777 12th Street 3rd Floor SACRAMENTO METROPOLITAN Sacramento, CA 95814
AIR QUALITY
MANAGEMENT DISTRICT

PROPOSED
04-13-2010

STATEMENT OF BASIS FOR MINOR MODIFICATION OF TITLE V FEDERAL OPERATING PERMIT

Application No.:	TV2005-16-02
Date:	April 13, 2010
Reviewing Engineer:	Bruce Nixon

A. FACILITY INFORMATION:

FACILITY NAME: University of California, Davis Medical Center (UCDMC)

LOCATION: 4800 2nd Avenue, Suite 1500
Sacramento, CA 95817

MAILING ADDRESS: 4800 2nd Avenue, Suite 1500
Sacramento, CA 95817

RESPONSIBLE OFFICIAL: Shelton Duruisseau, Ph. D.
Senior Associate Director, Hospitals and Clinics
Executive Associate Director, External Affairs

CONTACT PERSON: Dennis Curry, Senior Superintendent
Plant Operations and Maintenance

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.

In addition to this Statement of Basis the information contained in the Statement of Basis for the 06-14-2006 Title V permit renewal (TV2005-16-01) is applicable to the facility.

C. PERMIT ACTIONS:

Previous Permit Actions

The following permit actions have occurred since the initial Title V Federal Operating Permit No. 1996-01-01 was issued:

Permit Action	Date Issued	Permit No.
Initial Title V Federal Operating Permit	06-14-2001	TV1999-16-01
1st Minor Modification	04-09-2002	TV1999-01-02
2nd Minor Modification	03-18-2003	TV1999-16-03
3rd Minor Modification	08-10-2004	TV1999-16-04
4th Minor Modification	07-11-2005	TV1999-16-05
1st Permit Renewal	06-14-2006	TV2005-16-01

Current Permit Action

This 1st Minor Modification to the 1st Permit Renewal will be assigned the following permit number: TV2006-16-02.

The specific changes to the Title V permit are described in Section E below.

D. FACILITY DESCRIPTION:

The University of California, Davis operates the UC Davis Medical Center in Sacramento. The UC Davis Medical Center is a health care provider for the community and a teaching hospital for the UC Davis School of Medicine.

The UC Davis Medical Center is located on 140 acres in central Sacramento, three miles from the state Capitol and 20 miles from the main UC Davis campus. The University established the Medical Center in 1973 to support the clinical and research missions of the then new UC Davis School of Medicine. Licensed for 528 beds and fully accredited, UC Davis Medical Center is one of the region's Level I comprehensive adult and pediatric trauma center.

Electrical power for the facility is generated from an onsite cogeneration central power plant. The plant uses a natural gas fueled gas turbine to mechanically generate electricity and captures the heat emitted by the gas turbine to produce steam for facility heating and cooling. In addition, four large natural gas (with emergency use diesel fuel) and eight small natural gas fueled boilers provide steam when the gas turbine capacity is exceeded or the gas turbine is out of service.

Emergency electrical power is provided by eight diesel fueled internal combustion engines driving electrical generators. Emergency water pumping for fire fighting is provided by one internal combustion engine driving a fire pump.

A gasoline dispensing facility is used to fuel vehicles used on and off site.

E. DESCRIPTION OF TITLE V PERMIT MODIFICATION:

1. Modify Boiler Nos. 1, 2, 3 and 4 to comply with the amended NOx requirements of SMAQMD Rule 411

Description of modification requested:

Related documents:

05-17-2007	Engineering Evaluation - A/C Nos. 20216 - 20219	(Attachment D)
05-29-2007	Authority to Construct - A/C Nos. 20216 - 20219	(Attachment E)
03-28-2008	Title V permit modification application	(Attachment C)

The modification is to SMAQMD Rule 201 Permit to Operate Nos. 18529 - 18532.

SMAQMD Rule 411 Boiler NOx was amended on 10-27-2005 and required that the 4 boilers operated by UCDMC be modified to reduce NOx emissions from 30 ppmvd at 3% O2 to 9 ppmvd at 3% O2. The amended SMAQMD Rule 411 required final compliance with the NOx limitation by 10-27-2009. UCDMC made the modifications to the 4 boilers and is in compliance with SMAQMD Rule 411.

UCDMC received SMAQMD Rule 201 Permit to Operate Nos. 20216 - 20219 for these modifications.

Equipment Modifications:

There are no additions or deletions to the equipment listed in the Title V permit.

Emission Modifications:

The daily limits for each of the 4 boilers will change as follows:

Pollutant	Maximum Allowable Emissions for Natural Gas Combustion (B) lb/day	
	Current Limit	Modified Limit
ROC	9.0	3.0
NOx	26.4	8.2
SO2	0.5	0.5
PM10	7.5	7.6
CO	56.5	54.0

The emission concentration limit for NOx will change from 30 ppmvd at 3% O2 to 9 ppmvd at 3% O2.

The emission concentration limit for CO will change from 100 ppmvd at 3% O2 to 96.6 ppmvd at 3% O2.

Basis for the Applicable Federally Enforceable Requirements:

SMAQMD Rule 201 General Permit Requirements
SMAQMD Rule 202 New Source Review
SMAQMD Rule 207 Title V - Federal Operating Permit Program
SMAQMD Rule 401 Ringelmann Chart
SMAQMD Rule 406 Specific Contaminants
SMAQMD Rule 411 Boiler NOx
SMAQMD Rule 420 Sulfur Content of Fuels

40 CFR 60 Subpart Dc NSPS for Small Industrial - Commercial - Institutional Steam Generating Units

Compliance Status:

UCDMC complies with the applicable federally enforceable requirements.

Category of Title V Permit Modification (see categories in Attachment B):

The modification of the emission limits for the 4 boilers does not meet any of the criteria describing a "Significant" Title V permit modification. The Title V permit modification also does not meet any of the criteria of an "Administrative Amendment" in SMAQMD Rule 207 Section 202.

Therefore, the permit modification is classified as a "minor" Title V permit modification under SMAQMD Rule 207 Section 220.

F. APPLICABLE FEDERALLY ENFORCEABLE GENERAL REQUIREMENTS AND EQUIPMENT SPECIFIC REQUIREMENTS:

Except as noted below, the Applicable Federally Enforceable General Requirements and Equipment Specific Requirements will remain the same as those described in the Statement of Basis for Title V permit No. TV2005-16-01. The requirements will not be repeated here (see Title V permit file for Applicable Federally Enforceable General Requirements and Equipment Specific Requirements).

The following Applicable Federally Enforceable Equipment Specific Requirements are those that are modified on the permit -

1. Boiler Nos. 1, 2, 3 and 4 at Central Plant
   Modified Condition Nos.: 1 and 3

   In addition all references to SMAQMD Rule 201 Permit to Operate numbers will be updated as follows. (The Permit to Operate numbers are for reference purposes only and are not federally enforceable.)

   P/O 18529 ---> P/O 20216
   P/O 18530 ---> P/O 20217
   P/O 18531 ---> P/O 20218
   P/O 18532 ---> P/O 20219

G. RECOMMENDATION:

1. Revise the Title V Federal Operating Permit as described in this Statement of Basis.

2. Send proposed Statement of Basis and proposed Title V permit to U.S. EPA Region 9 for their 45 day review period.

3. Publish a notice in the Sacramento Bee requesting public comments within a 30 day review period.

See proposed Title V Permit No. TV2006-01-02 for equipment descriptions and permit conditions.

Approved by: _____ Date: _____

ATTACHMENT A

SMAQMD RULES THAT ARE

"APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS"

FOR UCDMC

SMAQMD RULES THAT ARE
"APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS"
FOR UCDMC

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 version	**Yes** - no related conditions are included in the permit because of general nature of the rule.
●	●	102	Circumvention 11-29-1983 version	**Yes** - no related conditions are included in the permit because of general nature of the rule.
	●	103	Exceptions 11-29-1983 version	**No** - source does not operate the type of equipment described in this rule.
	●	104	General Conformity 11-03-1994 version	**No** - the rule's purpose is to have the SMAQMD review federal conformity findings.
●	●	105	Emission Statement 04-20-1993 version	**Yes** - related conditions are included in the permit.
		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 version	**Yes** - no related conditions are included in the permit because of the general nature of the rule.

SMAQMD RULES THAT ARE
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FOR UCDMC

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	202	New Source Review 11-20-1984 version	**Yes** - related conditions are included in the permit.
		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 SMAQMD Title V Permit Program.)
●		208	Acid Rain	**No** - it is not a SIP approved rule. *Note: there is an equivalent federal regulation.*
		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.

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Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
		211	MACT at Major Sources of Hazardous Air Pollutants	**No** - it is not a SIP approved rule.
		213	Federal Major Modifications	**No** - it is not a SIP approved rule.
		215	Agricultural Permit Requirements and New Agricultural Permit Review	**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 SMAQMD Title V Permit Program.)
●		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.

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Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	307	Clean Air Act Fees 09-26-2002 version	**Yes** - related conditions are included in the permit.
		310	Permit Fees - Agricultural Source	**No** - it is not a SIP approved rule
●	●	401	Ringelmann Chart 04-05-1983 version	**Yes** - related conditions are included in the permit.
●		402	Nuisance	**No** - it is not a SIP approved rule.
●	●	403	Fugitive Dust 11-29-1983 version	**Yes** - related conditions are included in the permit.
●	●	404	Particulate Matter 11-20-1984 version	**Yes** - related conditions are included in the permit.
	●	405	Dust and Condensed Fumes 11-29-1983 version	**No** - the source does not operate such a process.
●	●	406	Specific Contaminants 11-29-1983 version	**Yes** - related conditions are included in the permit.

SMAQMD RULES THAT ARE
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FOR UCDMC

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	407	Open Burning 11-29-1983 version	**Yes** - no related conditions are included in the permit because the source does not conduct open burning.
	●	408	Incinerator Burning 11-29-1983 version	**No** - the source does not operate an incinerator.
	●	409	Orchard Heaters 11-29-1983 version	**No** - the source does not operate orchard heaters.
	●	410	Reduction of Animal Matter 11-29-1983 version	**No** - the source does not operate equipment for the reduction of animal matter.
●	●	411	NOx from Boilers, Process Heaters and Steam Generators 10-27-2005 version	**Yes** - related conditions are included in the permit.
●	●	412	Stationary IC Engines at Major Stationary Sources of NOx 06-01-1995 version	**Yes** - related conditions are included in the permit.
	●	413	Stationary Gas Turbines 03-24-2005 version	**No** - the source does not operate gas turbines.

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Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
●	●	414	Natural Gas Fired Water Heaters 08-01-1996 version	**Yes** - related conditions are included in the permit.
		417	Wood Burning Appliances	**No -** it is not a SIP approved rule.
●	●	420	Sulfur Content of Fuels 11-29-1983 version	**Yes** - related conditions are included in the permit.
●	●	441	Organic Solvents 11-29-1983 version	**Yes** - no related conditions are included in the permit because of limited applicability.
●	●	442	Architectural Coatings 09-05-1996 version	**Yes** - related conditions are included in the permit.
	●	443	Leaks from Synthetic Organic Chemical and Polymer Manufacturing 09-05-1996 version	**No** - the source does not operate synthetic organic chemical or polymer manufacturing equipment.
	●	444	Petroleum Solvent Dry Cleaning 08-13-1981 version	**No** - the source does not operate petroleum solvent dry cleaning equipment.
	●	446	Storage of Petroleum Products 11-16-1993 version	**No** - the source does not store affected petroleum products.

SMAQMD RULES THAT ARE
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FOR UCDMC

Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
	●	447	Organic Liquid Loading 04-02-1998 version	**No** - the source does not operate organic liquid loading equipment.
	●	448	Gasoline Transfer into Stationary Storage Containers 02-02-1995 version	**Yes** - related conditions are included in the permit.
	●	449	Transfer of Gasoline into Vehicle Fuel Tanks 09-26-2002 version	**Yes** - related conditions are included in the permit.
	●	450	Graphic Arts Operations 12-05-1996 version	**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 version	**Yes** - no related conditions are included in the permit because of limited applicability.
	●	452	Can Coating 09-05-1996 version	**No** - the source does not operate a can coating process.
	●	453	Cutback and Emulsified Asphalt Paving Materials 11-29-1983 version	**No** - the source does not manufacture or apply cutback or emulsified asphalt paving materials.

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Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
	●	454	Degreasing Operations 04-03-1997 version	**No** - the source does not operate degreasers subject to this rule.
	●	455	Pharmaceuticals Manufacturing 11-29-1983 version	**No** - the source does not manufacture pharmaceuticals.
	●	456	Aerospace Coating Operations 09-05-1996 version	**No** - the source does not coat aerospace parts.
		457	Methanol Compatible Tanks	**No** - it is not a SIP approved rule.
	●	458	Large Commercial Bread Bakeries 09-05-1996 version	**No** - the source does not produce bread products.
	●	459	Automotive, Truck and Heavy Equipment Refinishing Operations 10-02-1997 version	**No** - the source does not refinish vehicles.
●		460	Adhesives and Sealants	**No** - it is not a SIP approved rule.
		463	Wood Products Coatings	**No** - it is not a SIP approved rule.

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Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
	●	464	Organic Chemical Manufacturing Operations 07-23-1998 version	**No** - the source does not manufacture organic chemicals.
		465	Polyester Resin Operations	**No** - it is not a SIP approved rule.
●		466	Solvent Cleaning	**No** - it is not a SIP approved rule.
		485	Municipal Landfill Gas	**No** - it is not a SIP approved rule.
		496	Large Confined Animal Facilities	**No** - it is not a SIP approved rule.
	●	501	Agricultural Burning 11-29-1983 version	**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 version	**No** - facility emissions are below applicability level.
●		801	New Source Performance Standards	**No** - it is not a SIP approved rule. *Note: there are equivalent federal regulations.*

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Rule is Applicable	Rule is SIP Approved	Rule No.	Rule Title	Is the Rule an "Applicable Federally Enforceable Requirement"?
		901	General Requirements	**No** - it is not a SIP approved rule. *Note: there are equivalent federal regulations.*
		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.

SMAQMD RULES THAT ARE "APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS" FOR UCDMC

ATTACHMENT B

Categories of Title V Permit Modifications in SMAQMD Rule 207

Category of Title V Permit Modification:

The following are the categories of Title V permit modifications as defined in SMAQMD Rule 207. The category of the Title V permit modification is important because it dictates the public and U.S. EPA noticing requirements. For each of the proposed permit modifications that are discussed following this section, the Title V permit modification category will be specified.

Category: "Significant" Title V permit modification

SMAQMD Rule 207 Section 233 defines a Title V permit modification as a "Significant" Title V permit modification if any of the following conditions are met:

233.1 Involves any modification under Section 112(g) of Title I (42 U.S.C. Section 412(g) of the Federal Clean Air Act, or under EPA regulations promulgated pursuant to Title I of the Federal Clean Air Act, including 40 CFR Part 51, 52, 60, 61 and 63.

233.2 Involves relaxation or significant change to existing monitoring, reporting or recordkeeping requirements in the Title V permit.

233.3 Involves case-by-case determination of an emission limit or other standard.

233.4 Involves a stationary source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis.

233.5 Attempts to set or change a Title V permit term or condition which allows a source to avoid an applicable federal requirement including:
a. A federally enforceable emission cap pursuant to Title I of the Federal Clean Air Act, or
b. An alternative HAP emission limit pursuant to Section 112(i)(5) (Section 42 U.S.C. Section 7412(j)(5) of the Federal Clean Air Act.

233.6 Involves a modification to a major stationary source which results in an increase in the potential to emit greater than: 25 tons per year of nitrogen oxides, 25 tons per year of volatile organic compounds, 40 tons per year of sulfur dioxide, 100 tons per year of carbon monoxide, or 15 tons per year of PM10 when aggregated with all other increases in potential to emit over the period of five consecutive years before the application for modification, and including the calendar year of the most recent application.

Category: "Administrative" Title V permit modification

SMAQMD Rule 207 Section 202 defines a Title V permit modification as an "Administrative" Title V permit amendment if any of the following conditions are met:

202.1 Corrects typographical errors.

202.2 Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the stationary source;

202.3 Requires more frequent monitoring or reporting by the responsible official of the stationary source.

202.4 Allows for change in ownership or operational control of a source where the Air Pollution Control Officer determines that no other change in the Title V permit is necessary, provided that a written agreement containing a specific date for transfer of Title V permit responsibility, coverage, and liability between the current and new responsible official has been submitted to the Air Pollution Control Officer.

202.5 Incorporates into the Title V permit the conditions of a preconstruction permit that is issued to an existing Title V stationary source through Rule 202, NEW SOURCE REVIEW and meeting the procedural requirements specified in Sections 401 through 408 of this Rule and the compliance requirements in Section 305 of this Rule.

Category: "Minor" Title V permit modification

SMAQMD Rule 207 Section 220 defines a Title V permit modification as an "Minor" Title V permit amendment if all of the following conditions are met:

220.1 Is not a significant Title V permit modification.

220.2 Is not an administrative Title V permit amendment.

220.3 Does not violate any applicable requirements which are federally enforceable.

ATTACHMENT C

Application for Title V Permit Modification

ATTACHMENT D

Engineering Evaluation for Authority to Construct

ATTACHMENT E

SMAQMD Rule 201 Authority to Construct