content and nitrogen content of fuel being fired in the turbine daily. The owners, operators or fuel vendors may develop custom schedules for determination of these values. These custom schedules must be approved by the Administrator before they can be used to determine compliance with this requirement. The USEPA issued General Mills a custom schedule in March 1999. Currently, General Mills is required to sample natural gas supplied to the turbine and analyze for sulfur content on a semi-annual basis. Analysis for nitrogen is not required if natural gas is the only fuel fired.

40CFR 60-GG.334 (c)

This regulation requires the owner or operator of a gas turbine to report any excess emissions of oxides of nitrogen (NOx), sulfur dioxide (SO<sub>2</sub>), ice fog, and emergency fuel use to be reported semi-annually.

40CFR 60-GG.335 (d)

This regulation requires the owner or operator of the gas turbine to use the following methods to determine compliance with the sulfur content standard in 40 CFR 60.335(b): ASTM D 2880-71 for

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liquid fuels and ASTM 1072-80, D 3031-81, D 4084-82, or D 3246-81 for gaseous fuels

#### 40CFR 60-GG.335 (e)

This regulation requires the owner or operator of the gas turbine to use the methods specified in 40 CFR 335(a) and (d) to determine the nitrogen and sulfur content of fuels being burned. The analysis may be performed by the owner or operator, a service contractor, the fuel vendor, or any qualified agency

#### 6NYCRR 200 .1

This section contains a definition of terms referred to throughout New York's entire codes, rules and regulations.

#### 6NYCRR 200 .3

This section prohibits false statements in connection with applications, plans, specifications and/or reports submitted pursuant to this Subchapter.

#### 6NYCRR 201-6.5 (c) (3) (ii)

Reports of any required monitoring must be submitted at a minimum frequency of every six months. The Department must be notified of any permit deviations and incidences of noncompliance, stating the probable cause of the deviations and any corrective actions or preventative measures taken.

#### 6NYCRR 201-6.5 (f)

This regulation defines in general terms under what circumstances changes would be allowed without a permit modification provided the permit contains sufficient operational flexibility provisions.

#### 6NYCRR 225-1.2 (d)

The sulfur-in-fuel limitations for residual and distillate oil and for solid fuel are listed in Tables 1,2 and 3 or 6 NYCRR Part 225-1.2(c), (d) and (e). General Mills uses residual and distillate oil throughout the facility which is limited to 1.1% sulfur by weight. Compliance with this limit is determined by vendor certification of the sulfur content for each delivery of oil.

#### 6NYCRR 225-1.8 (a)

Upon request the owner or operator of a facility which purchases and fires coal or oil shall submit reports to the commissioner containing a fuel analysis, information on the quantity of the fuel received, burned, and results of any stack sampling, stack monitoring and any other procedures to ensure compliance with the provisions of 6 NYCRR Part 225-1. All records shall be available for a minimum of three years

#### 6NYCRR 225-1.8 (d)

This requires that sampling, compositing and analysis of fuel samples must be done in accordance with methods acceptable to the commissioner.

#### 6NYCRR 227 .2 (b) (1)

This regulation is from the 1972 version of Part 227 and still remains as part of New York's State Implementation Plan. The rule establishes a particulate limit of 0.1 lbs/mmBtu based on a 2 hour average emission for any oil fired stationary combustion installation. In addition to recordkeeping requirements, the monitoring condition requires that a stack test be conducted during the term of the permit to verify compliance with the particulate limit.



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6NYCRR 227-1.2 (b)

This requires that the total heat input of all combustion sources connected to one stack or control device be used to calculate the permissible particulate emission rate.

6NYCRR 227-1.3

This regulation requires a limitation and compliance monitoring for opacity from a stationary combustion installation.

6NYCRR 227-1.6

This requirement details the corrective action necessary to rectify a violation of any Provision of Part 227-1. In addition, it allows the Department to seal any combustion source that fails to implement the specified corrective action and prohibits the owner or operator from removing that seal and operating the source. Only the Department may remove a seal affixed to a stationary combustion installation upon completion of the corrective action.

6NYCRR 227-1.7

This requires the submission of emissions data when requested by the Department. It also requires that any sampling, compositing and fuel analysis required by this rule be carried out using methods acceptable to the Department.

6NYCRR 227-2.

General Mills has a facility-wide potential to emit NOx which is greater than the applicability threshold of 100 tpy specified for this regulation. This condition limits the total emissions of NOx from stationary combustion installations (boilers, combustion turbines, internal combustion engines, furnaces, ovens, etc.) throughout the facility, including the Cereal, Flour and Co-Gen/Boiler Plants, to 99 tons per year for any 12 consecutive months. Compliance with this emissions CAP will allow General Mills to avoid the requirements of 6NYCRR 227-2, NOx RACT.

**Non Applicability Analysis**

**List of non-applicable rules and regulations:**

<b>Location</b>	<b>Short Description</b>	<b>Regulation</b>
<b>Facility/EU/EP/Process/ES</b>		
FACILITY	Reasonably available control technology for NOx	6NYCRR 227-2.

NOTE: Non-applicability determinations are cited as a permit condition under 6 NYCRR Part 201-6.5(g). This information is optional and provided only if the applicant is seeking to obtain formal confirmation, within an issued Title V permit, that specified activities are not subject to the listed federal applicable or state only requirement. The applicant is seeking to obtain verification that a requirement does not apply for the stated reason(s) and the Department has agreed to include the non-applicability determination in the issued Title V permit which in turn provides a shield against any potential enforcement action.

**Compliance Certification**

Summary of monitoring activities at GENERAL MILLS OPERATIONS INC:



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Location Facility/EU/EP/Process/ES	Type of Monitoring	Cond No.
FACILITY	monitoring of process or control device parameters as surrogate	1-6
FACILITY	intermittent emission testing	1-7
FACILITY	monitoring of process or control device parameters as surrogate	1-8
FACILITY	monitoring of process or control device parameters as surrogate	49
U-00452/-/52A/0452A	record keeping/maintenance procedures	56
U-00452/-/52A/0452A	record keeping/maintenance procedures	59
U-00452/-/52A/0452A	record keeping/maintenance procedures	57
U-00452/-/52A/0452A	intermittent emission testing	61
U-00452/-/52A/0452A	monitoring of process or control device parameters as surrogate	63
U-00452/-/52A/0452A	record keeping/maintenance procedures	1-11
U-00452/-/52A/0452A	record keeping/maintenance procedures	1-12
U-00452/-/52A/0452A	record keeping/maintenance procedures	66
U-00452/-/52A/0452A	record keeping/maintenance procedures	67
FACILITY	record keeping/maintenance procedures	1-1
FACILITY	record keeping/maintenance procedures	1-2
FACILITY	record keeping/maintenance procedures	1-3
FACILITY	record keeping/maintenance procedures	33
FACILITY	work practice involving specific operations	37
FACILITY	work practice involving specific operations	38
FACILITY	record keeping/maintenance procedures	39
FACILITY	record keeping/maintenance procedures	40
U-00451/-/51B	record keeping/maintenance procedures	1-9
U-00451/-/51B	intermittent emission testing	1-10
FACILITY	monitoring of process or control device parameters as surrogate	1-4
FACILITY	monitoring of process or control device parameters as surrogate	1-5
FACILITY	record keeping/maintenance procedures	44
FACILITY	record keeping/maintenance procedures	45
FACILITY	monitoring of process or control device parameters as surrogate	47

**Basis for Monitoring**

This title V permit specifies special operating/monitoring conditions, recordkeeping and reporting required to verify compliance with the applicable requirement. The basis for monitoring for these requirements is as follows:

**40CFR52.21:**

To verify compliance with the PSD CAPs on NOx and SO2 emissions, General Mills must monitor fuel usage and calculate emissions of these contaminants from the Co-Gen/Boiler House, on a monthly basis. The annual rolling total, determined by summing the individual monthly NOx and SO2 emissions during any consecutive 12-month period, must be compared to the limits of 91.5 tpy NOx and 167.0 tpy SO2, which were set to avoid the requirements of 40CFR52.21. If emissions exceed these limits, General Mills will be considered in violation of their PSD CAP(s) and that exceedance must be reported to the Department within 30 days. If General Mills is unable to comply with the emissions CAP(s) they will be subject to the requirements of PSD, which includes applying the Best Available Control Technology (BACT) to the turbine and waste heat boiler for the contaminant(s) whose CAP cannot be maintained. Annual reporting is required. Records must be maintained on-site for five years and be available for review by the Department or USEPA upon request.

To verify compliance with the minimum allowable operating capacity of 100% on the gas turbine, General Mills must track true power output and make sure that it conforms approximately to the data from the manufacturer regarding



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ambient temperature and power output. Daily records must be maintained on-site for five years and reporting must be conducted semi-annually and annually.

Every three to five years, General Mills exchanges their turbine with a rebuilt turbine from the manufacturer in lieu of conducting on-site maintenance. To verify that NOx emissions from the rebuilt turbine are equal to or less than the replaced turbine, a stack test is required. This is important since the NOx emission factor for the turbine is used to determine compliance with the NOx CAP for PSD and the NOx RACT CAP. It is also used to determine whether or not there is a significant net emissions increase in NOx due to the exchange.

#### **6NYCRR227-2:**

Nitrous oxide emissions, which result mostly from combustion sources, such as boilers, furnaces, turbines, cars/trucks, etc. are responsible for ground-level ozone and acid rain (like sulfur dioxide), both of which destroy human health and the environment. Nitrous oxide emissions also contribute to global warming..

This regulation requires that stationary combustion sources which emit nitrous oxides at 100 tons per year or more control NOx emissions through Reasonably Available Control Technology (RACT). To avoid the requirements of 6NYCRR Subpart 227-2, NOx RACT, General Mills chose to limit NOx emissions from the entire facility to 99 tpy or less. Each month, General Mills must calculate facility-wide NOx emissions based on fuel usage and emission factors specified in their title V permit. Throughout the facility, NOx is emitted from the boilers, turbine, ovens, furnaces, emergency generators, etc. Compliance is determined by summing the individual monthly NOx emissions from all stationary combustion sources during any consecutive 12-month period and comparing it to the 99 tpy CAP. Annual certification of compliance by General Mills is required. Records must be maintained on-site for five years and be available for inspection upon request.

#### **40CFR60 Subparts A and GG:**

The Solar gas turbine is subject to the requirements of 40CFR60 Subpart A - General Provisions and Subpart GG - Standards of Performance for Stationary Gas Turbines. Subpart GG includes a 150 ppm emission limit on NOx from the turbine, a limit of 0.8% sulfur by weight in fuel burned in the turbine and compliance with a custom schedule issued by the USEPA Region 2 office for monitoring sulfur and nitrogen in the natural gas which fuels the turbine. The custom schedule eliminates the requirement to monitor nitrogen in fuel, if natural gas is the only fuel fired in the turbine. Semi-annual analysis of the sulfur content in natural gas is required to verify compliance with the 0.8% sulfur in fuel limit. Compliance with the 150ppm NOx limit was verified in 1989 during an initial stack test. During that test a maximum concentration of 104 ppm NOx occurred at 75% operating capacity. All records must be maintained on-site for review by inspectors from the USEPA and/or NYSDEC. Review of these records allows the inspectors to verify compliance with the requirements. Reporting is required semi-annually.

#### **6NYCRR225-1.2 (d) and 6NYCRR225-1.8 (a):**

The sulfur content in fuel oil and coal are limited by 6NYCRR225-1 to lower the sulfur dioxide emissions resulting from stationary combustion installations. When sulfur dioxide is exhausted to the air it combines with water to form sulfuric acid. When it rains, snows, etc. this acid enters lakes and rivers, contaminating drinking water and fish, making the bodies of water uninhabitable for aquatic organisms. It also is harmful to human health, trees and vegetation, buildings, etc.

Residual oil (No. 6) and distillate (No. 2) oil used throughout General Mill's Plants are subject to the sulfur in oil limit of 1.1 % by weight as specified under 6NYCRR225-1.2 (d). Compliance with this rule is verified through vendor certification of the sulfur content for each delivery of oil. Records are required to be maintained on-site for five years for



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review to verify compliance with these requirements. Annual compliance certification and semi-annual deviation reports are required .

#### **6NYCRR227.2(b)(1):**

This regulates particulate emissions from stationary combustion sources. Inhalable particulates are detrimental to human health, causing asthma and other lung diseases, heart disease and sometimes death. In cities and towns, particulates are responsible for reduced visibility and damage to painted surfaces and buildings.

The two mid-size, oil fired boilers in EU 00451 are subject to the requirements of 6NYCRR227.2(b)(1). Particulate emissions from the combustion of No. 6 oil in these boilers (Process 51B), exhausted through EP 0451A, are limited to 0.1 lb/MMBTU. Approval of a stack test protocol and the performance of a stack test are required prior to permit renewal to verify compliance with the specified limit.

To minimize particulate emissions, General Mills is also required to operate and maintain the oil fired boilers as specified by the manufacturer. Oxygen sensors must be calibrated at least quarterly. The boilers must be operated with sufficient oxygen to ensure complete combustion, without generating excessive NOx emissions. Boiler tune-ups are required annually.

Records of stack tests and protocols, boiler maintenance/tune-ups and oxygen sensor calibrations must be maintained on-site so that NYSDEC and/or USEPA inspectors may review them to verify compliance with these requirements. Reporting is required semi-annually.

#### **6NYCRR227-1.3 and 6NYCRR211.3:**

Opacity is regulated under 6NYCRR227-1.3 and 6NYCRR211.3 to control the emission of particulates, which when respired can harm human health and can also cause reduced visibility. An opacity determination is a surrogate method of determining compliance with the in-stack concentration limit for particulates.

All emission points at the Co-Gen/Boiler House Plant are subject to 6NYCRR227-1.3(a), which limits the average opacity of the emissions during any six consecutive minutes to less than 20%. A daily check of visible emissions is required to verify compliance with this rule. The observation of emissions greater than zero percent opacity will trigger an investigation to determine the cause, followed by corrective action. If visible emissions persist, a Method 9 opacity evaluation is required to determine whether the opacity limit has been exceeded. The facility is considered in violation of 6NYCRR227-1.3 if the opacity is determined to be greater than 20%. Records of daily observations and Method 9 analyses must be maintained on-site for five years so that the Administrator and/or the NYSDEC can review records and determine if General Mills has maintained compliance with these regulations. In addition to semi-annually, reporting is required any time a Method 9 analysis is conducted. Since all of the particulate emitting sources at the Co-Gen/Boiler House Plant are combustion sources, compliance with the 20% opacity limit specified under 6NYCRR211.3, may be verified via the monitoring requirements specified under 6NYCRR227-1.3(a).

#### **6NYCRR201-6.5(f)(1):**

In accordance with 6NYCRR201-6.5(f)(1), this title V permit includes a monitoring condition specifying operational flexibility at the Co-Gen/Boiler House Plant which allows General Mills to carry out minor changes without modifying the title V permit. This includes the ability to move equipment and/or exhaust points, and the replacement of the stationary gas turbine with a rebuilt turbine consistent with the turbine listed or equivalent. Turbine replacement may only be conducted in lieu of on-site routine maintenance and repairs. General Mills may change or modify existing processes provided no additional requirements are applicable, the emissions from the modified process are equal to or less than the source being modified or replaced, NSR and/or PSD is/are not applicable and an emissions cap is not

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required to avoid applicability. General Mills must maintain any required records on-site for five years.

**40CFR60 Subpart GG:**

Facilities that operate stationary gas turbines are subject to the requirements of 40CFR60, Subpart GG, which includes a limit on sulfur content in fuel of 0.8% by weight and a 150 ppm limit on NO<sub>x</sub> emissions. The sampling of fuel, with analysis of the sulfur and nitrogen content is also required. In accordance with their custom schedule issued by the USEPA, General Mills is required to analyze their natural gas using a specified method for sulfur on a semi-annual basis. The analysis of nitrogen content is not required. General Mills must keep records of the analyses performed, including the test method used, so that the NYSDEC and/or USEPA may determine compliance with these requirements.