

AIR QUALITY
MANAGEMENT DISTRICT

**STATEMENT OF BASIS
FOR
2nd RENEWAL OF TITLE V FEDERAL OPERATING PERMIT**

APPLICATION NO.: TV2011-03-01
DATE: January 26, 2011
REVIEWING ENGINEER: Michelle Joe

A. FACILITY INFORMATION

FACILITY NAME: Campbell Soup Supply Company, LLC
LOCATION: 6200 Franklin Boulevard
Sacramento, CA
MAILING ADDRESS: 6200 Franklin Boulevard
Sacramento, CA 95824
RESPONSIBLE OFFICIAL: Brett Buatti, V.P. Manufacturing
Sacramento Operations
(916) 395-5110
CONTACT PERSON: Jennifer Cornes, Environmental Project Engineer
Sacramento Operations
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B. PURPOSE OF THIS STATEMENT OF BASIS

The Title V Federal Operating 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)(5) 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 of this Statement of Basis 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 this Statement of Basis, while based on information contained in the permit, is a separate document and is not itself an enforceable term and condition of the permit.

C. PERMIT HISTORY

This Statement of Basis is for the second renewal of the Title V Federal Operating Permit No. 2005-03-01 issued to Campbell Soup Supply Company, LLC on April 19, 2006. That Title V Federal Operating Permit No. 2005-03-01 has an April 19, 2011 expiration date. The following permit actions have occurred since the initial Federal Operating Permit No. 96-03-01 was issued:

<u>Permit Action</u>	<u>Date</u>	<u>Permit No.</u>
Initial permit issued:	04-19-2001	TV1996-03-01
1st Administrative Amendment	11-21-2002	TV1996-03-01A
1st Minor Modification	03-18-2003	TV1996-03-02
2nd Administrative Amendment	05-13-2003	TV1996-03-02A
1st Permit Renewal	04-19-2006	TV2005-03-01
1st Significant Modification	06-08-2007	TV2005-03-02
1st Administrative Amendment	07-31-2008	TV2005-03-02A

This 2nd permit renewal will be assigned the following permit number: TV2011-03-01.

Campbell Soup Supply Company is requesting to renew the Title V federal operating permit for its facility which was issued on 04-19-2006 and last modified on 07-31-2008. This permit renewal will also include an Administrative Amendment to change the company's responsible official.

D. FACILITY DESCRIPTION

Prior to June 1998 Campbell Soup Company conducted two distinct operations at this facility.

1. Manufacturing of 2-piece and 3-piece cans for food product packaging.
2. Processing of canned foods and juices including tomato juices, tomato sauces, and soups.

In June 1998 Campbell Soup Company sold the can manufacturing process to Silgan Can Company who continues the operation of the can manufacturing process at the same location. Campbell Soup Company then created a subsidiary named Campbell Soup Supply Company, LLC and assigned the canned food and juice processing to this new company.

Food Processing and Packaging:

The primary objective of food processing is the preservation of perishable foods in a stable form that can be stored and shipped to markets during all months of the year. Processing also can change foods into new or more usable forms and make foods convenient to prepare.

The canning operation employs the following general processes: washing, sorting, grading, chopping, slicing, grinding, container filling, container sealing, heat sterilization, cooling, labeling, casing and storage for shipment. None of these activities result in significant emissions.

The principal preparation steps are washing and sorting. Raw ingredients are usually thoroughly washed by high-pressure sprays or by strong-flowing streams of water while being passed along a moving belt or an agitating or revolving screen. Ingredient preparation is done through sorting into groups (by hand) according to degree of ripeness or perfection of shape. Trimming is also done by hand.

After preparation, the raw ingredients are transported to the point of filling. Before being filled, the can is cleaned. The containers are filled with the product by the machines. After filling, the cans are sealed by interlocking the curl of the lid and flange of the can, creating a double seal. Closing machines are equipped to create vacuum in the headspace either mechanically or by steam-flow before lids are sealed (except for aluminum cans which use pressurized nitrogen to create a positive pressure before sealing).

During processing, microorganisms that can cause spoilage are destroyed by heat. The temperature and processing time vary with the nature of the product and the size of the container. After heat sterilization, containers are quickly cooled to prevent overcooking. Containers may be cooled by conveying the containers from the cooker to a rotary cooler, hydrostatic cooler or conveyor equipped with a cold-water spray.

The steam for food processing and sterilization can be produced by four (4) natural gas fired boilers located onsite. However, under normal operation, steam is imported from a cogeneration facility located at the SW corner of the Campbell Soup property line. The cogeneration facility is owned by Sacramento Power Authority (subsidiary of SMUD) and operated by Siemens-Westinghouse. The steam is routed through steam lines to the facility areas where it is required. The boilers have special equipment and special natural gas burners to reduce the air emissions of nitrogen oxides (NOx) and carbon monoxide (CO).

D. FACILITY DESCRIPTION (continued)

Maintenance and Support Activities:

These activities are performed for the purpose of maintenance, repair and upkeep of the facility equipment and grounds. Examples of these types of activities include welding, use of lubricants, forklift activity, architectural coating, grounds maintenance, vehicle traffic, work performed by contractors, etc.

Storage Tanks:

This facility stores materials such as vegetable oil, vinegar, chlorine and ammonia. There are also a number of small, sealed drums and containers which are not expected to emit any type of air pollutants.

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E. SIGNIFICANT EMISSIONS UNIT INFORMATION

This section describes the emission units that have a current and valid Permit to Operate from the SMAQMD and are part of the Title V Federal Operating Permit.

BOILER NO. 1

SMAQMD Permit No. 20160

Cleaver Brooks, Model LD-94-R,H, 100 MMBTU/hour (main burner), 4.9 MMBTU/hour (standing pilot flame burner), natural gas primary fuel, no standby fuel.

BOILER NO. 2

SMAQMD Permit No. 20161

Cleaver Brooks, Model LD-94-R,H, 100 MMBTU/hour (main burner), 4.9 MMBTU/hour (standing pilot flame burner), natural gas primary fuel, no standby fuel.

BOILER NO. 3

SMAQMD Permit No. 20936

Cleaver Brooks, Model DLDH-94, 100 MMBTU/hour (main burner), 4.9 MMBTU/hour (standing pilot flame burner), natural gas primary fuel, no standby fuel.

BOILER NO. 4

SMAQMD Permit No. 20937

Cleaver Brooks, Model CA-28, 139 MMBTU/hour (main burner), 4.9 MMBTU/hour (standing pilot flame burner), natural gas primary fuel, no standby fuel.

DRY INGREDIENT HANDLING AIR POLLUTION CONTROL SYSTEM NO. 1

SMAQMD Permit No. 16888

The Dry Ingredient Air Pollution Control Rotoclone venting six mixers. The APC Rotoclone is an American Air Filter, Type W, Size No. 27 handling 16,000 CFM and rated at 40 hp.

DRY INGREDIENT HANDLING AIR POLLUTION CONTROL SYSTEM NO. 2

SMAQMD Permit No. 17180

The Dry Ingredient Air Pollution Control Rotoclone venting two bagged flour dumping stations, one flour sifter hood, one MSG batching station and one sugar batching station. The APC Rotoclone is an American Air Filter, Type W, Size No. 27 handling 16,000 CFM and rated at 40 hp.

DRY INGREDIENT HANDLING AIR POLLUTION CONTROL SYSTEM NO. 3

SMAQMD Permit No. 18710

The Dry Ingredient Air Pollution Control Rotoclone venting two rock salt storage silos. The APC Rotoclone is an American Air Filter, Type W, Size No. 12 handling 3,000 CFM and rated at 10 hp.

INTERNAL COMBUSTION ENGINE - EMERGENCY USE

SMAQMD Permit No. 14634

An emergency use Internal Combustion Engine that drives a water pump for fighting fires at the site. The Internal Combustion Engine is a Cummins, Model No. V-378-F2, 136 HP, diesel no. 2 fueled.

E. SIGNIFICANT EMISSIONS UNIT INFORMATION (continued)

INTERNAL COMBUSTION ENGINE - EMERGENCY USE

SMAQMD Permit No. 21074

An emergency use Internal Combustion Engine that drives a water pump for fighting fires at the site. The Internal Combustion Engine is a Cummins, Model No. CFP83-F40, 288 HP, diesel no. 2 fueled.

INKJET PRINTING OPERATIONS

SMAQMD Permit No. 22542

The existing inkjet printing operations were previously considered insignificant emissions units when they were each determined to emit less than 2 lb/day of ROC emissions. However, the SMAQMD policy recently changed to consider all inkjet printers as one permit unit, thereby exceeding the 2 lb/day significance limit. The inkjet printing operations consist of various inkjet printers installed on the container and case lines and are used to print codes on packages.

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F. INSIGNIFICANT EMISSIONS UNIT INFORMATION

Process Description	Basis for Exemption
Ingredient preparation (transfer, washing, sorting/grading, cutting, dicing, peeling, grinding, dumping, waste stream, conveyors, thaw cabinet, barrel washer, spice batching, pepper slicing, onion slicing)	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Blending (blenders, mixers, kettles, blanching/cooking)	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Filling (can filler, can sealer)	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Sterilizing (retorts, heat sterilization/cookers, hydrostatic cookers, can cooling section)	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Packaging (casing, shrinkwrapping, palletizing)	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Hot melt glue application on Lines 4, Z, LL01, LL02, LL03, LL04, LL05, LL07, LL08	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Cold glue on Line 4	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Fork lifts and on-site diesel trucks	SMAQMD Rule 201 Section 111.1, vehicles used to transport passengers and freight
Vacuum pumps	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Air conditioning equipment	SMAQMD Rule 201 Section 115, cooling systems
Building ventilation	SMAQMD Rule 201 Section 115, cooling systems
Ventilation heat tunnels	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Laboratory equipment	SMAQMD Rule 201 Section 120, laboratory equipment
Air flow cleaners	SMAQMD Rule 201 Section 115, cooling systems
Maintenance welding hoods	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Lubrication stations	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Paint booth	SMAQMD Rule 201 Section 118.2, < 1 gallon/day
Battery usage and charging station	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Insect and rodent fumigation service performed by contractor	SMAQMD Rule 201 Section 121 Maintenance
Ammonia refrigeration	SMAQMD Rule 201 Section 122, < 2 lb/24 hours

F. INSIGNIFICANT EMISSIONS UNIT INFORMATION (continued)

Process Description	Basis for Exemption
Fructose Tank	SMAQMD Rule 201 Section 117.2 Vapor pressure < 0.1 psi at 20°C
Vegetable oil tanks (20,000 gallon outside silo)	SMAQMD Rule 201 Section 117.2 Vapor pressure < 0.1 psi at 20°C
Fructose tank	SMAQMD Rule 201 Section 117.2 Vapor pressure < 0.1 psi at 20°C
Vegetable oil tank (20,000 gallon outside silo)	SMAQMD Rule 201 Section 117.2 Vapor pressure < 0.1 psi at 20°C
Vegetable oil tank (3,000 gallons on 3rd floor)	SMAQMD Rule 201 Section 117.3 Vapor pressure < 1.5 psi at 20°C and capacity < 6076 gallons
Diesel tanks	SMAQMD Rule 201 Section 117.3 Vapor pressure < 1.5 psi at 20°C and capacity < 6076 gallons
Gasoline tank	SMAQMD Rule 201 Section 117.3 Vapor pressure < 1.5 psi at 20°C and capacity < 6076 gallons
Propane tanks	SMAQMD Rule 201 Section 117.1 Compressed gas
Liquid nitrogen tank	SMAQMD Rule 201 Section 117.1 Liquefied gas
Phosphate tank (liquid)	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Corrosion inhibitor tanks	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Sodium hypochlorite tanks	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Belt lubricant tank (850 gallons)	SMAQMD Rule 201 Section 117.3 Vapor pressure < 1.5 psi at 20°C and capacity < 6076 gallons
Detergent tank (3,050 gallons in Soap Room)	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Detergent tank (3,800 gallons in Soap Room)	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Detergent tank (3,800 gallons in Soap Room)	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Detergent tank (1,500 gallons in Soap Room)	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Caustic tanks	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Ammonia tank	SMAQMD Rule 201 Section 122, < 2 lb/24 hours

F. INSIGNIFICANT EMISSIONS UNIT INFORMATION (continued)

Process Description	Basis for Exemption
Biocide tanks	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Chlorine/bleach tanks	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Distilled vinegar tank	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Hydrochloric acid tank	SMAQMD Rule 201 Section 122, < 2 lb/24 hours
Cooling towers, HVACs	SMAQMD Rule 201 Section 115, Cooling system
Cooling towers, air compressors	SMAQMD Rule 201 Section 115, Cooling system
Cooling towers, hydrostatic cookers	SMAQMD Rule 201 Section 115, Cooling system
Evaporative condensers, refrigeration	SMAQMD Rule 201 Section 115, Cooling system

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G. ALTERNATE OPERATING SCENARIOS

None requested by the permittee.

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H. RECENT PERMIT ACTIONS

Below is a description of local permit actions that have taken place since the last update to the Title V permit.

Permit Cancellations:

The following Permits to Operate have been cancelled and their reference will be removed from the Title V permit:

Cancelled Permits to Operate			
PO No.	Date Cancelled	Equipment Description	Reason for Cancellation
14638	1/16/2008	100 MMBTU/hr Boiler #1	Permit modified by SMAQMD Permit No. 20160 to comply with Rule 411 by replacing the burner and to remove diesel as a standby fuel.
14639	1/16/2008	100 MMBTU/hr Boiler #2	Permit modified by SMAQMD Permit No. 20161 to comply with Rule 411 by replacing the burner and to remove diesel as a standby fuel.
14640	1/16/2008	100 MMBTU/hr Boiler #3	Permit modified by SMAQMD Permit No. 20317 to allow for temporary operation without CEMS monitoring during CEMS upgrade and to remove diesel as a standby fuel.
14641	1/16/2008	139 MMBTU/hr Boiler #4	Permit modified by SMAQMD Permit No. 20318 to allow for temporary operation without CEMS monitoring during CEMS upgrade and to remove diesel as a standby fuel.
20317	11/21/2008	100 MMBTU/hr Boiler #3	Permit modified by SMAQMD Permit No. 20936 to comply with Rule 411 by replacing the burner.
20318	11/21/2008	139 MMBTU/hr Boiler #4	Permit modified by SMAQMD Permit No. 20937 to comply with Rule 411 by replacing the burner.

H. RECENT PERMIT ACTIONS (continued)

New Permits to Operate:

The following Permits to Operate have been issued since the last Title V update and will be incorporated into the Title V permit:

New Permits to Operate			
PO No.	Date Issued	Equipment Description	Reason for Permit
20160	1/16/2008	100 MMBTU/hr Boiler #1	Modification of existing boiler previously permitted under SMAQMD Permit No. 14638.
20161	1/16/2008	100 MMBTU/hr Boiler #2	Modification of existing boiler previously permitted under SMAQMD Permit No. 14639.
20936	11/21/2008	100 MMBTU/hr Boiler #3	Modification of existing boiler previously permitted under SMAQMD Permit No. 14640.
20937	11/21/2008	139 MMBTU/hr Boiler #4	Modification of existing boiler previously permitted under SMAQMD Permit No. 14641.
21074	8/12/2008	288 BHP IC Engine Standby	Newly installed engine.
22542	1/18/2011	Inkjet Printing Operations	SMAQMD permit policy recently changed which required this previously insignificant emissions equipment to obtain an SMAQMD Rule 201 Permit to Operate.

I. FACILITY EMISSIONS

Maximum Allowable 2010 Emissions (tons per year)								
SMAQMD Permit No.	Process or Equipment	ROC	NOx	PM10	SOx	CO	Single HAP (D)	Total HAPs (D)
20160, 20161, 20936, & 20937	Boiler Nos. 1, 2, 3, and 4 (A)	3	60.3	5	0.6	54	<3	<3
16888	Dry Ingredient Handling No. 1	0	0	1.2	0	0	0	0
17180	Dry Ingredient Handling No. 2	0	0	1.2	0	0	0	0
18710	Dry Ingredient Handling No. 3	0	0	1.2	0	0	0	0
14634	IC Engine Emergency Use (B)	0.034	0.42	0.03	0.005	0.091	<0.13	<0.13
21074	IC Engine Emergency Use (B)	0.0635	0.311	0.0095	0.0105	0.165	<0.13	<0.13
22542	Can and Case Printing (C)	1.31	0	0	0	0	<1.3	<1.3
N/A	Labeling Adhesive (C)	0.08	0	0	0	0	<0.09	<0.09
N/A	Misc. ROC Usage (C)	1.99	0	0	0	0	<0.7	<0.7
Total		6.5	61.0	8.6	0.6	54.3	<5.2	<5.2

- (A) Emissions based on combusting natural gas only.
- (B) Emissions based on permitted annual limits.
- (C) Emissions based on actual material usage in 2009.
- (D) Based on the maximum allowable 2004 emissions in the 1st Title V Permit Renewal.

J. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Facility-wide Requirements

SMAQMD Rule 201 - General Permit Requirements

SIP approved: 07-13-1987 (52 FR 26148)
11-20-1984 rule version is SIP approved
08-24-2006 rule version is the current version and is not SIP approved

Rule Description: This rule provides an orderly procedure for the review of new sources of air pollution and of the modification and operation of existing sources through the issuance of permits.

Compliance Status: Campbell Soup Supply Company has active permits for all sources that require permits.

SMAQMD Rule 202 - New Source Review

SIP approved: 06-19-1985 (50 FR 25417)
11-20-1984 rule version is SIP approved
02-24-2005 rule version is the current version and is not SIP approved

Rule Description: This rule sets the procedures for review of new and modified stationary sources and provides the mechanisms for evaluating the applicability of BACT and offset requirements.

Compliance Status: Processes at Campbell Soup Supply Company that require SMAQMD permits have been reviewed pursuant to this rule. BACT and emission offsets have been provided as required by the rule.

SMAQMD Rule 207 - Title V Federal Operating Permits

SIP approved: 11-21-2003 (68 FR 65637) (part of Title V program approval)
04-26-2001 rule version is SIP approved

Rule Description: This rule sets forth the procedures for review, issuance and renewal of Title V operating permits.

Compliance Status: Campbell Soup Supply Company has submitted a timely and complete Title V application for Title V permit renewal and is currently operating under an active Title V permit.

J. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Facility-wide Requirements (continued)

SMAQMD Rule 401 - Ringelmann Chart

SIP approved: 02-01-1984 (49 FR 3987)
04-19-1983 rule version is SIP approved

Rule Description: This rule regulates the discharge of air contaminants into the atmosphere by limiting visible emissions.

Compliance Status: All equipment is expected to comply with the visible emissions requirement.

SMAQMD Rule 403 - Fugitive Dust

SIP approved: 12-05-1984 (49 FR 47490)
08-03-1977 rule version is SIP approved

Rule Description: This rule regulates processes which may periodically cause fugitive dust emissions into the atmosphere.

Compliance Status: The facility complies with this rule by taking the necessary precautions to ensure that fugitive dust is not airborne beyond the property line.

SMAQMD Rule 404 - Particulate Matter

SIP approved: 07-13-1987 (52 FR 26148)
11-20-1984 rule version is SIP approved

Rule Description: This rule regulates processes which emit particulate matter into the atmosphere, other than combustion contaminants.

Compliance Status: The facility complies with this rule by capturing particulate matter with air pollution control equipment.

SMAQMD Rule 405 - Dust and Condensed Fumes

SIP approved: 12-05-1984 (49 FR 47490)
08-03-1977 rule version is SIP approved

Rule Description: This rule regulates processes which emit dust and condensed fumes into the atmosphere.

Compliance Status: The facility complies with this rule by capturing particulate matter with air pollution control equipment. See Attachment A for calculations showing compliance.

J. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Facility-wide Requirements (continued)

SMAQMD Rule 442 - Architectural Coatings

SIP approved: 11-09-1998 (63 FR 60214)
09-05-1996 rule version is SIP approved
05-24-2001 rule version is the current version and is not SIP approved

Rule Description: This rule limits the quantity of volatile organic compounds in architectural coatings supplied, sold, offered for sale, applied, solicited for application or manufactured for use within the SMAQMD.

Compliance Status: The affected coatings used by the facility are received and stored in containers that display the required manufacturer's labels and demonstrate compliance with the rule's requirements.

40 CFR 68 (begin at 68.1) - Chemical Accident Prevention Provisions

Promulgated: 01-31-1994 (59 FR 4493)
[04-09-2004 (69 FR 18831) most recent amendment]

Rule Description: This regulation specifies requirements for owners or operators of stationary sources concerning the prevention of accidental chemical releases.

An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, must comply with the requirements of 40 CFR Part 68.

40 CFR 68.215 requires that the air permitting authority include in the Title V permit for a facility specified statements regarding the regulation. Those statements are included in the Federally Enforceable Requirements - General section of the permit.

Compliance Status: The permittee stores more than the designated amounts of the specified chemical substances in 40 CFR 68 and is in compliance with the requirements of the regulation.

J. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Facility-wide Requirements (continued)

40 CFR 82 Subpart F (begin at 82.150) - Protection of Stratospheric Ozone - Recycling and Emissions Reduction

Promulgated: 05-14-1993 (58 FR 28712)
[04-13-2005 (70 FR 19278) most recent amendment]

Rule Description: The purpose of this subpart is to reduce emissions of class I and class II refrigerants and their substitutes to the lowest achievable level by maximizing the recapture and recycling of such refrigerants during the service, maintenance, repair and disposal of appliances and restricting the sale of refrigerants consisting in whole or in part of a class I and class II ODS in accordance with Title VI of the Clean Air Act.

This subpart applies to any person servicing, maintaining or repairing appliances. This subpart also applies to persons disposing of appliances, including small appliances and motor vehicle air conditioners. In addition, this subpart applies to refrigerant reclaimers, technician certifying programs, appliance owners and operators, manufacturers of appliances, manufacturers of recycling and recovery equipment, approved recycling and recovery equipment testing organizations, persons selling class I or class II refrigerants or offering class I or class II refrigerants for sale and persons purchasing class I or class II refrigerants.

As indicated in 40 CFR 70.6, Title V permits need to assure compliance with all applicable requirements at the time of permit issuance. Part 70 defines as an applicable requirement, "Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the Act, unless the Administrator has determined that such requirements need not be contained in a Title V permit." [40 CFR 70.2(12)]. The applicable requirements of Title VI are included in the Federally Enforceable Requirements - General section of the permit.

Compliance Status: The permittee employs qualified contractors to maintain equipment that contains class I or class II refrigerants.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Equipment Specific Requirements
Boiler Nos. 1, 2, 3, and 4

Boiler Nos. 1, 2, 3, and 4

SMAQMD Rule 406 - Specific Contaminants

SIP approved: 12-05-1984 (49 FR 47490)
12-06-1978 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds and combustion contaminants by limiting emission concentrations.

Compliance Status: The boilers are expected to emit SO₂ at less than 0.000019% SO₂ by volume, and PM₁₀ at less than 0.0028 grains/dscf at 12% CO₂.

See Attachment B for calculation of SO₂ and PM emission concentrations from the boilers.

The rule emission limits for SO₂ are 0.2% SO₂ by volume and for PM are 0.1 grains/dscf at 12% CO₂, respectively. The emissions from the boilers at the Campbell Soup Supply Company facility comply with this rule.

SMAQMD Rule 411 - Boiler NOx

SIP approved: 05-06-2009 (74 FR 20880)
~~08-23-2007 rule version is SIP approved~~

Rule Description: This rule limits NOx and CO emissions from boilers, steam generators and process heaters with heat input ratings of 1 MMBTU/hour or greater. It limits the NOx and CO emission concentration as described in the table below (in ppm, corrected to 3% O₂).

Boiler Size (MMBtu/hour)	NOx	CO	or limit fuel usage (therms/year)
≥1 and <2.5	30	400	40,000
≥2.5 and <5	30	400	70,000
≥5 and <20	15	400	200,000
≥20 and <100	9	400	200,000
≥100	9	400	300,000

Compliance Status: The emissions from the boilers comply with the 9 ppm NOx and 400 ppm CO corrected to 3% O₂ requirements of the rule.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Equipment Specific Requirements
Boiler Nos. 1, 2, 3, and 4 (continued)

SMAQMD Rule 420 - Sulfur Content of Fuels

SIP approved: 12-05-1984 (49 FR 47490)
 08-13-1981 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds from combustion of fuels by limiting the sulfur content of the fuel.

Compliance Status: The following table illustrates the SMAQMD Rule 420 sulfur limits for gaseous fuels and the expected sulfur content of gaseous fuels combusted in equipment at the facility.

The permittee's equipment complies with this rule.

Equipment	Fuel	SMAQMD Rule 420 Allowable Sulfur Content of Fuel (grains S per 100 cubic feet)	Expected Sulfur Content of Fuel Used (grains S per 100 cubic feet)
Boiler Nos. 1, 2, 3, and 4	Natural Gas	50	0.22 (A)

(A) Based on the sulfur content of pipeline-quality natural gas in Sacramento County.

Permit Conditions on SMAQMD Rule 201 Permits to Operate

Condition Description: The conditions of operation on the SMAQMD Rule 201 Permits to Operate limit emission concentrations, mass emissions and require recordkeeping and reporting.

The following table indicates the conditions on the SMAQMD Rule 201 permits that are not applicable federally enforceable requirements.

Equipment	SMAQMD Rule 201 Permit No.	Permit conditions that are <u>not</u> federally enforceable
Boiler Nos. 1, 2, 3, and 4	20160, 20161, 20936, and 20937	Condition Nos. 1, 2, 3, and 4 – These are administrative requirements not contained in any SIP-approved rule or other federally enforceable regulation. All other permit conditions are federally enforceable.

Compliance Status: The permittee's equipment complies with the SMAQMD Rule 201 permit conditions.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Equipment Specific Requirements
Boiler Nos. 1, 2, 3, and 4 (continued)

Boiler No. 4 only

40 CFR 60 Subpart Db (begin at 60.40b) - NSPS for Industrial - Commercial – Institutional Steam Generating Units:

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record.

Rule Description: This regulation is only applicable to a steam generating unit that has a heat capacity greater than 100 MMBTU/hour but less than 250 MMBTU/hour and is modified after June 19, 1984. The regulation limits PM, NOx, SOx, and opacity emissions. A **modification** only occurs, by NSPS definition, when there is an increase in emissions. When physical changes were made to Boiler No. 4 the emissions decreased and therefore the NSPS is not applicable.

Compliance Status: Not applicable as explained above.

Boiler Nos. 1, 2 and 3 only

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record.

40 CFR 60 Subpart Dc (begin at 60.40c) - NSPS for Small Industrial - Commercial - Institutional Steam Generating Units:

Rule Description: This regulation affects steam generating units with maximum design heat input of 10 - 100 MMBTU/hour and limits PM, NOx, SOx, and opacity emissions. The regulation also requires recordkeeping and reporting. However, no standards within the subpart are applicable to units fired by natural gas only and therefore the NSPS is not applicable.

Compliance Status: Not applicable as explained above.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Equipment Specific Requirements
Boiler Nos. 1, 2, 3, and 4 (continued)

Boiler Nos. 1, 2, 3, and 4

The following federal regulation is not an applicable federal requirement but is discussed here to document the non-applicability determination for the record.

40 CFR 63 Subpart DDDDD - NESHAP for Industrial, Commercial, and Institutional Boilers:

Rule Description: This regulation establishes national emission limits and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial and institutional boilers and process heaters that are located at, or part of, a major source of HAP.

Rule Status: This subpart was promulgated on September 13, 2004. However, on July 30, 2007, the Court of Appeals for the District of Columbia Circuit issued its mandate in NRDC v. EPA, vacating the boiler NESHAP because of challenges to EPA's use of health-based compliance alternative standards instead of MACT standards.

Compliance Status: The vacating of this regulation by the court is likened to the regulation never being promulgated. When EPA fails to meet the deadline for establishing emission limits for HAPs under Section 112 of the Clean Air Act or when the court vacates a rule, then the "MACT hammer" (Section 112(j)) is triggered.

The "hammer provisions" require a state or local permitting agency to develop MACT standards for the affected facility on a case-by-case basis. These standards may not be less stringent than the MACT floor, which is the average emission limitation achieved by the best performing 12% of existing sources in the industrial category.

As of this writing, the SMAQMD is anticipating EPA's release of the revised MACT standards. In the meantime, an affected source shall be required to comply with a two-part permit process. Part 1 is a notification of applicability by providing the facility's location and other basic information. Part 2 is a more detailed description of emissions and controls, which will enable the agency to establish emission limits on a facility-by-facility basis.

The boilers at Campbell Soup Supply Company are not subject to the federal NESHAP for Boilers because they are not located at a facility that is a major source for HAP.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Equipment Specific Requirements
Emergency Use IC Engines

SMAQMD Rule 406 - Specific Contaminants

SIP approved: 12-05-1984 (49 FR 47490)
12-06-1978 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds and combustion contaminants by limiting emission concentrations.

Compliance Status: The diesel fueled emergency use IC Engines are expected to emit SO₂ at less than 0.001% SO₂ by volume and PM₁₀ at less than 0.1 grains/dscf at 12% CO₂.

See Attachment B for calculation of SO₂ and PM emission concentrations from the emergency use IC engines.

The rule emission limits for SO₂ are 0.2% SO₂ by volume and for PM are 0.1 grains/dscf at 12% CO₂, respectively. The emissions from the emergency use IC Engines at the Campbell Soup Supply Company facility comply with this rule.

SMAQMD Rule 412 - Stationary IC Engines Located at Major Stationary Sources of NOx

SIP Approved: 04-30-1996 (61 FR 18959)
06-01-1995 rule version is SIP approved

Rule Description: This rule regulates NO_x, CO and ROC emissions from the operation of stationary IC engines located at major stationary sources of NO_x. However, emergency use IC engines are only required to install a non-resetting totalizing hour meter (or computerized tracking) and maintain operation records.

Compliance Status: The emergency use IC engines are each equipped with a non-resetting totalizing hour meter and maintain operation records to comply with this rule.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Equipment Specific Requirements
Emergency Use IC Engines (continued)

SMAQMD Rule 420 - Sulfur Content of Fuels

SIP approved: 12-05-1984 (49 FR 47490)
 08-13-1981 rule version is SIP approved

Rule Description: This rule regulates emissions of sulfur compounds from combustion of fuels by limiting the sulfur content of the fuel.

Compliance Status: The following table illustrates the SMAQMD Rule 420 sulfur limits for liquid fuels and the expected sulfur content of liquid fuels combusted in equipment at the facility.

The permittee's equipment complies with this rule.

Equipment	Fuel	SMAQMD Rule 420 Allowable Sulfur Content of Fuel (% S by weight)	Expected Sulfur Content of Fuel Used (% S by weight)
IC engines, emergency use	CARB diesel	0.5	0.0015

Permit Conditions on SMAQMD Rule 201 Permits to Operate

Condition Description: The conditions of operation on the SMAQMD Rule 201 Permits to Operate limit emission concentrations, mass emissions and require recordkeeping and reporting.

The following table indicates the conditions on the SMAQMD Rule 201 permits that are not applicable federally enforceable requirements.

Equipment	SMAQMD Rule 201 Permit No.	Permit conditions that are not federally enforceable
IC engine, emergency use	14634	Condition Nos. 1, 2, 3, and 4.
IC engine, emergency use	21074	Condition Nos. 1, 2, 3, and 4.

Compliance Status: The permittee's equipment complies with the SMAQMD Rule 201 permit conditions.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Equipment Specific Requirements
Emergency Use IC Engines (continued)

40 CFR 60 Subpart IIII (begin at 60.4200) - NSPS for Stationary Compression Ignition Internal Combustion Engines:

Rule Description: This regulation affects manufacturers, owners and operators of new stationary compression ignition internal combustion engines and limits NMHC + NO_x, HC, NO_x, CO, and PM emissions. The regulation also requires the use of compliant fuels, monitoring equipment and maintenance operation limits.

Compliance Status: The fire pump engine permitted under SMAQMD Permit No. 14634 was installed before July 1, 2006 and therefore the NSPS is not applicable.

The fire pump engine permitted under SMAQMD Permit No. 21074 was installed after July 1, 2006 and is subject to this NSPS. The regulation requires the following:

1. The engine must meet the non-road standard that is applicable to the engine size and year of manufacture. The engine meets the standards specified in Table 4 of this subpart for model year 2008 and earlier engines rated between 175-700 hp, as follows: NO_x+ROC – 7.8 g/hp/hr, CO – 2.6 g/hp-hr, PM – 0.40 g/hp-hr.
2. The fuel used must meet the requirements specified in 40 CFR 80.510(b). The engine is required to use CARB diesel to comply with the aforementioned fuel specification.
3. The engine must have an hour meter installed. The engine is equipped with an hour meter.
4. Operation for maintenance purposes shall be limited to 100 hours per year. The engine is limited to 50 hours per year for maintenance purposes.

Therefore, the permittee's equipment complies with this NSPS.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Equipment Specific Requirements
Emergency Use IC Engines (continued)

40 CFR 63 Subpart ZZZZ (begin at 63.6580) - NESHAP for Reciprocating Internal Combustion Engines (RICE):

Rule Description: This regulation limits the emissions of HAP from new reciprocating internal combustion engines located at area and major sources of HAPs.

Compliance Status: The fire pump engine permitted under SMAQMD Permit No. 14634 was installed before June 12, 2006 and therefore the NESHAP is not applicable.

The fire pump engine permitted under SMAQMD Permit No. 21074 was installed after June 12, 2006 and is subject to this NESHAP. The regulation requires the engine to comply with the requirements specified in 40 CFR Subpart IIII - NSPS for Stationary Compression Ignition Internal Combustion Engines. The engine complies with this NSPS, and therefore complies with this NESHAP.

Streamlining Multiple Applicable Requirements:

The emergency use engines are subject to the following overlapping Applicable Federally Enforceable Requirements:

Basis of Requirement	Applicable Requirements % S by weight
SMAQMD Rule No. 420 – Sulfur Content of Fuels	≤ 0.5%
SMAQMD Rule No. 201 permit conditions based on: SMAQMD Rule No. 202 – New Source Review	≤ 0.0015%

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule Nos. 201 and 202, which will be included in the Title V permit.

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Equipment Specific Requirements
Emergency Use IC Engines (continued)

Basis of Requirement	Applicable Requirements
SMAQMD Rule No. 412 – Stationary IC Engines Located at Major Stationary Sources of NOx	Operate a non-resetting totalizing hour meter (or computerized tracking) and maintain operation records.
SMAQMD Rule No. 201 permit conditions based on: SMAQMD Rule No. 202 – New Source Review	Operate a non-resetting totalizing hour meter (or computerized tracking) and maintain operation records.

Pursuant to U.S. EPA's *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, the above applicable requirements will be streamlined. The most stringent requirements are the permit conditions based on SMAQMD Rule Nos. 201 and 202, which will be included in the Title V permit.

DRAFT

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Equipment Specific Requirements

Dry Ingredient Handling Air Pollution Control Systems Nos. 1, 2 and 3

Dry Ingredient Handling Air Pollution Control Systems Nos. 1, 2 and 3

SMAQMD Permits to Operate Nos. 16888, 17180 and 18710:

Conditions No. 1 through No. 4 are not federally enforceable. All other conditions of these permits are federally enforceable since they are requirements of SIP-approved rules.

Compliance Status:

Campbell Soup Supply Company is currently in compliance with all the conditions of the Permit to Operate Nos. 16888, 17180 and 18710.

DRAFT

K. APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS
Equipment Specific Requirements
Inkjet Printing Operations

Inkjet Printing Operations

SMAQMD Permit to Operate No. 22542:

Conditions No. 1, 2, 3, 4 and 5 are not federally enforceable. All other conditions of this Permit to Operate are federally enforceable since they are requirements of SIP-approved rules.

Compliance Status:

Campbell Soup Supply Company is expected to be in compliance with all the conditions of the Permit to Operate.

DRAFT

L. FUTURE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS Facility-wide Requirements

SMAQMD Rule 202 - New Source Review

SIP approved: Not SIP approved
SMAQMD adopted the revised Rule 202 on 10-28-2010

Rule Description:

This rule was revised on 10-28-2010 to provide for the issuance of Authorities to Construct and Permits to Operate at new and modified stationary sources without interfering with the attainment or maintenance of ambient air quality standards.

Compliance Status:

This rule is not effective until U.S. EPA approves SMAQMD Rule 214. This amended rule will affect any new emissions unit or modification of an existing emissions unit occurring on or after the rule effective date.

SMAQMD Rule 214- New Source Review

SIP approved: Not SIP approved
SMAQMD adopted the new Rule 214 on 10-28-2010

Rule Description:

This rule was adopted on 10-28-2010 to provide for the issuance of Authorities to Construct and Permits to Operate at new and modified stationary sources without interfering with the attainment or maintenance of ambient air quality standards.

Compliance Status:

This rule will be effective the day of U.S. EPA final action approving this rule. This new rule will affect any new emissions unit or modification of an existing emissions unit occurring on or after the rule effective date.

M. TITLE V PERMIT CONDITIONS

It is recommended that the Campbell Soup Supply Company, LLC Title V Federal Operating Permit be renewed.

See proposed Title V Federal Operating Permit No. TV2011-03-01 for permit conditions.

Approved by:  Date: 1/27/11

DRAFT

ATTACHMENT A

SMAQMD Rule 405
Compliance Calculations
for
Dry Ingredient Air Pollution
Control Systems No. 1, No. 2 and No. 3

Calculation of "Process Weight" for Dry Ingredient Air Pollution Control System No. 1

The total weight of flour introduced to the flour mixers is a maximum of 6,000 lb/hour. Therefore, the total "Process Weight" of all materials used in the process that is exhausted by Dry Ingredient Air Pollution Control System No. 1 is 6,000 lb/hour.

Based on the Table in SMAQMD Rule 405 the maximum allowable "dust and condensed fumes" emission is 7.27 lb/hour for a "Process Weight" of 6,000 lb/hour.

Permit Condition No. 1 in the Dry Ingredient Air Pollution Control System section of the Title V permit limits the PM10 emissions to the following:

$$\text{PM10} = (0.002 \frac{\text{grains}}{\text{ft}^3}) \times (16,000 \frac{\text{ft}^3}{\text{min}}) \times (\frac{1 \text{ lb}}{7000 \text{ grains}}) \times (60 \frac{\text{min}}{\text{hour}})$$

$$\text{PM10} = 0.27 \frac{\text{lb}}{\text{hour}} \quad \text{Maximum permitted emission}$$

Since the maximum permitted PM10 emission of 0.27 lb/hour is much less than the SMAQMD Rule 405 maximum allowable emission of 7.27 lb/hour, the process complies with SMAQMD Rule 405.

Calculation of "Process Weight" for Dry Ingredient Air Pollution Control System No. 2

The weight of flour dumped to the flour dumping station is a maximum of 500 lb/hour. The weight of sugar/MSG handled from the sugar/MSG batching station is a maximum of 300 lb/hour. The weight of flour processed in the flour sifter is 5,000 lb/hour. Therefore, the total "Process Weight" of all materials used in the processes that are exhausted by Dry Ingredient Air Pollution Control System No. 2 is 5,800 lb/hour.

Based on the Table in SMAQMD Rule 405 the maximum allowable "dust and condensed fumes" emission is 7.12 lb/hour for a "Process Weight" of 6,000 lb/hour.

Permit Condition No. 2 in the Dry Ingredient Air Pollution Control System section of the Title V permit limits the PM10 emissions to the following:

$$\text{PM10} = (0.002 \frac{\text{grains}}{\text{ft}^3}) \times (16,000 \frac{\text{ft}^3}{\text{min}}) \times (\frac{1 \text{ lb}}{7000 \text{ grains}}) \times (60 \frac{\text{min}}{\text{hour}})$$

$$\text{PM10} = 0.27 \frac{\text{lb}}{\text{hour}} \quad \text{Maximum permitted emission}$$

Since the maximum permitted PM10 emission of 0.27 lb/hour is much less than the SMAQMD Rule 405 maximum allowable emission of 7.27 lb/hour, the process complies with SMAQMD Rule 405.

Calculation of "Process Weight" for Dry Ingredient Air Pollution Control System No. 3

The weight of rock salt pneumatically conveyed to the storage silo is a maximum of 50,000 lb/hour. The "Process Weight" of all materials used in the processes that are exhausted by Dry Ingredient Air Pollution Control System No. 3 is 50,000 lb/hour.

Based on the Table in SMAQMD Rule 405 the maximum allowable "dust and condensed fumes" emission is 14.7 lb/hour for a "Process Weight" of 50,000 lb/hour.

Permit Condition No. 3 in the Dry Ingredient Air Pollution Control System section of the Title V permit limits the PM10 emissions to the following:

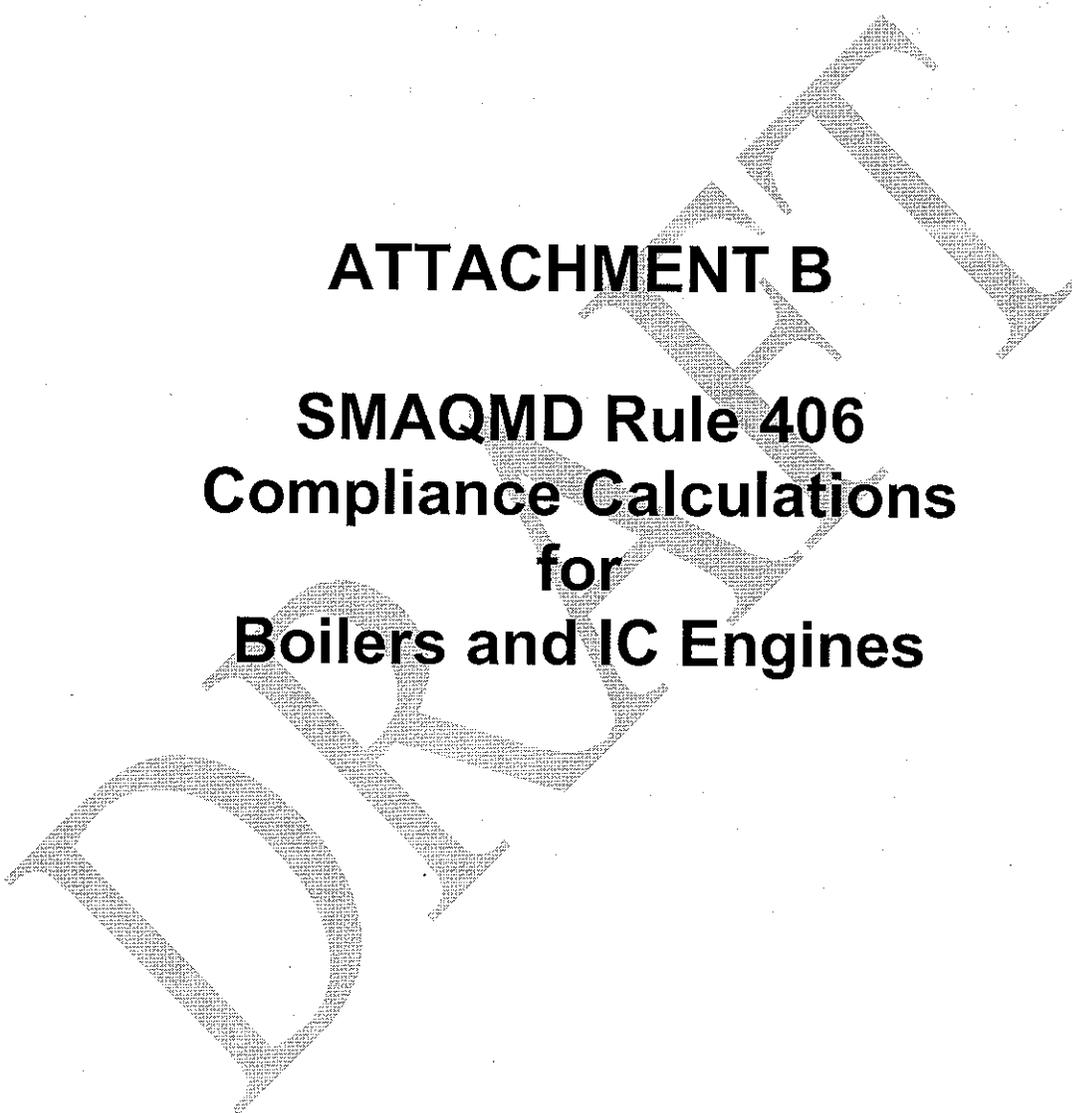
$$\text{PM10} = \left(0.002 \frac{\text{grains}}{\text{ft}^3}\right) \times \left(3,000 \frac{\text{ft}^3}{\text{min}}\right) \times \left(\frac{1 \text{ lb}}{7000 \text{ grains}}\right) \times \left(60 \frac{\text{min}}{\text{hour}}\right)$$

$$\text{PM10} = 0.05 \frac{\text{lb}}{\text{hour}} \quad \text{Maximum permitted emission}$$

Since the maximum permitted PM10 emission of 0.05 lb/hour is much less than the SMAQMD Rule 405 maximum allowable emission of 14.7 lb/hour, the process complies with SMAQMD Rule 405.

ATTACHMENT B

SMAQMD Rule 406
Compliance Calculations
for
Boilers and IC Engines



Calculation of SO₂ and PM Emission Concentrations from Boilers and IC Engines

Boilers

Assumptions for calculations:

Natural gas F-factor	= 8,710 dscf/MMBTU (at 0% O ₂ , by definition of F factor)
Natural Gas HHV	= 1,000 BTU/cf
Molecular Weight of SO ₂	= 64 grams/mol
Standard Molar Volume	= 0.8493 dscf/gram mole (at 68 degrees F and 1 atm)
Total Maximum Rated Heat Input	= (100+100+100+139) MMBTU/hour = 439 MMBTU/hour
SO ₂ Emission Factor	= 0.6 lb SO ₂ /mmcf
PM Emission Factor	= 7.6 lb PM/mmcf
Boiler Efficiency	= 85% (assumed for natural gas boiler)
Outlet Oxygen	= 9.5% (assumed for natural gas boiler)
Outlet Carbon Dioxide	= 12% (assumed for natural gas boiler)

SO₂ from Boilers

Based on the SO₂ emission factor for boilers fired on natural gas from U.S. EPA AP42 Table 1.4-2 (7/98), the SO₂ emission concentration from the boilers is estimated to be:

$$\begin{aligned}
 &= \frac{\text{Boiler volumetric SO}_2 \text{ emission rate (ft}^3\text{/hour)}}{\text{Boiler volumetric combustion gas flow rate (ft}^3\text{/hour)}} \\
 &= \frac{(0.6 \text{ lbs SO}_2\text{/mmcf}) (0.439 \text{ mmcf/hour}) (0.8493 \text{ ft}^3\text{/mole}) (1 \text{ mole}/64 \text{ grams}) (453.6 \text{ grams}/\text{lb})}{(439 \text{ MMBTU/hour}) (1 \text{ BTU input}/0.85 \text{ BTU output}) (8,710 \text{ E-6 ft}^3\text{/BTU)}} \\
 &= \frac{1.59 \text{ ft}^3 \text{ SO}_2\text{/hour}}{4,498,458.8 \text{ ft}^3\text{/hour}} \text{ at 0\% O}_2 \text{ by definition of F factor} \\
 &= \frac{1.59 \text{ ft}^3 \text{ SO}_2\text{/hour}}{(4,498,458.8 \text{ ft}^3\text{/hour}) (20.9/(20.9-9.5))} \text{ at 9.5\% O}_2 \text{ actual operating condition, } \frac{20.9}{(20.9-9.5)} \\
 &= (1.93\text{E-7}) * 100 = 0.000019\% \text{ SO}_2 \text{ by volume}
 \end{aligned}$$

**Calculation of SO₂ and PM Emission Concentrations
from Boilers and IC Engines
(continued)**

PM10 from Boilers

Based on the PM emission factor for boilers fired on natural gas from U.S. EPA AP42 Table 1.4-2 (7/98), the PM emission concentration from the boilers is estimated to be:

$$\begin{aligned} &= \frac{\text{Boiler PM mass emission rate (grains/hour)}}{\text{Boiler volumetric combustion gas flow rate (ft}^3\text{/hour)}} \\ &= \frac{(7.6 \text{ lbs PM/mmcf}) (0.439 \text{ mmcf/hour}) (7,000 \text{ grains/lb})}{(439 \text{ MMBTU/hour}) (1 \text{ BTU input}/0.85 \text{ BTU output}) (8,710 \text{ E-6 ft}^3\text{/BTU)}} \\ &= \frac{23,354.8 \text{ grains PM/hour}}{4,498,458.8 \text{ ft}^3\text{/hour}} \text{ at } 0\% \text{ O}_2 \text{ by definition of F factor} \\ &= \frac{23,354.8 \text{ grains PM/hour}}{(4,498,458.8 \text{ ft}^3\text{/hour}) (20.9/(20.9-9.5))} \text{ at } 9.5\% \text{ O}_2 \text{ actual operating condition, } \frac{20.9}{(20.9-9.5)} \\ &= 0.0028 \text{ grains/ft}^3 \text{ at } 12\% \text{ CO}_2 \end{aligned}$$

SMAQMD Rule 406 emission limits for SO₂ and PM are 0.2% SO₂ by volume and 0.1 grains/cf at 12% CO₂, respectively. Therefore, the emissions from the boilers at the Campbell Soup Supply Company facility should comply with this rule.

**Calculation of SO₂ and PM Emission Concentrations
 from Boilers and IC Engines
 (continued)**

IC Engines:

Assumptions for calculations:

Diesel fuel F-factor	=	9,190 dscf/MMBTU (at 0% O ₂ , by definition of F factor)
Diesel HHV	=	140,000 BTU/gal = 0.14 MMBTU/gal
Molecular weight of SO ₂	=	64 grams/gram mole
Standard molar volume	=	0.8493 dscf/gram mole (at 68 degrees F and 1 atm)
Grains/Pound conversion	=	7000 grains/lb
SO ₂ emission factor	=	0.1645 grams/hp-hr
PM emission factor	=	1.0 grams/hp-hr = 0.29 lb/hr (based on the permitted PM emission factor for P/O 14634 as a worse-case scenario)
IC engine horsepower	=	136 hp (for SMAQMD Permit No. 14634)
IC engine fuel consumption	=	8 gal/hour (for SMAQMD Permit No. 21074)
IC engine heat rate	=	0.0025425 MMBTU/hp-hr at 100% engine efficiency
IC engine efficiency	=	35% (assumed for diesel IC engine)
Outlet oxygen	=	13.5% (typical for diesel IC engine)
Outlet carbon dioxide	=	8% (typical for diesel IC engine)

SO₂ from IC Engines

SO₂ emissions from the IC engines are calculated by dividing the Volumetric SO₂ Emission Rate by the Volumetric Combustion Gas Emission Rate as shown below:

Volumetric SO₂ Emission Rate:

$$= (0.1645 \text{ g/hp-hr}) (0.8493 \text{ dscf/gram mole}) (1 \text{ gram mole}/64 \text{ grams})$$

$$= 0.0022 \text{ dscf SO}_2/\text{hp-hr}$$

Volumetric Combustion Gas Emission Rate:

$$= (9190 \text{ dscf/MMBTU}) (0.0025425 \text{ MMBTU/hp-hr}) (100\%/35\% \text{ engine efficiency})$$

$$= 67 \text{ dscf of combustion gas/hp-hr at } 0\% \text{ O}_2 \text{ by definition of F factor}$$

$$= 189 \text{ dscf of combustion gas/hp-hr at } 13.5\% \text{ O}_2 \text{ at } 13.5\% \text{ O}_2 \text{ actual operating condition, } \frac{(20.9-0)}{(20.9-13.5)}$$

**Calculation of SO₂ and PM Emission Concentrations
from Boilers and IC Engines
(continued)**

% SO₂ by volume:

$$= \frac{\text{Volumetric SO}_2 \text{ Emission Rate} \times (100\%)}{\text{Volumetric Combustion Gas Emission Rate}}$$

$$= \frac{(0.0022 \text{ dscf SO}_2/\text{hp-hr}) (100\%)}{189 \text{ dscf/hp-hr}}$$

$$= 0.001\% \text{ SO}_2 \text{ by volume}$$

PM10 from IC Engines

$$= \frac{(\text{PM emission rate}) (7000 \text{ grains/lb})}{(\text{heat rate}) (\text{fuel consumption}) (\text{F factor}) (\text{correction to 12\% CO}_2 \text{ from 8\% actual})}$$

$$= \frac{(0.29 \text{ lb PM/hr}) (7000 \text{ grains/lb})}{(0.14 \text{ MMBTU/hr}) (8 \text{ gal/hr}) (9190 \text{ dscf/MMBTU}) (12\%/8\%)}$$

$$= 0.13 \text{ grains/dscf at 12\% CO}_2$$

SMAQMD Rule 406 emission limits for SO₂ and PM are 0.2% SO₂ by volume and 0.1 grains/dscf at 12% CO₂, respectively. The particulate emission concentration limit is regulated by SMAQMD Rule 406 to only one decimal point. Therefore, the calculated emission can be as high as 0.149 grains/dscf and still be in compliance with the rule. Therefore, the emissions from the IC Engines at the Campbell Soup Supply Company facility should comply with this rule.

ATTACHMENT C

SMAQMD RULES THAT ARE "APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS" FOR CAMPBELL SOUP SUPPLY COMPANY

**SMAQMD RULES THAT ARE
 "APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS"
 FOR CAMPBELL SOUP SUPPLY COMPANY**

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	101	General Provisions and Definitions 09/03/1998 adoption	Yes - no related conditions are included in the permit because of general nature of the rule.
●	●	102	Circumvention 11/29/1983 adoption	Yes - no related conditions are included in the permit because of general nature of the rule.
●	●	103	Exceptions 11/29/1983 adoption	No - source does not operate the type of equipment described in this rule.
●	●	104	General Conformity 11/03/1994 adoption	No - the rule's purpose is to have the SMAQMD review federal conformity findings.
●	●	105	Emission Statement 09/05/1996 adoption	No - actual emissions of ROC and NOx are less than 25 tons/year.
●	●	107	Alternative Compliance	No - it is not a SIP approved rule.
●	●	108	Minor Violations	No - it is not a SIP approved rule.
●	●	201	General Permit Requirements 11/20/1984 adoption	Yes - no related conditions are included in the permit.
●	●	202	New Source Review 11/20/1984 adoption	Yes - related conditions are included in the permit.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
		203	Prevention of Significant Deterioration	No - it is not a SIP approved rule.
		204	Emission Reduction Credits	No - it is not a SIP approved rule.
		205	Community Bank and Priority Reserve Bank	No - it is not a SIP approved rule.
		206	Mobile and Transportation Source Emission Reduction Credits	No - it is not a SIP approved rule.
●	*	207	Title V Federal Operating Permit Program	Yes - related conditions are included in the permit. (* Although this is not a SIP approved rule it is applicable because it is part of the approved Title V Permit Program.)
		208	Acid Rain	No - it is not a SIP approved rule.
		209	Limiting Potential to Emit	No - it is not a SIP approved rule.
		210	Synthetic Minor Source Status	No - it is not a SIP approved rule.
		211	MACT at Major Sources of Hazardous Air Pollutants	No - it is not a SIP approved rule.
●	*	301	Stationary Source Permit Fees	Yes - related conditions are included in the permit. (* Although this is not a SIP approved rule it is applicable because it is part of the approved Title V Permit Program.)

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●		302	Hearing Board Fees	No - it is not a SIP approved rule.
		303	Agricultural Burning Permit Fees	No - it is not a SIP approved rule.
		304	Plan Fees	No - it is not a SIP approved rule.
		305	Environmental Document Preparation and Processing Fees	No - it is not a SIP approved rule.
		306	Air Toxics Fees	No - it is not a SIP approved rule.
●	●	307	Clean Air Act Fees 09/26/2002 adoption	Yes - no related conditions are included in the permit.
●	●	401	Ringelmann Chart 04/05/1983 adoption	Yes - related conditions are included in the permit.
●		402	Nuisance	No - it is not a SIP approved rule.
●	●	403	Fugitive Dust 11/29/1983 adoption	Yes - related conditions are included in the permit.
●	●	404	Particulate Matter 11/20/1984 adoption	Yes - related conditions are included in the permit.
●	●	405	Dust and Condensed Fumes 11/29/1983 adoption	Yes - related conditions are included in the permit.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	406	Specific Contaminants 11/29/1983 adoption	Yes - related conditions are included in the permit.
●	●	407	Open Burning 11/29/1983 adoption	Yes - no related conditions are included in the permit.
●	●	408	Incinerator Burning 11/29/1983 adoption	No - the source does not operate an incinerator.
●	●	409	Orchard Heaters 11/29/1983 adoption	No - the source does not operate orchard heaters.
●	●	410	Reduction of Animal Matter 11/29/1983 adoption	No - the source does not operate equipment for the reduction of animal matter.
●	●	411	Boiler NOx 08/23/2007 version	Yes - related conditions are included in the permit.
●	●	412	Stationary IC Engines at Major Stationary Sources of NOx 06/01/1995 adoption	Yes - related conditions are included in the permit.
●	●	413	Stationary Gas Turbines 03/24/2005 version	No - the source does not operate a gas turbine.
●	●	414	Natural Gas Fired Water Heaters 08/01/1996 adoption 03/25/2010 rule version is not SIP approved	Yes - The permit does not contain any related conditions because the rule targets the sale of water heaters, not the operation of water heaters

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	420	Sulfur Content of Fuels 11/29/1983 adoption	Yes - related conditions are included in the permit.
●	●	441	Organic Solvents 11/29/1983 adoption	No - the source is exempt from this rule because it is subject to SMAQMD Rule 451.
●	●	442	Architectural Coatings 09/05/1996 adoption 05/24/2001 rule version is not SIP approved	Yes - related conditions are included in the permit.
●	●	443	Leaks from Synthetic Organic Chemical and Polymer Manufacturing 09/05/1996 adoption	No - the source does not operate synthetic organic chemical or polymer manufacturing equipment.
●	●	444	Petroleum Solvent Dry Cleaning 11/29/1983 adoption	No - the source does not operate petroleum solvent dry cleaning equipment.
●	●	446	Storage of Petroleum Products 11/16/1993 adoption	No - the source only stores petroleum products in tanks that are exempt from the rule requirements (< 40,000 gallons).
●	●	447	Organic Liquid Loading 04/02/1998 adoption	No - the source does not operate organic liquid loading equipment.
●	●	448	Gasoline Transfer into Stationary Storage Containers 02/02/1995 adoption	No - the source does transfer gasoline into storage tanks subject to the rule requirements (≥250 gallons).
●	●	449	Transfer of Gasoline into Vehicle Fuel Tanks 09/26/2002 adoption	No - the source is exempt from this rule because it is exempt from SMAQMD Rule 448.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	450	Graphic Arts Operations 10/23/2008 adoption	No - the source does not operate a graphic arts process as defined in the rule
●	●	451	Surface Coating of Miscellaneous Metal Parts and Products 11/29/1983 adoption 10/28/2010 rule version is not SIP approved	Yes - no related conditions are included in the permit.
●	●	452	Can Coating 09/25/2008 adoption	No - the source does not operate can coating equipment.
●	●	453	Cutback and Emulsified Asphalt Paving Materials 11/29/1983 adoption	No - the source does not manufacture or apply cutback or emulsified asphalt paving materials.
●	●	454	Degreasing Operations 09/25/2008 adoption	No - the source uses exempt solvents as defined in the rule.
●	●	455	Pharmaceuticals Manufacturing 11/29/1983 adoption	No - the source does not manufacture pharmaceuticals.
●	●	456	Aerospace Coating Operations 09/05/1996 adoption	No - the source does not coat aerospace parts.
●	●	458	Large Commercial Bread Bakeries 09/05/1996 adoption	No - the source does not produce bread products.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	459	Automotive, Truck and Heavy Equipment Refinishing Operations 10/02/1997 adoption	No - the source does not refinish vehicles.
		460	Adhesives and Sealants	No - it is not a SIP approved rule.
●	●	463	Wood Products Coatings 09/25/2008 adoption	No - the source does not coat wood products.
●	●	464	Organic Chemical Manufacturing Operations 07/23/1998 adoption	No - the source does not manufacture organic chemicals.
		465	Polyester Resin Operations	No - it is not a SIP approved rule.
●	●	466	Solvent Cleaning 05/23/2002 adoption	No - the source does not perform solvent cleaning.
		485	Municipal Landfill Gas	No - it is not a SIP approved rule.
●	●	501	Agricultural Burning 11/29/1983 adoption	No - the source does not conduct agricultural burning.
●	●	601	Procedure before the Hearing Board	No - it is not a SIP approved rule.
●	●	602	Breakdown Conditions: Emergency Variance	No - it is not a SIP approved rule.
●	●	701	Emergency Episode Plan 05/27/1999 adoption	No - the source's actual emissions are less than 50 tons/year of ROC and NOx and less than 100 tons/year of CO and PM10.

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●		801	New Source Performance Standards	No - it is not a SIP approved rule. Note: there is an equivalent federal regulation.
		901	General Requirements	No - it is not a SIP approved rule. Note: there is an equivalent federal regulation.
		902	Asbestos	No - it is not a SIP approved rule. Note: there is an equivalent federal regulation.
		903	Mercury	No - it is not a SIP approved rule. Note: there is an equivalent federal regulation.
		904	Airborne Toxic Control Measures	No - it is not a SIP approved rule. Note: there are equivalent federal regulations for some of the listed ATCMs.
		1002	Fleet Inventory	No - it is not a SIP approved rule.
		1003	Reduced-Emission Fleet Vehicles/Alternative Fuels	No - it is not a SIP approved rule.
		1005	Mobile Source Emission Reduction Credits/Banking	No - it is not a SIP approved rule.
		1006	Transportation Conformity	No - it is not a SIP approved rule.