



South Coast Air Quality Management District

Form 400-A

Application For Permit To Construct and Permit To Operate

Mail Application To: P.O. Box 4944 Diamond Bar, CA 91765 Tel. (909) 396-3385 www.aqmd.gov

Section A: Operator Information

1. Business Name of Operator To Appear On The Permit: Orange County Sanitation District
2. Valid AQMD Facility ID (Available on Permit or Invoice Issued by AQMD): 017301
3. Owner's Business Name (only if different from Business Name of Operator):

Section B: Equipment Location

4. Equipment Location Address: For equipment operated at various locations in AQMD's jurisdiction, provide address of initial site
10844 Ellis Avenue
Street Address
Fountain Valley CA, 92708 - 7018
City State Zip Code
County: Los Angeles Orange San Bernardino Riverside
Contact Name: Terry Ahn
Contact Title: Regulatory Specialist Phone: (714) 593-7082
Fax: (714) 962-8379 E-Mail: tahn@ocsd.com

Section C: Permit Mailing Address

5. Permit and Correspondence Information:
[X] Check here if same as equipment location address
Street Address
City State Zip Code
Contact Name:
Contact Title: Phone:
Fax: E-Mail:

Section D: Application Type The facility is in RECLAIM Title V RECLAIM & Title V Program (please check if applicable)

6. Reason for Submitting Application (Select only ONE):
New Construction (Permit to Construct)
Equipment Operating Without A Permit or Expired Permit*
Administrative Change
Equipment On-Site But Not Constructed or Operational
Title V Application (Initial, Revisions, Modifications, etc.)
Compliance Plan
Facility Permit Amendment
Registration/Certification
Streamlined Standard Permit
Permitted Equipment Altered/ Modified Without Permit Approval*
Proposed Alteration/Modification to Permitted Equipment
Change of Condition For Permit To Operate
Change of Condition For Permit To Construct
Change of Location—Moving to New Site
Existing Or Previous Permit/Application Number:
7. Estimated Start Date of Operation/Construction (MM/DD/YYYY): 06/01/2009
8. Description of Equipment: Boiler, Hurst Boiler and Welding Co. or Equal; Maximum Rated Burner Fuel Input of 10.5 MMBtu/hr, Digester Gas (Primary) and Natural Gas (Secondary) Fueled, Natural Gas Fired Pilot
9. Is this equipment portable AND will it be operated at different locations within AQMD's jurisdiction? No Yes
10. For Identical equipment, how many additional applications are being submitted with this application? (Form 400-A required for each)
11. Are you a Small Business as per AQMD's Rule 102 definition? (10 employees or less and total gross receipts are \$500,000 or less, or a not-for-profit training center?) No Yes
12. Has a Notice of Violation (NOV) or a Notice To Comply (NC) been issued for this equipment? No Yes If yes, provide NOV/NC #:

Section E: Facility Business Information

13. What type of business is being conducted at this equipment location? Municipal Wastewater Treatment
14. What is your business primary NAICS Code (North American Industrial Classification System)? 221320
15. Are there other facilities in the SCAQMD jurisdiction operated by the same operator? No Yes
16. Are there any schools (K-12) within a 1000-ft. radius of the equipment physical location? No Yes

Section F: Authorization/Signature

17. Signature of Responsible Official: Michael D. Moore
18. Title: Manager, ECRA
19. Print Name: Mike D. Moore
20. Date: 12/22/08
Check List:
[X] Form(s) signed and dated by authorized official
[X] Supplemental Equipment Form (400-E-XX or 400-E-GEN)
[X] CEQA Form (400-CEQA) attached
[X] Payment for permit processing fee attached
Your application will be rejected if any of the above items are missing.

Table with columns: AQMD USE ONLY, APPLICATION/TRACKING #, TYPE, EQUIPMENT CATEGORY CODE, FEE SCHEDULE, VALIDATION, ENG. DATE, ASSIGNMENT, CHECK/MONEY ORDER, AMOUNT, Tracking #

Handwritten note: cr 77905

**South Coast
Air Quality Management District**

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

March 16, 2012

Lisa Rothbart, P. E.
Environmental Supervisor
Environmental Compliance Division
Orange County Sanitation District (OCSD)
10844 Ellis Avenue
Fountain Valley, CA 92708-7018

RE: Extension for Permit to Construct A/N 494460 – Hurst Boiler, rated at 10.5 MMBTU/HR heat input. Orange County Sanitation District (OCSD), Facility ID # 017301.

Dear Ms. Rothbart:

The South Coast Air Quality Management District (AQMD) has received your letter, dated March 5, 2012, requesting an extension for the above listed Permit to Construct (A/N 494460). The letter indicated completion of construction related activities since the commencement of the project. Based on projected schedule for completion of the remaining items, OCSD estimated that equipment shall be installed and ready for field verification by end of the first quarter in 2013. For the continued construction progress and the planned activities mentioned in the letter, the permit to construct, issued under A/N 494460, is granted extension until **March 15, 2013** per Rule 205.

Please be advised that as per Rule 202, upon completion of equipment construction and notification to AQMD before using the equipment, permit to construct shall serve as a temporary permit for operation until the permit to operate is granted or denied. Please note that the equipment start-up date is considered the date when equipment is first time turned on, including equipment field verification and functional and reliability testing.

If you have any questions, please contact Gaurang Rawal, Air Quality Engineer, at (909) 396-2543 or grawal@aqmd.gov.

Sincerely,



Charles Tupac, P.E.
AQAC Supervisor
Waste Management and Bulk Terminals Permitting

CT: GCR
cc: AQMD Compliance
✓A/N 494460 File



ORANGE COUNTY SANITATION DISTRICT

We protect public health and the environment by providing effective wastewater collection, treatment, and recycling.

March 5, 2012

Charles Tupac
Toxics and Waste Management
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, CA 91765

SUBJECT: Extension Request for Permit-to-Construct A/N 494460, Hurst Boiler Installation at Orange County Sanitation District (OCSD) Reclamation Plant No. 1 (Facility ID No. 017301)

In accordance with SCAQMD Rule 205, we hereby submit a written request for an extension of time to complete fabrication and construction of the new Hurst Boiler, Model S5-250-125W equipped with a low-NOx burner, Model NVC8-G-30, to be located at OCSD's Reclamation Plant No. 1 in Fountain Valley.

A number of milestones have been accomplished since the commencement of this project including completion of engineering design, grading and construction of the boiler foundation slab, installation of the pumps, and 90% construction completion of the water and gas lines. Although we have made a continued progress toward project completion, construction activities, similar to those listed below, remain to be completed thru project close-out which is planned for 2013.

- Factory demonstration testing;
- Boiler system delivery and structural installation (planned for fourth-quarter 2012);
- Electrical and instrumentation installation;
- 10% water and gas system piping and final connections; and
- Field verification testing (planned for first-quarter 2013).

Once the aforementioned structural tasks are accomplished during calendar year 2012 as presently projected, the system will undergo a series of field verification tests including functional and reliability acceptance testing, and operational readiness testing to validate performance metrics of the unit as specified.

We believe continued progress has been made on the project, and we request that the extension for the subject permit be granted thru March 15, 2013. Should you have any questions and/or comments with respect to the subject request, please contact me at (714) 593-7405 or Randa AbuShaban of our staff at (714) 593-7413.

Lisa Rothbart, P.E.
Environmental Supervisor

RA:LR:jb

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cc: V. Kogan T. Ahn R. AbuShaban G. Rawal (SCAQMD)



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South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

January 18, 2011

Lisa Rothbart
Environmental Supervisor
Environmental Compliance & Regulatory Affairs Manager
Orange County Sanitation District (OCSD)
10844 Ellis Avenue
Fountain Valley, CA 92708-7018

RE: Extension for Permit to Construct A/N 494460 – Hurst Boiler, rated at 10.5 MMBTU/HR heat input. Orange County Sanitation District (OCSD), Facility ID # 017301.

Dear Ms. Rothbart:

The South Coast Air Quality Management District (AQMD) has received your letter, dated January 6, 2010, requesting an extension for the above listed Permit to Construct (A/N 494460). The letter states that since commencement of the project, OCSD has completed engineering design and granting of the contract for excavation and grading of the proposed site, and construction and installation of the equipment. As we understand that structural construction and equipment installation completion is expected around fourth quarter of 2011. For the continued construction progress and the planned activities mentioned in the letter, the permit to construct, issued under A/N 494460, is hereby granted extension until **March 15, 2012** per Rule 205.

Please be advised that as per Rule 202, upon completion of equipment construction and notification to AQMD before using the equipment, permit to construct shall serve as a temporary permit for operation until the permit to operate is granted or denied. Please note that the equipment start-up date is considered the date when equipment is first time turned on, including equipment field verification and functional and reliability testing.

If you have any questions, please contact Gaurang Rawal, Air Quality Engineer, at (909) 396-2543 or grawal@aqmd.gov.

Sincerely,

Charles Tupac, P.E.
AQAC Supervisor
Waste Management and Bulk Terminals Permitting

CT: GCR
cc: AQMD Compliance
A/N 494460 File



ORANGE COUNTY SANITATION DISTRICT

We protect public health and the environment by providing effective wastewater collection, treatment, and recycling.

January 6, 2011

Charles Tupac
Toxics and Waste Management
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, CA 91765

SUBJECT: Extension Request for Permit-to-Construct A/N 494460, Hurst Boiler Installation at Orange County Sanitation District (OCSD) Reclamation Plant No. 1, Facility ID No. 017301.

In accordance with SCAQMD Rule 205, we hereby submit a written request for an extension of time to complete fabrication and construction of the new Hurst Boiler, Model S5-250-125W equipped with a low-NOx burner, Model NVC8-G-30, to be located at OCSD's Reclamation Plant No. 1 in Fountain Valley.

A number of milestones have been accomplished since the commencement of this project including completion of engineering design, granting of the contract award to J.R. Filanc Construction to complete the installation and construction activities, and the excavation and grading of the proposed site in preparation for the installation of the new boiler. However, a majority of the planned construction activities, similar to those listed below, still remains.

- Boiler system procurement and fabrication;
- Factory demonstration testing;
- Boiler system delivery and structural installation; and
- System piping and final connections.

Once the aforementioned structural tasks are accomplished during fourth-quarter 2011 as projected, the system will undergo a series of field verification tests; including functional and reliability acceptance testing, and Operational Readiness Testing; to validate performance metrics of the unit as specified. Overall, the construction phase of this project is planned to close-out during first-quarter 2012.

Serving
Anaheim
Brea
Buena Park
Cypress
Fountain Valley
Fullerton
Garden Grove
Huntington Beach
Irvine
La Habra
La Palma
Los Alamitos
Newport Beach
Orange
Placentia
Santa Ana
Seal Beach
Stanton
Tustin
Villa Park
Yorba Linda
Costa Mesa
Sanitary District
Midway City
Sanitary District
Irvine Ranch
Water District
County of Orange



recycled paper



Charles Tupac
Page 2
January 6, 2011

We believe continued progress has been made on the project, and we request that the extension for the subject permit be granted. Should you have any questions and/or comments with respect to the subject request, please contact me at (714) 593-7405 or Randa AbuShaban of our staff at (714) 593-7413.

A handwritten signature in cursive script, appearing to read "Lisa Rothbart", is written over a horizontal line.

Lisa Rothbart
Environmental Supervisor
Environmental Compliance and Regulatory Affairs Division

LR:RA:sa

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cc: V. Kogan
T. Ahn
R. AbuShaban
G. Rawal (SCAQMD)



ORANGE COUNTY SANITATION DISTRICT

December 16, 2008

10844 Ellis Avenue
Fountain Valley, CA
92708-7018

Mailing Address
P.O. Box 8127
Fountain Valley, CA
92728-8127

www.ocsd.com

Phone
(714) 962-2411

Fax
(962) 0356

Permit Services
South Coast Air Quality Management District
21865 E. Copley Drive
Diamond Bar, CA 91765-4182

Subject: Permit Application for Installation of Low NOx Hot Water Boiler at
OCSD's Plant No. 1 (OCSD Job NO. P1-100)

The purpose of this letter is to submit a permit application for the installation of a new low NOx hot water boiler at Orange County Sanitation District's Wastewater Treatment Plant No. 1. The new boiler will provide additional heating capacity for the existing anaerobic sludge digestion system.

The new boiler will have maximum rated heat capacity of 10.5 million Btu per hour and be designed to operate with the digester gas as the primary fuel and natural gas as the secondary fuel. The boiler emission controls will be designed for NOx concentration of 15 ppmv and 9 ppmv when fueled with digester gas and natural gas, respectively.

Enclosed with this letter are:

- SCAQMD Form 400-A
- SCAQMD Form 400-CEQA
- SCAQMD Form 400-E-9a
- SCAQMD Form 400-PS
- Supplemental Information
- Check for the permit processing fee in the amount of \$12,939.58

If you have any questions or require further information, please contact Terry Ahn at (714) 593-7082 or tahn@ocsd.com.

Michael D. Moore
Manager Environmental Compliance and Regulatory Affairs

Serving
Anaheim
Brea
Buena Park
Cypress
Fountain Valley
Fullerton
Garden Grove
Huntington Beach
Irvine
La Habra
La Palma
Los Alamitos
Newport Beach
Orange
Placentia
Santa Ana
Seal Beach
Stanton
Tustin
Villa Park
Yorba Linda
Costa Mesa
Sanitary District
Midway City
Sanitary District
Irvine Ranch
Water District
County of Orange



Permit Services
Page 2
December 16, 2008

MM/TA/jb

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Enclosure(s)

c: T. Ahn
V. Kogan
Gaurang Rawal (SCAQMD)

Beat 51070/sch.F



Cleaning the air that we breathe...



Below are the permit fees we have calculated based on the information you have entered. To complete the permit process, please click the print button to print the Fee Sheet and submit a signed check for the Total amount due along with your application package.

Thank you for using AQMD's online Fee Calculator!

Fee Sheet

[Restart Application Process](#) [Print](#)

Facility Information

[Edit](#)

Name: ID: 017301

Address:

Operation Type: Manufacturing Facility

Number of Employees:

Annual Revenue: \$

Prior Permit?: Yes

Add Applications

[Add](#)

Permit Unit

Boiler, Landfill/Digester Gas (>10 MMBTU/hr) \$12,939.58

Summary of Subtotals

Permit Fees \$12,939.58

Expedited Processing Fees \$0.00

Higher Fees \$0.00

Small Business Discount \$0.00

Fees calculated based on current fiscal year (July 1st - June 30th).
Fee calculation date: November, 19 2008.

Grand Total: \$12,939.58

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21865 Copley Dr, Diamond Bar, CA 91765 - (909) 396-2000 - (800) CUT-SMOG (288-7664)



South Coast Air Quality Management District

Form 400-CEQA

California Environmental Quality Act (CEQA) Applicability

Mail Application To:
P.O. Box 4944
Diamond Bar, CA 91765

Tel: (909) 396-3385

www.aqmd.gov

The SCAQMD is required by state law, the California Environmental Quality Act (CEQA), to review discretionary permit project applications for potential air quality and other environmental impacts. This form is a screening tool to assist the SCAQMD in clarifying whether or not the project has the potential to generate significant adverse environmental impacts that might require preparation of a CEQA document [CEQA Guidelines §15060(a)].² Refer to the attached instructions for guidance in completing this form.³ For each Form 400-A application, also complete and submit one Form 400-CEQA. If submitting multiple Form 400-A applications for the same project at the same time, only one 400-CEQA form is necessary for the entire project. If you need assistance completing this form, contact Lori Inga at (909) 396-3109.

FACILITY INFORMATION	
Business Name of Operator to Appear on the Permit: Orange County Sanitation District	Facility ID (6-Digit): 017301
Project Description: Installation of low NOx hot water boiler to provide additional hot water heating capacity for the Anaerobic Sludge Digestion process at Orange County Sanitation District's Plant No. 1 (OCS D Job No. P1-100)	

REVIEW FOR EXEMPTION FROM FURTHER CEQA ACTION			
Check "Yes" or "No" as applicable			
	Yes	No	Is this application for:
A.	<input type="radio"/>	<input checked="" type="radio"/>	A CEQA and/or NEPA document previously or currently prepared that specifically evaluates this project? If yes, a permit cannot be issued until a Final CEQA document and Notice of Determination is submitted.
B.	<input type="radio"/>	<input checked="" type="radio"/>	A request for a change of permittee only (without equipment modifications)?
C.	<input type="radio"/>	<input checked="" type="radio"/>	Equipment certification or equipment registration (qualifies for Rule 222)?
D.	<input type="radio"/>	<input checked="" type="radio"/>	A functionally identical permit unit replacement with no increase in rating or emissions?
E.	<input type="radio"/>	<input checked="" type="radio"/>	A change of daily VOC permit limit to a monthly VOC permit limit?
F.	<input type="radio"/>	<input checked="" type="radio"/>	Equipment damaged as a result of a disaster during state of emergency?
G.	<input type="radio"/>	<input checked="" type="radio"/>	A Title V (i.e., Regulation XXX) permit renewal (without equipment modifications)?
H.	<input type="radio"/>	<input checked="" type="radio"/>	A Title V administrative permit revision?
I.	<input type="radio"/>	<input checked="" type="radio"/>	The conversion of an existing permit into an initial Title V permit?
If "Yes" is checked for any question above, your application does not require additional evaluation for CEQA applicability. Skip to page 2, "SIGNATURES" and sign and date this form.			

REVIEW OF IMPACTS WHICH MAY TRIGGER CEQA			
Complete Sections I-VI by checking "Yes" or "No" as applicable. To avoid delays in processing your application(s), explain all "Yes" responses on a separate sheet and attach it to this form.			
	Yes	No	Section I - General
1.	<input type="radio"/>	<input checked="" type="radio"/>	Has this project generated any known public controversy regarding potential adverse impacts that may be generated by the project? Controversy may be construed as concerns raised by local groups at public meetings; adverse media attention such as negative articles in newspapers or other periodical publications, local news programs, environmental justice issues, etc.
2.	<input type="radio"/>	<input checked="" type="radio"/>	Is this project part of a larger project?
Section II - Air Quality			
3.	<input type="radio"/>	<input checked="" type="radio"/>	Will there be any demolition, excavating, and/or grading construction activities that encompass an area exceeding 20,000 square feet?
4.	<input type="radio"/>	<input checked="" type="radio"/>	Does this project include the open outdoor storage of dry bulk solid materials that could generate dust? If Yes, include a plot plan with the application package.

¹ A "project" means the whole of an action which has a potential for resulting in physical change to the environment, including construction activities, clearing or grading of land, improvements to existing structures, and activities or equipment involving the issuance of a permit. For example, a project might include installation of a new, or modification of an existing internal combustion engine, dry-cleaning facility, boiler, gas turbine, spray coating booth, solvent cleaning tank, etc.

² To download the CEQA guidelines, visit http://ceres.ca.gov/env_law/state.html.

³ To download this form and the instructions, visit <http://www.aqmd.gov/ceqa> or <http://www.aqmd.gov/permit>

	Yes	No	
5.	<input type="radio"/>	<input checked="" type="radio"/>	Would this project result in noticeable off-site odors from activities that may not be subject to SCAQMD permit requirements? For example, compost materials or other types of greenwaste (i.e., lawn clippings, tree trimmings, etc.) have the potential to generate odor complaints subject to Rule 402 – Nuisance.
6.	<input type="radio"/>	<input checked="" type="radio"/>	Does this project cause an increase of emissions from marine vessels, trains and/or airplanes?
7.	<input type="radio"/>	<input checked="" type="radio"/>	Will the proposed project increase the QUANTITY of hazardous materials stored aboveground onsite or transported by mobile vehicle to or from the site by greater than or equal to the amounts associated with each compound on the attached Table 1?⁴
Section III – Water Resources			
8.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project increase demand for water at the facility by more than 5,000,000 gallons per day? The following examples identify some, but not all, types of projects that may result in a "yes" answer to this question: 1) projects that generate steam; 2) projects that use water as part of the air pollution control equipment; 3) projects that require water as part of the production process; 4) projects that require new or expansion of existing sewage treatment facilities; 5) projects where water demand exceeds the capacity of the local water purveyor to supply sufficient water for the project; and 6) projects that require new or expansion of existing water supply facilities.
9.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project require construction of new water conveyance infrastructure? Examples of such projects are when water demands exceed the capacity of the local water purveyor to supply sufficient water for the project, or require new or modified sewage treatment facilities such that the project requires new water lines, sewage lines, sewage hook-ups, etc.
Section IV – Transportation/Circulation			
10.			Will the project result in (Check all that apply):
	<input type="radio"/>	<input checked="" type="radio"/>	a. the need for more than 350 new employees?
	<input type="radio"/>	<input checked="" type="radio"/>	b. an increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round-trips per day?
	<input type="radio"/>	<input checked="" type="radio"/>	c. increase customer traffic by more than 700 visits per day?
Section V – Noise			
11.	<input type="radio"/>	<input checked="" type="radio"/>	Will the project include equipment that will generate noise GREATER THAN 90 decibels (dB) at the property line?
Section VI – Public Services			
12.			Will the project create a permanent need for new or additional public services in any of the following areas (Check all that apply):
	<input type="radio"/>	<input checked="" type="radio"/>	a. Solid waste disposal? Check "No" if the projected potential amount of wastes generated by the project is less than five tons per day.
	<input type="radio"/>	<input checked="" type="radio"/>	b. Hazardous waste disposal? Check "No" if the projected potential amount of hazardous wastes generated by the project is less than 42 cubic yards per day (or equivalent in pounds).
REMINDER: For each "Yes" checked in the sections above, attach all pertinent information including, but not limited to, estimated quantities, volumes, weights, etc.			
SIGNATURES			
I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I UNDERSTAND THAT THIS FORM IS A SCREENING TOOL AND THAT THE SCAQMD RESERVES THE RIGHT TO CONSIDER OTHER PERTINENT INFORMATION IN DETERMINING CEQA APPLICABILITY.			
SIGNATURE OF RESPONSIBLE OFFICIAL OF FIRM:		TITLE OF RESPONSIBLE OFFICIAL OF FIRM:	
<i>Michael D. Moore</i>		Manager, ECRA	
TYPE OR PRINT NAME OF RESPONSIBLE OFFICIAL OF FIRM:	RESPONSIBLE OFFICIAL'S TELEPHONE NUMBER:	DATE Signed:	
Mike D. Moore	(714) 5937-450	12/16/08	
SIGNATURE OF PREPARER, IF PREPARED BY PERSON OTHER THAN RESPONSIBLE OFFICIAL OF FIRM:		TITLE OF PREPARER:	
<i>Terry Ahn</i>		Regulatory Specialist	
TYPE OR PRINT NAME OF PREPARER:	PREPARER'S TELEPHONE NUMBER:	DATE Signed:	
Terry Ahn	(714) 5937-082	12/15/08	

THIS CONCLUDES FORM 400-CEQA. INCLUDE THIS FORM AND THE ATTACHMENTS WITH FORM 400-A.

⁴ Table 1 – Regulated Substances List and Threshold Quantities for Accidental Release Prevention can be found in the Instructions for Form 400-CEQA.



South Coast Air Quality Management District

FORM 400-E-9a

EXTERNAL COMBUSTION ENGINE BOILER

Mail Application To:
SCAQMD, P.O. Box 4944
Diamond Bar, CA 91765

Tel: (909) 396-3385

www.aqmd.gov

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Form 400A, Form CEQA, Plot Plan and Stack Form

Permit to be issued to (Business name of operator to appear on permit):
Orange County Sanitation District

Street location where the equipment will be operated (for equipment which will be moved to various locations in AQMD's jurisdiction, please list the initial location site):
10844 Ellis Avenue, Fountain Valley, CA. 92708

Section A: EQUIPMENT DESCRIPTION

Boiler	Manufacturer: Hurst Boiler and Welding Co. or Equal	Model:
	Max. Heat Input Rating (Higher Heating Value - HHV): 10,500,000 BTU per hour	Serial No:
	Type: <input type="radio"/> Water-tube (ONLY Check if Fuel Type is Natural Gas or Propane) <input checked="" type="radio"/> Fire-tube	
Burner	Manufacturer: Power Flame Inc. or Equal	Model:
	Number of burners: 1	Rating of each burner (HHV): 10,500,000 Btu/hr
	Type: <input checked="" type="radio"/> Low NOx (please attach manufacturer's specifications) <input type="radio"/> Other:	
Blower	HP: 10,000	
Fuel type	Primary Fuel: <input type="radio"/> Natural Gas <input type="radio"/> LPG <input type="radio"/> Refinery Gas* <input checked="" type="radio"/> Digester Gas* <input type="radio"/> Landfill Gas* <input type="radio"/> Other* : _____ <input type="radio"/> Fuel Oil (Specify Grade): _____	If Digester or Landfill Gas, List Higher Heating Value: 600
	Secondary or stand-by fuel: <input checked="" type="radio"/> Natural Gas <input type="radio"/> LPG <input type="radio"/> Refinery Gas* <input type="radio"/> Digester Gas* <input type="radio"/> Landfill Gas* <input type="radio"/> Other* : _____ <input type="radio"/> Fuel Oil (Specify Grade): _____	If Digester or Landfill Gas, List Higher Heating Value: _____
	*If Digester Gas, Landfill Gas, Refinery Gas, and/or Other are checked, attach fuel analysis indicating higher heating value and sulfur content.	
Control	Type of Controls (check all that apply):	
	<input checked="" type="checkbox"/> Low NOx Burner	<input type="checkbox"/> Oxygen Trim
	<input type="checkbox"/> Fuel Gas Recirculation	<input type="checkbox"/> CO Catalyst ¹
	<input type="checkbox"/> Selective Catalytic Reduction (SCR) ¹	<input type="checkbox"/> Other (specify): _____
	<input type="checkbox"/> Thermal DeNOx (Selective Non-Catalytic Reduction, SNCR) ¹	
¹ A separate permit is required, please see Form 400-E-G1 for instructions.		
Fuel usage	Average Load: _____ %	OR Average Firing Rate (HHV): 7.60 MMBTU/hr

Section B: PROCESS DESCRIPTION

Operating Parameters	Turn down ratio: 4.000	Percent excess air: 20.00 %	
Operating Schedule	Normal: 24 hours/day	7 days/week	26 weeks/yr.
	Maximum: 24 hours/day	7 days/week	52 weeks/yr.

Section C: APPLICANT CERTIFICATION STATEMENT I hereby certify that all information contained herein and information submitted with this application is true and correct.

SIGNATURE OF PREPARER:	TITLE OF PREPARER: Regulatory Specialist	
CONTACT PERSON FOR INFORMATION ON THIS EQUIPMENT: Terry Ahn	CONTACT PERSON'S TELEPHONE NUMBER: (714) 593-7082	DATE SIGNED:

CONFIDENTIAL INFORMATION
Under the California Public Records Act, all information in your permit application will be considered a matter of public record and may be disclosed to a third party. If you wish to keep certain items as confidential, please complete the following steps:
(a) Make a copy of any page containing confidential information blanked out. Label this page "public copy."
(b) Label the original page "confidential." Circle all confidential items on the page.
(c) Prepare a written justification for the confidentiality of each confidential item. Append this to the confidential copy.



South Coast Air Quality Management District
FORM 400-E-9
Engineer Report

Data	A/N	
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GIVEN

RATING: 10,500,000 btu/hr.

HHV: 600 btu/cu. ft.

FUEL USAGE:

17500 cu.ft./hr.

420000 cu.ft./day

126000 cu.ft./mo.

OPERATING SCHEDULE:

24 hrs./day

7 days/wk.

30 days/mo.

52 wks./yr.

364 dys./yr.

DGP

Calculations							
	EF	EF	HOURLY	DAILY	30 DAY AVE.	30 DAY NSR	ANNUAL
	lbs/mmf	lb./mmbtu	lbs./hr.	lbs./day	lbs./day	lbs./day	lbs./yr.
ROG	7	0.0122	0.1281	3.0744	3.1062	3	1119.0816
NOx /	30 ✓	0.0349	0.3665	8.7960	8.8869 ✓	9	3201.7440
SOx	40 ppm	0.0628	0.6594	15.8256	15.9891	16	5760.5184
CO	100 ppm	0.0708	0.7434	17.8416	18.0260	18	6494.3424
PM	7.5	0.0130	0.1365	3.2760	3.3099	3	1192.4640
PM10	7.5	0.0130	0.1365	3.2760	3.3099	3	1192.4640



South Coast Air Quality Management District

FORM 400-PS

PLOT PLAN AND STACK INFORMATION FORM

Mail Application To:
 SCAQMD
 P.O. Box 4944
 Diamond Bar, CA 91765
 Tel: (909) 396-3365
www.aqmd.gov

This form must be accompanied by a completed Application for a Permit to Construct/Operate -Form 400A and Form 400-CEQA

Permit to be issued to (Business name of operator to appear on permit):
Orange County Sanitation District

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site):
10844 Ellis Avenue, Fountain Valley, CA. 92708 Fixed Location Various Locations

SECTION A: LOCATION DATA

Plot Plan Please attach a site map for the project. Identify and locate the proposed equipment on the property. A copy of the appropriate Thomas Brothers page that shows the location, or a drawing or sketch that show the major street and identifies the location of the equipment is acceptable.

Location of School Nearby Is the facility located within a 1/4 mile radius (1,320 feet) of the outer boundary of a school?
 Yes No. If yes, please provide name(s) of school(s) below.

School Name	School Address	Distance from stack or equipment vent to the outer boundary of the school.

Note: Per Section 42301.9 of the California Health and Safety Code, a "school" means any public or private school used for purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in

Population Density Urban (area of dense population) Rural (area of sparse population)

Zoning Classification Mixed Use Residential Commercial Zone (M-U) Service and Professional Zone (C-S) Medium Commercial (C-3)
 Heavy Commercial (C-4) Commercial Manufacturing (C-M)

SECTION B: EMISSION RELEASE PARAMETERS - STACKS, VENTS

Stack Data

Stack Height: 42.00 feet (height above ground level)* What is the height of the closest building nearest the stack? 30.00 feet

Stack Inside Diameter: 18.000 inches Stack Flow: 3230.00 acfm Stack Temperature: 360.00 °F

Rain Cap Present: Yes No Stack Orientation: Vertical Horizontal

* If the stack height is less than 2.5 times the closest building height (H), please provide information on any building within 5xH distance from the stack(attach additional sheet if necessary)

Building #/name:	Building #/name:
<u>Digester No. 8</u>	<u>Digester No. 11</u>
Building Height: <u>30.00</u> feet	Building Height: <u>30.00</u> feet
Building Width: <u>90.00</u> feet	Building Width: <u>110.00</u> feet
Building Length: <u>90.00</u> feet	Building Length: <u>110.00</u> feet

Receptor Distance from equipment stack or roof vents/openings

Distance to nearest residence 700.00 feet or 213 m meters Distance to nearest business 1100.0 feet or 335 meters

Building Information

Are the emissions released from vents and/or openings from the building? Yes No

If yes, please provide:

Building height above ground level: _____ ft. Building _____ length ft. or _____ Total square footage of building where the source of the emissions is located.
 dimensions: _____ width ft.

SECTION C: APPLICANT CERTIFICATION STATEMENT

I hereby certify that all information contained herein and information submitted with this application is true and correct.

SIGNATURE OF PREPARER: 	TITLE OF PREPARER: Regulatory Specialist	PREPARER'S TELEPHONE NUMBER: (714) 593-7082
CONTACT PERSON FOR INFORMATION ON THIS EQUIPMENT: Terry Ahn	CONTACT PERSON'S TELEPHONE NUMBER: (714) 593-7082	PREPARER'S E-MAIL ADDRESS: tahn@ocsd.com
E-MAIL ADDRESS: tahn@ocsd.com	CONTACT PERSON'S FAX NUMBER: (714) 962-8379	DATE SIGNED: <u>12/15/08</u>

CONFIDENTIAL INFORMATION

Under the California Public Records Act, all information in your permit application will be considered a matter of public record and may be disclosed to a third party. If you wish to keep certain items as confidential, please complete the following steps:

- Make a copy of any page containing confidential information blanked out. Label this page "public copy."
- Label the original page "confidential." Circle all confidential items on the page.
- Prepare a written justification for the confidentiality of each confidential item. Append this to the confidential copy.

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TYPICAL COMPOSITION OF OCSD DIGESTER GAS

Compound	Average % by volume (or ppm where noted))
Methane	61-64
Carbon Dioxide	34-37
Nitrogen and Nitrogen Compounds	0.83
Oxygen	0.17
Non-Methane, Non-Ethane Organics	0.28
Hydrogen Sulfide	20-40 ppm
Reduced Sulfur Compounds (Mercaptan, Carbon Disulfide, etc.)	0.1-0.5 ppm
Chlorine Compounds (Benzene, Toluene, Xylenes, Dichlorobenzene)	1-10 ppm
Siloxanes	1-10 ppm
Metals (arsenic, sodium, lead, iron)	Traces (less than 0.01 ppm)

Supplemental Information

Installation of New Low NOx Hot Water Boiler at Plant No. 1 (OCSD Job No. P1-100)

Project Overview

The installation of a new low NOx hot water boiler at Plant No.1 is a part of OCSD's Capital Improvement Project Job No. P1-100 involves rehabilitating existing anaerobic sludge digestion system and the installation of the new boiler which will provide additional heating capacity for the system.

Process Description and Design Criteria

The hot water boiler will be designed to operate with either digester gas or natural gas fuel. The alternative natural gas fuel will be provided from the service main owned by The Gas Company. The pilot will be designed for operating on natural gas only.

The boiler emission controls will be designed for NOx concentration of 9 ppmv and 15 ppmv for natural gas and digester gas, respectively. Based on historical data at OCSD Plant No. 1, the digester gas heat value averages approximately 600 BTU/ft³.

The boiler will use a free standing exhaust stack to discharge combustion gases produced by the boiler. The stack will be 18-inches diameter with the outlet located approximately 42 feet above finished grade.

The following table and the attached Drawing 1M1006 provide specific details of the mechanical design of the new boiler.

Design Criteria	Value
Boiler Horsepower (Nominal)	250 HP
Minimum Boiler Output	8,369,000 Btu/hr
Rated Burner Fuel Input	10,500,000 Btu/hr
Design Pressure Rating	125 psig
Boiler Water Flow	250 gpm
Stack Emissions – Digester Gas: NOx (Max.)	15 ppm ✓
Stack Emissions – Natural Gas: NOx (Max.)	9 ppm ✓
Overall Dimensions (not to exceed)	228 L by 88 W inches
Vent Stack - Diameter	18 inches
Vent Stack – Height (above grade)	42 feet

Operating Schedule

The boiler will normally operate 24 hours per day, 7 days per week, and 26 weeks per year. The maximum operating schedule is 24 hours per day, 7 days per week, and 52 weeks per year

Project Location

The new boiler will be installed adjacent to Anaerobic Digester Nos. 8 and 11, on top of Tunnel No. 9. The attached Drawings 0G0001, 0G1001, and 1C1003 provide the location of the boiler.

Project Schedule

The Project P1-100 construction is scheduled to begin in mid-2009 and completion of construction is presently scheduled for the end of year in 2012.

Design Drawings

The following drawings are provided:

Description	Drawing Number
General Cover Sheet and Location Plan	0G0001
General Work Location Plan	0G1001
Civil Site Plan	0C1003
Mechanical Hot Water Boiler Plan & Sections	1M1006

Emissions Estimation

Estimated Emissions of Criteria Pollutants

The estimated criteria pollutant emissions from the new boiler are presented in Table 1 below. These emissions represent the maximum operating schedule of 24 hrs/day and 365 days per year. The emission factors used to calculate the emissions were obtained from the SCAQMD's Emission Fees Report Program. For NOx emissions, see SCAQMD Form 400-E-9a.

Table 1. Summary of Criteria Pollutant Emissions from the Boiler (for Digester Gas)

Compound	EF (lbs/mmcf)	Maximum Uncontrolled Emissions	
		(lbs/yr)	(lbs/hr)
ROG	6.6	1011.78	0.12
SOx	3.5	536.55	0.06
CO	18	2759.40	0.32
PM	15.6	2391.48	0.27

Estimated Emissions of Toxic Air Contaminants (TAC)

The estimated TAC emissions from the boiler are presented in Table 2. These emissions represent the maximum operating schedule of 24 hrs/day and 365 days per year. The emission factors used to calculate the emissions were obtained from the SCAQMD's MATES-III Report. The emissions are below the SCAQMD Rule 1401 Risk Assessment Tier 1 Screening Levels; therefore, no further health risk analysis was conducted.

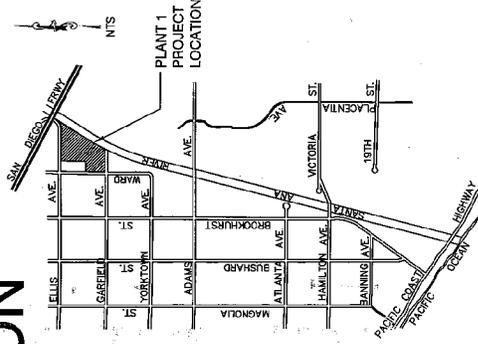
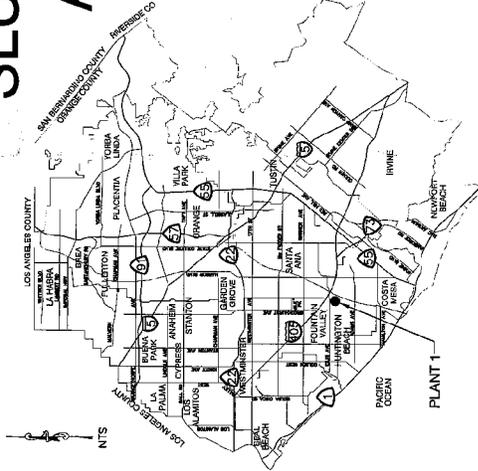
Table 2. Summary of TAC Emissions from the Boiler (for Digester Gas)

Compound	EF (lbs/mmcf)	Maximum Uncontrolled Emissions		Tier I Screening Levels 100 Meter	
		(lbs/yr)	(lbs/hr)	(lbs/yr)	(lbs/hr)
Acetaldehyde	0.0031	0.48	5.43E-05	89.2	n/a
Benzene	0.0058	0.89	1.02E-04	8.92	3.96
Ethyl Benzene	0.0069	1.06	1.21E-04	517,000	n/a
Formaldehyde	0.123	18.86	2.15E-03	42.5	0.252
Stryene	0.04	6.13	7.00E-04	233,000	56.2
Toulene	0.0265	4.06	4.64E-04	77,500	99.1
Xylenes	0.0195	2.99	3.41E-04	181,000	58.9

0.0123

ORANGE COUNTY SANITATION DISTRICT

PROJECT No. P1-100 SLUDGE DIGESTER REHABILITATION AT RECLAMATION PLANT No. 1 DESIGN SUBMITTAL 3 (DS3) OCTOBER, 2008 VOLUME IV



APPROVED FOR BIDDING

ORANGE COUNTY SANITATION DISTRICT

JAMES D. HERBERG - DIRECTOR OF ENGINEERING
 RECOMMENDED

MATTHEW P. SMITH - ENGINEERING MANAGER
 PREPARED UNDER THE SUPERVISION OF:

SINO RAPAIGNA, PROJECT MANAGER

DATE: _____

DATE: _____

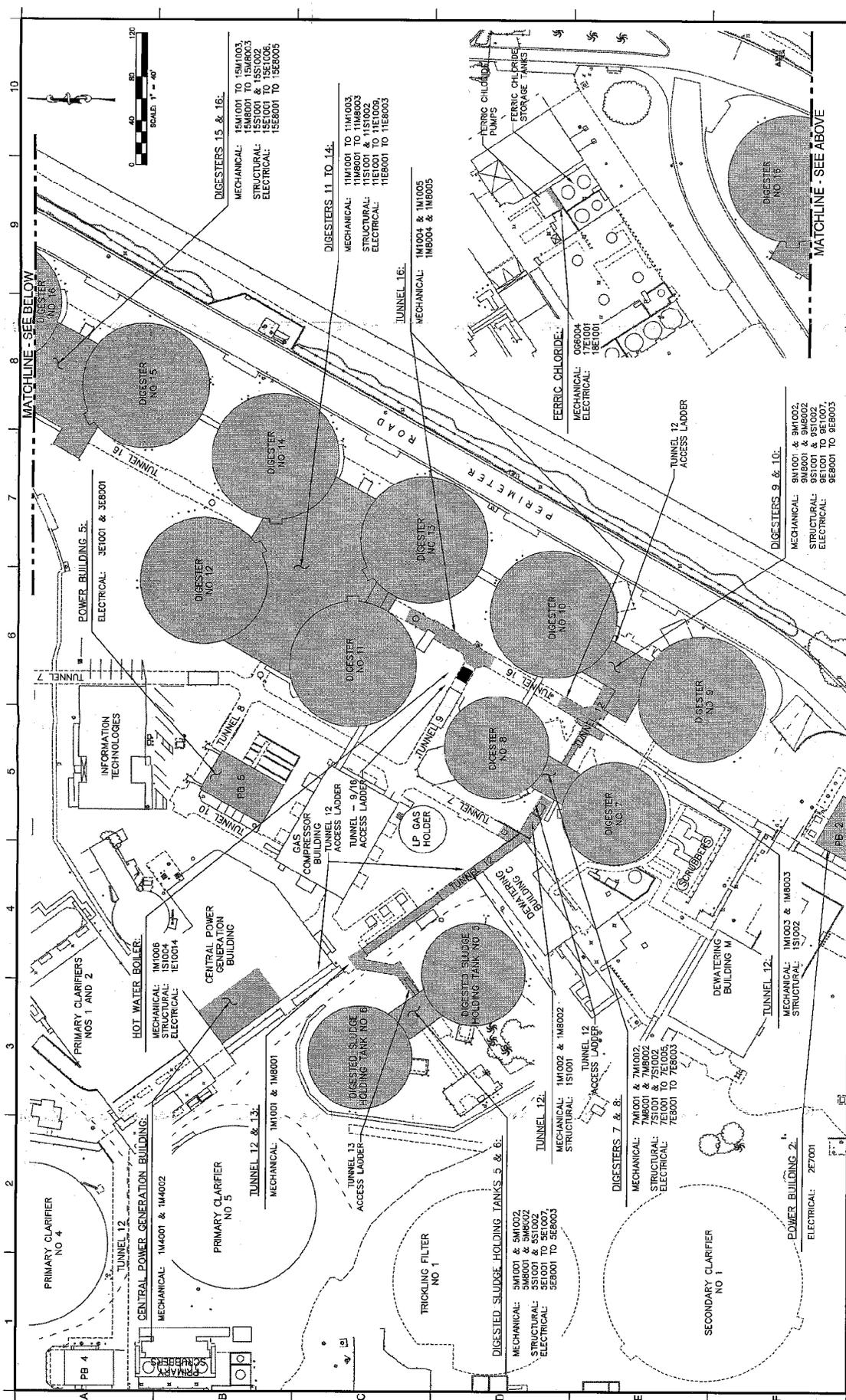
DATE: _____

MARK	DESCRIPTION	DATE (PPR)

DESIGNED BY: B. STALLINGS	PROJECT NO. P1-100
DRAWN BY: J. CONNELLY	DRAWING NO. 0G0001
CHECKED BY: M. BLEY	1 OF 376
SCALE: 1/8" = 1' (AT FULL SIZE)	
(IF NOT 2" SCALE ACCORDING TO)	

ORANGE COUNTY SANITATION DISTRICT	PLANT NO. 1 SLUDGE DIGESTER REHABILITATION GENERAL COVER SHEET AND LOCATION PLAN
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AECOM	ORANGE COUNTY SANITATION DISTRICT
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MARK	DESCRIPTION	DATE (APP)
DESIGNED BY: S. SHALANS DRAWN BY: J. CONNELLY CHECKED BY: M. REY 1" = 40' AT FULL SIZE (IF NOT 2" = SCALE ACCORDINGLY)		
AECOM <small>2004 AECOM INC. DATE 2004 USE OFFICE: CA, BAY AREA OFFICE</small>		ORANGE COUNTY SANITATION DISTRICT
SLUDGE DIGESTER REHABILITATION GENERAL WORK LOCATION PLAN		PLANT NO. 1 PROJECT NO. 21-100 DRAWING NO. 0G1001 7 OF 576

D:\Work\1001\work\4419\1-100 (Digester Rehab)\03 Final Design\1-100-051001.dwg
 User: jhm.connelly
 Date: 10/15/2008 11:40am
 PLOT: 1-100-051001

