



South Coast Air Quality Management District

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

June 26, 2014

Mr. James Herberg
General Manager
Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708-7018

Re: Title V Revised Permit for Orange County Sanitation District (OCSD),
ID# 029110

Dear Mr. Herberg,

Enclosed please find revision to the Title V facility permit, for the Orange County Sanitation District (OCSD) Huntington Beach, Sewage Treatment Plant No. 2 (Facility ID 029110), located at 22212 Brookhurst Street, Huntington Beach, California. The draft permit, which included minor revision (under A/N 556625) and de-minimis significant revision (under A/N 545002), was sent to EPA on May 6, 2014 for review and there were no comments received by the SCAQMD.

The following applications were included under Section H (rev 07) - Permits to Construct and Temporary Permits to Operate.

SECTION H: Permit to Construct and Temporary Permit to Operate

Application Number	Equipment	Description
556626	Sewage Treatment (>5 MGD) Anaerobic	Modifications to permit to operate, G25942, by the removal of existing sludge dewatering facility (belt filter press) with new sludge dewatering facility (Centrifuges and associated equipment, Project P2-92).
556627	Air Pollution Control (APC) System - Wet Scrubber and Biofilter	APC system consisting of wet scrubber and biofilter to treat foul-air from the new Sludge Dewatering Facility (Project P2-92). Existing odor control permitted equipment will be replaced with new APC system.
545003	Odor Control System, Biofilters	Change of condition and equipment description revision for clarification for the existing permit to construct, A/N518276. H2S emission limit is revised for the biofilters that treats dissolved air floatation thickeners (DAFTs), Project P2-89.

Mr. James Herberg
Orange County Sanitation District
Title V Permit Revision
Huntington Beach, ID # 29110

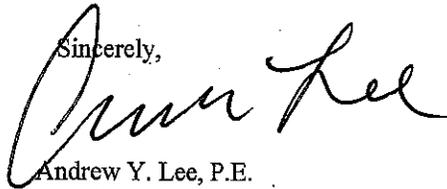
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June 26, 2014

This permit revision includes Title Page, Table of Contents and Section H. Please review the attached pages and section carefully. Insert the enclosed pages in your Title V Facility Permit and discard the earlier versions. Questions concerning this revised permit should be directed to Mr. Gaurang Rawal at (909) 396-2543.

The operation of your facility is bound by the conditions and/or requirements stated in your Facility Permit to Operate. If you determine any administrative errors, please contact Mr. Gaurang Rawal at the above number or e-mail grawal@aqmd.gov, within 30 days of receipt of your permit.

Sincerely,



Andrew Y. Lee, P.E.
Senior AQ Engineering Manager
Energy/Public Services/
Waste Mgmt/Terminals-Permitting

AYL: CDT: GCR

Enclosures

cc: w/ enclosure
Geraldo Rios, EPA Region IX
Compliance-SCAQMD
Title V Central File
A/N 545002 - de minimis significant revision
A/N 556625- minor revision



FACILITY PERMIT TO OPERATE

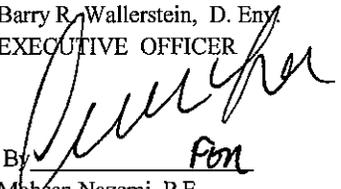
**ORANGE COUNTY SANITATION DISTRICT
22212 BROOKHURST ST
HUNTINGTON BEACH, CA 92646**

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Barry R. Wallerstein, D. Env.
EXECUTIVE OFFICER

By 
Mohsen Nazemi, P.E.
Deputy Executive Officer
Engineering & Compliance



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

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**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

This section consists of a table listing all equipment with Permits to Construct and copies of all individual Permits to Construct issued to various equipment at the facility. Each permit will list operating conditions including periodic monitoring requirements and applicable emission limits and requirements that the equipment is subject to. Also included is the rule origin and authority of each emission limit and permit condition.



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

PERMITTED EQUIPMENT LIST

THE FOLLOWING IS A LIST OF ALL PERMITS TO CONSTRUCT AND PERMITS TO OPERATE AT THIS FACILITY:

Application Number	Permit to Construct Granted On	Equipment Description	Page Number
428804	9/22/2004	ODOR CONTROL SYSTEM, FOR TRUNKLINES AND HEADWORKS	5
519422	6/07/2012	ODOR CONTROL SYSTEM, FOR BIOSOLIDS TRUCK LOADING STATION	9
518276	6/07/2012	ODOR CONTROL SYSTEM, FOR DAF THICKENING PROCESS	11
545003	6/26/2014	ODOR CONTROL UNIT, BIOFILTER	14
545004	10/17/2013, will supersede R-D94235	BOILER, 10.2 MMBTU/HR, DIGESTER GAS AND NATURAL GAS	17
545005	10/17/2013, will supersede R-D94232	BOILER, 10.2 MMBTU/HR, DIGESTER GAS AND NATURAL GAS	20
546364	4/16/2014	ICE CG-1, 4166 HP, DG/NG WITH DG FUEL PRETREATMENT	23
546365	4/16/2014	ICE CG-2, 4166 HP, DG/NG WITH DG FUEL PRETREATMENT	27
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556627	6/26/2014	AIR POLLUTION CONTROL SYSTEM, WET SCRUBBER AND BIOFILTER	47
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559232	4/16/2014	APC SYSTEM 4, SCR/CO CATALYST	64

NOTE: EQUIPMENT LISTED ABOVE THAT HAVE NO CORRESPONDING PERMITS TO OPERATE NUMBER ARE ISSUED PERMITS TO CONSTRUCT. THE ISSUANCE OR DENIAL OF THEIR PERMITS TO OPERATE IS SUBJECT TO ENGINEERING FINAL REVIEW. ANY OTHER APPLICATIONS THAT ARE STILL BEING PROCESSED AND HAVE NOT BEEN ISSUED PERMITS TO CONSTRUCT OR PERMITS TO OPERATE WILL NOT BE FOUND IN THIS TITLE V PERMIT.



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

FACILITY WIDE CONDITION (S)

Condition(s):

1. EXCEPT FOR OPEN ABRASIVE BLASTING OPERATIONS, THE OPERATOR SHALL NOT DISCHARGE INTO THE ATMOSPHERE FROM ANY SINGLE SOURCE OF EMISSIONS WHATSOEVER ANY AIR CONTAMINANT FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR WHICH IS:
 - A. AS DARK OR DARKER IN SHADE AS THAT DESIGNATED NO. 1 ON THE RINGLEMANN CHART, AS PUBLISHED BY THE UNITED STATES BUREAU OF MINES; OR
 - B. OF SUCH OPACITY AS TO OBSCURE AN OBSERVER'S VIEW TO A DEGREE EQUAL TO OR GREATER THAN DOES SMOKE DESCRIBED IN SUBPARAGRAPH (A) OF THIS CONDITION.
[RULE 401]
2. THE OPERATOR SHALL NOT COMBUST DIGESTER GAS CONTAINING SULFUR COMPOUNDS IN EXCESS OF 40 PPMV CALCULATED AS HYDROGEN SULFIDE AVERAGED DAILY.
[RULE 431.1]
3. THE OPERATOR SHALL NOT USE FUEL OIL CONTAINING SULFUR COMPOUNDS IN EXCESS OF 0.05 PERCENT BY WEIGHT. ON OR AFTER JUNE 1, 2004, A PERSON SHALL NOT PURCHASE ANY DIESEL FUEL FOR STATIONARY SOURCE APPLICATION IN THE DISTRICT, UNLESS THE FUEL IS LOW SULFUR DIESEL FOR WHICH THE SULFUR CONTENT SHALL NOT EXCEED 15 PPM BY WEIGHT AS SUPPLIED BY THE SUPPLIER.
[RULE 431.2]
4. THE OWNER/OPERATOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF 40 CFR 63 SUBPART VVV - NON-INDUSTRIAL POTW PLANT NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) AND ALL APPLICABLE REQUIREMENTS OF 40 CFR 63 SUBPART ZZZZ - STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES NESHAP.
[40 CFR 63 SUBPART VVV, AND 40 CFR 63 SUBPART ZZZZ]
5. THE OPERATOR SHALL MEASURE THE SULFUR CONTENT OF THE DIGESTER GAS ACCORDING TO THE FOLLOWING:
 - A. FOR READINGS UP TO 36 PPM AS H₂S, DAILY ANALYSIS OF THE DIGESTER GAS FOR H₂S, USING COLORIMETRIC TUBES, AND WEEKLY ANALYSIS OF THE DIGESTER GAS BY AQMD METHOD 307 - TOTAL SULFUR COMPOUNDS IN FUEL GAS BY GAS CHROMATOGRAPHY AND SULFUR CHEMILUMINESCENCE DETECTOR.
 - B. FOR READINGS ABOVE 36 PPM AS H₂S, DAILY ANALYSIS OF THE DIGESTER GAS FOR H₂S BY AQMD METHOD 307 - TOTAL SULFUR COMPOUNDS IN FUEL GAS BY GAS CHROMATOGRAPHY AND SULFUR CHEMILUMINESCENCE DETECTOR. A MINIMUM OF THREE CONSECUTIVE DAILY SAMPLES ARE REQUIRED TO DEMONSTRATE THE TOTAL SULFUR CONTENT IS BELOW 36 PPM.
[RULE 431.1]



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6. A COMPLETE APPLICATION FOR COMPLIANCE ASSURANCE MONITORING (CAM, 40 CFR PART 64) SHALL BE SUBMITTED WHENEVER THE ANNUAL MASS OF VOC OF THE DIGESTER GAS EXCEEDS 19,999 LBS/YR. THE VOC CONTENT OF THE DIGESTER GAS SHALL BE ANALYZED IN CONJUNCTION WITH THE ANNUAL SOURCE TESTING OF THE CGS ENGINES USING THE APPROVED METHODS. FOR EACH CALENDAR YEAR, THE VOC EMISSIONS SHALL BE CALCULATED BY MARCH 31ST OF THE SUBSEQUENT CALENDAR YEAR, OR WITHIN 30 DAYS OF SOURCE TEST REPORT DATE, WHICHEVER IS LATER, BASED ON THE DIGESTER GAS CONCENTRATION DATA FROM ANNUAL RULE 1110.2 SOURCE TESTING OF THE ENGINES. IF THE VOC EMISSIONS EXCEED 19,999 LBS/YR, THE CAM APPLICATION SHALL BE SUBMITTED BY MARCH 31ST, OR WITHIN 60 DAYS AFTER THE CALCULATION DUE DATE, WHICHEVER IS LATER.
[40 CFR PART 64, CAM]



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

PERMIT TO CONSTRUCT

A/N 428804
Granted as of 9/22/2004

Equipment Description:

ODOR CONTROL FACILITY (P2-66) CONSISTING OF:

- A. TRUNKLINES ODOR CONTROL SYSTEM:
- THREE (3) SINGLE STAGE BIOTRICKLING FILTERS (BIOTOWERS), IDENTICAL, (ONE STAND-BY), VERTICAL TYPE, EACH 10'- 0" DIA. X 46'- 9" H., OVERALL DIMENSIONS, WITH 8' - 6" H. POLYURETHANE FOAM PACKING, A MIST ELIMINATOR, ASSOCIATED RECIRCULATING PUMPS, AND AN EXHAUST SYSTEM WITH THREE 75 HP BLOWERS (40,000 SCFM TOTAL), TREATING FOUL AIR EXHAUST FROM THE DIVERSION STRUCTURE AND INFLUENT TRUNKLINES, VENTING TO THE 1ST STAGE BIOTRICKLING FILTERS AT THE HEADWORKS ODOR CONTROL FACILITY.
- B. HEADWORKS ODOR CONTROL SYSTEM:
- 1ST STAGE, THIRTEEN (13) BIOTRICKLING FILTERS (BIOTOWERS), IDENTICAL, (THREE ON STAND-BY), VERTICAL TYPE, EACH 10'- 0" DIA. X 46'- 9" H., OVERALL DIMENSIONS, WITH 8' - 6" H. POLYURETHANE FOAM PACKING, A MIST ELIMINATOR, ASSOCIATED PUMPS, AND AN EXHAUST SYSTEM WITH THIRTEEN 75 HP BLOWERS (188,300 SCFM TOTAL), TREATING FOUL AIR FROM HEADWORKS FACILITY AND PRETREATED EXHAUST AIR FROM TRUNKLINE ODOR CONTROL FACILITY VENTING TO THE 2ND STAGE CHEMICAL SCRUBBERS AT THE HEADWORKS ODOR CONTROL FACILITY.
 - 2ND STAGE, EIGHT (8) CHEMICAL SCRUBBERS, IDENTICAL, (TWO ON STAND-BY), VERTICAL TYPE, EACH 10'- 0" DIA. X 48'- 0" H., OVERALL DIMENSIONS, WITH Q-PAC OR TRIPACK TYPE, 10' - 0" H. POLYURETHANE PACKING, A MIST ELIMINATOR, AUTOMATIC CHEMICAL FEED, ASSOCIATED RECIRCULATION PUMPS, AND AN EXHAUST SYSTEM WITH EIGHT 60 HP BLOWERS (188,300 SCFM TOTAL), TREATING EXHAUST AIR FROM 1ST STAGE BIOTRICKLING FILTERS, AND VENTING TO THE ATMOSPHERE.
- C. SODIUM HYPOCHLORITE, SODIUM HYDROXIDE AND HYDROCHLORIC ACID STORAGE TANKS.

Conditions:

- OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED, UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
- THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.



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[RULE 204]

- 3 THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.

[RULE 204]

4. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THE EQUIPMENT IS NOT COMPLETED WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.

[RULE 205]

5. THIS FACILITY (P2-66) SHALL ONLY TREAT FOUL AIR GENERATED FROM THE DIVERSION STRUCTURE AND TRUNKLINES, GRIT HANDLING BUILDING, BAR SCREEN BUILDING AND CHANNELS, PUMP STATION WET WELL, SCREENINGS WASHING AND LOADING BUILDINGS, GRIT BASINS, PRIMARY SPLITTER BOX, AND INFLUENT PUMP STATION DISCHARGE CHANNEL.

[RULE 402]

6. ALL THE EXHAUST FROM THE BIOTRICKLING FILTERS (TRUNKLINE AND HEADWORKS BIOTRICKLING FILTERS) SHALL BE VENTED TO AND TREATED BY THE FINAL CHEMICAL SCRUBBERS PRIOR TO RELEASE TO THE ATMOSPHERE.

[RULE 402]

7. A SUFFICIENT NUMBER OF BIOTRICKLING (BIOTOWERS) AND CHEMICAL SCRUBBERS SHALL BE IN OPERATION WHEN THE BASIC EQUIPMENT ARE IN OPERATION TO MAINTAIN THE CHEMICAL SCRUBBERS OUTLET H₂S CONCENTRATIONS, AS MEASURED BY THE AUTOMATIC CHEMICAL FEED AND H₂S MONITORING SYSTEM, LESS THAN THE MAXIMUM OUTLET H₂S LIMITS AS SPECIFIED IN CONDITION NO. 14 EXCEPT DURING UNFORESEEN AND ROUTINE MAINTENANCE WORK OR POWER OUTAGE IN THE PLANT THAT REQUIRES THE SCRUBBERS TO BE SHUTDOWN FOR A PERIOD NOT TO EXCEED 10 HOURS PER INCIDENT PER EQUIPMENT AND 50 HOURS PER YEAR PER EQUIPMENT.

[RULE 402]

8. ALL BIOTRICKLING FILTERS AND CHEMICAL SCRUBBERS SHALL BE EQUIPPED WITH INLET AND OUTLET CONTINUOUS HYDROGEN SULFIDE MONITORING SYSTEM (VAPAX UNIT OR EQUIVALENT).

[RULE 204]

9. WHEN THE CHEMICAL SCRUBBERS ARE IN OPERATION, AUTOMATIC CHEMICAL FEED AND HYDROGEN SULFIDE (H₂S) MONITORING SYSTEM SHALL BE IN OPERATION AND MAINTAINED TO RECORD THE SCRUBBER INLET AND OUTLET H₂S CONCENTRATIONS, IN PPMV, EXCEPT DURING SHUTDOWN FOR MAINTENANCE. THE H₂S MONITORING SYSTEM SHALL BE CALIBRATED PERIODICALLY PURSUANT TO MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

[RULE 204]

10. A FLOW METER, INDICATING GALLONS PER MINUTE (GPM) SHALL BE INSTALLED AND MAINTAINED IN THE CHEMICAL SCRUBBING SOLUTION [SODIUM HYDROXIDE (NaOH) AND SODIUM HYPOCHLORITE (NaOCl)] RECIRCULATION LINE FOR EACH OF THE CHEMICAL SCRUBBER. AT LEAST 785 GPM OF CHEMICAL SCRUBBING SOLUTION SHALL BE SUPPLIED TO EACH CHEMICAL SCRUBBER WHEN IT IS IN OPERATION.



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- [RULE 204]
11. FOR THE CHEMICAL SCRUBBER(S), A DIFFERENTIAL PRESSURE GAUGE OR OTHER DEVICE SHALL BE INSTALLED AND MAINTAINED TO INDICATE, IN INCHES OF WATER COLUMN, THE DIFFERENTIAL PRESSURE DROP ACROSS THE PACKING MEDIA. DURING NORMAL OPERATION, THE PRESSURE DROP MEASURED ACROSS THE PACKING MEDIA SHALL BE MAINTAINED BETWEEN 1 AND 2 INCHES OF WATER COLUMN, UNLESS OTHERWISE APPROVED BY AQMD.
[RULE 204]
12. THE PH OF THE CHEMICAL SCRUBBING SOLUTION SHALL BE MAINTAINED BETWEEN 9 TO 10.5.
[RULE 204]
13. WHEN THE AUTOMATIC CHEMICAL FEED AND H₂S MONITORING SYSTEM IS NOT OPERATING, PH OF THE SCRUBBING LIQUID, SCRUBBER SOLUTION RECIRCULATION RATE (GPM), THE SCRUBBER INLET AND OUTLET H₂S CONCENTRATION (PPMV) AND DIFFERENTIAL PRESSURE (INCHES OF WATER COLUMN) ACROSS THE PACKING MEDIA SHALL BE MEASURED AND RECORDED AT LEAST ONCE PER SHIFT.
[RULE 204]
14. WHEN THE CHEMICAL SCRUBBERS ARE IN OPERATION, THE DAILY AVERAGE CONCENTRATION OF SULFUR COMPOUNDS, CALCULATED AS H₂S MEASURED AT THE OUTLET OF THE SCRUBBER SHALL NOT EXCEED 1 PPMV.
[RULE 402]
15. WITHIN 60 DAYS AFTER ACHIEVING THE MAXIMUM FOUL AIR FLOW RATE FOR THE ODOR CONTROL (P2-66) FACILITY, BUT NOT LATER THAN 180 DAYS AFTER INITIAL START-UP, ORANGE COUNTY SANITATION DISTRICT (OCS D) SHALL CONDUCT SOURCE TESTS IN ACCORDANCE WITH THE AQMD OR OTHER APPROVED TEST PROCEDURES. A TEST PROTOCOL INCLUDING ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE AQMD, TOXICS AND WASTE MANAGEMENT TEAM, FOR APPROVAL AT LEAST 30 DAYS PRIOR TO START OF THE TESTS. NOTICE SHALL BE PROVIDED TO THE AQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. THE TESTS SHALL DETERMINE CONTROL EFFICIENCY OF THE AIR POLLUTION CONTROL EQUIPMENT (CHEMICAL SCRUBBERS) AND SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, THE EMISSIONS TO ATMOSPHERE FOR
- A. TOTAL NON-METHANE HYDROCARBONS (NMHC), INLET AND OUTLET (LBS/HR AND PPMV).
 - B. TOXIC AIR CONTAMINANTS INCLUDING, BUT NOT LIMITED TO, AMMONIA, BENZENE, CHLOROFORM, 1,4 (p)-DICHLOROBENZENE, ETHYL BENZENE, HYDROGEN SULFIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE, STYRENE, TOLUENE, 1,1,1-TRICHLOROETHANE, TRICHLOROETHYLENE, XYLENES, ETC., INLET AND OUTLET, (LBS/HR AND PPMV).
 - C. CARBON DIOXIDE, OXYGEN AND NITROGEN
 - D. MOISTURE CONTENT, TEMPERATURE AND FLOW RATE
 - E. AMMONIA, NMHC, AND HYDROGEN SULFIDE (H₂S) CONTROL EFFICIENCY (WT%).
 - F. METALLIC COMPOUNDS, SUCH AS ARSENIC, BERYLLIUM, CADMIUM, HEXAVALENT CHROMIUM, NICKEL, ETC.



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[RULE 204, 402]

16. SAMPLING PORTS SHALL BE PROVIDED IN THE SCRUBBER EXHAUST STACK, 8-10 DUCT DIAMETERS DOWNSTREAM AND 2 DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE. AT EACH LOCATION, TWO SAMPLING PORTS 90 DEGREES APART SHALL BE PROVIDED AND SHALL CONSIST OF 4-INCH WELDED NIPPLES WITH CAPS. SAFETY ACCESS TO THE SAMPLING PORTS SHALL BE PROVIDED BY THE APPLICANT.
[RULE 217]
17. ORANGE COUNTY SANITATION DISTRICT (OCSD) SHALL CALCULATE THE MAXIMUM INDIVIDUAL CANCER RISK (MICR), ACUTE HAZARD INDEX (HIA) AND CHRONIC HAZARD INDEX (HIC), BASED ON THE SOURCE TESTS RESULTS, USING AQMD PUBLISHED "RISK ASSESSMENT PROCEDURES FOR RULES 1401 (RULE VERSION AMENDED MAY 2, 2003) AND 212", VERSION 6.0, AUGUST 18, 2000, TO DETERMINE THE COMPLIANCE WITH RULE 1401. RESULTS SHALL BE SUBMITTED TO AQMD.
[RULE 1401]
18. ALL RECORDS SHALL BE KEPT AND MAINTAINED FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

A/N 519422
Granted as of 6/07/2012

Equipment Description:

ODOR CONTROL SYSTEM FOR THE BIOSOLIDS TRUCK LOADING STATION, CONSISTING OF;

1. EXHAUST BLOWER, MAXIMUM 3000 CFM, 15 H. P., VENTING TWO (2) BIOSOLIDS STORAGE SILOS (PART OF THE SLUDGE PROCESSING STATION, PC 453240).
2. ADSORBER, BAY PRODUCTS, SPARROW 3000, 8' DIA. X 7'- 3" H. OVERALL, CONTAINING MINIMUM OF 3800 LBS OF ACTIVATED CARBON (BOTTOM LAYER) AND 1500 LBS OF POTASSIUM PERMANGANATE (KMNO4) IMPREGNATED MEDIA (TOP LAYER). EQUIPPED WITH DIFFERENTIAL PRESSURE GAUGE AND A DEMISTER.
3. EXHAUST STACK, 1' - 6" DIA. X 13' - 6" HIGH ABOVE GROUND.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATIONS UNDER WHICH THIS PERMIT IS ISSUED.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITIONS AT ALL TIMES.
[RULE 204]
3. THE OPERATOR MAY USE ALTERNATE MEDIA AND AMOUNTS IN ORDER TO OPTIMIZE THE ODOR CONTROL SYSTEM, PROVIDED SUCH ALTERNATE MEDIA AND AMOUNTS ARE GUARANTEED BY THE VENDOR TO MEET THE EMISSION LIMITS IN THIS PERMIT.
[RULE 204]
4. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THE EQUIPMENT IS NOT COMPLETED WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]
5. SAMPLING PORTS SHALL BE PROVIDED AT THE INLET AND OUTLET OF THE ODOR CONTROL SYSTEM TO ALLOW COLLECTION/ANALYSIS OF THE INLET FOUL AIR AND TREATED EXHAUST STREAM.
[RULE 204]
6. THE OPERATOR SHALL INSTALL AND MAINTAIN A DIFFERENTIAL PRESSURE GAUGE TO ACCURATELY INDICATE THE DIFFERENTIAL PRESSURE, IN INCHES OF WATER COLUMN, ACROSS THE MEDIA BED.



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[RULE 204]

7. THE OPERATOR SHALL, ON A WEEKLY BASIS, MEASURE AND RECORD THE DIFFERENTIAL PRESSURE DROP, IN INCHES OF WATER COLUMN, ACROSS THE MEDIA BED.

[RULE 204]

8. IN OPERATION, THE PRESSURE DROP MEASURED ACROSS THE MEDIA BED SHALL BE MAINTAINED BETWEEN 4.8 AND 8.4 INCHES OF WATER COLUMN, OR ANOTHER RANGE SPECIFIED BY THE MANUFACTURER. MANUFACTURER'S PRESSURE DROP RANGE SPECIFICATIONS FOR THIS EQUIPMENT SHALL BE KEPT ON FILE AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

[RULE 204]

9. THE HYDROGEN SULFIDE (H₂S) CONCENTRATION (PPMV) AT THE INLET TO ODOR CONTROL SYSTEM SHALL BE MONITORED AND RECORDED ON A WEEKLY BASIS FOR THE FIRST MONTH OF OPERATION, AND MONTHLY THEREAFTER USING COLORIMETRIC H₂S TUBES OR ANY OTHER DISTRICT APPROVED METHOD.

[RULE 204]

10. THE HYDROGEN SULFIDE (H₂S) CONCENTRATION (PPMV) IN THE EXHAUST OF THE ODOR CONTROL SYSTEM SHALL BE MEASURED AND RECORDED AT LEAST ONCE A WEEK USING COLORIMETRIC H₂S TUBES, HANDHELD H₂S ANALYZER, OR ANY OTHER DISTRICT APPROVED METHOD.

[RULE 204]

11. IN OPERATION, THE HYDROGEN SULFIDE (H₂S) CONCENTRATION IN THE EXHAUST OF THE ODOR CONTROL SYSTEM SHALL NOT EXCEED 1.0 PPMV.

[RULE 402, 1401]

12. THE MEDIA IN THE ADSORBER SHALL BE REPLACED WITH MINIMUM AMOUNT (LBS) OF FRESH CARBON MEDIA, AS DESCRIBED UNDER EQUIPMENT DESCRIPTION OR CONDITION NO. 3, WHENEVER NECESSARY TO COMPLY WITH THE CONDITIONS OF THIS PERMIT.

[RULE 204]

13. SPENT MEDIA REMOVED FROM THIS SYSTEM SHALL BE MAINTAINED OR STORED IN CLOSED CONTAINERS PRIOR TO REMOVAL FROM SITE.

[RULE 402]

14. RECORDS SHALL BE MAINTAINED AS REQUIRED BY THIS PERMIT INCLUDING MEDIA CHANGE OVER DATE(S), QUANTITY, AND VENDOR GUARANTEES FOR COMPLIANCE. THE RECORDS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.

[RULE 204]



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

A/N 518276
Granted as of 6/07/2012

Equipment Description:

ODOR CONTROL SYSTEM, TREATING EXHAUST FROM DISSOLVED AIR FLOATATION THICKENERS (DAFTS), CONSISTING OF:

1. EXHAUST HEADER FROM FOUR (4) DISSOLVED AIR FLOATATION THICKENERS (DAFTS) AND TWO (2) POLYMER MIX TANKS.
2. THREE (3) FOUL-AIR EXHAUST FANS (ONE STANDBY), EACH 100 H.P., MAXIMUM 35,000 CFM CAPACITY.
3. HUMIDIFICATION, IN-DUCT, WITH TWELVE (12) SPRAY NOZZLES, AND EQUIPPED WITH HYDROGEN SULFIDE (H₂S) ANALYZER.
4. THREE (3) BIOFILTER CELLS, CONCRETE WALLED, CUSTOM DESIGNED, EACH BIOFILTER CELL 20' W. X 33' L. X 9' D., CONTAINING PROPRIETARY INORGANIC MINERAL BASED MEDIA, EQUIPPED WITH INLET FOUL-AIR FLOW METERS, SAMPLING PORTS AND SURFACE IRRIGATION SYSTEM.

Conditions:

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT TO CONSTRUCT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]
4. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THE EQUIPMENT IS NOT COMPLETED WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]
5. A TEMPERATURE INDICATOR SHALL BE INSTALLED AND MAINTAINED IN THE MAIN FOUL-AIR HEADER PRIOR TO FOUL-AIR DISTRIBUTION TO THE BIOFILTERS. THE INLET FOUL AIR TEMPERATURE READINGS, TAKEN ON A MONTHLY BASIS, SHALL BE MAINTAINED IN THE



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RANGE OF EQUIPMENT DESIGN SPECIFICATIONS OR AS PER MANUFACTURER'S RECOMMENDATION, AND WRITTEN SPECIFICATIONS SHALL BE KEPT ON FILE.
[RULE 204]

6. A HYDROGEN SULFIDE (H₂S) ANALYZER SHALL BE INSTALLED AND MAINTAINED IN THE MAIN FOUL-AIR HEADER PRIOR TO FOUL-AIR DISTRIBUTION TO THE BIOFILTERS. FOUL-AIR H₂S CONCENTRATION (PPMV) SHALL BE MONITORED ON A MONTHLY BASIS AND RESULTS RECORDED. WHEN H₂S ANALYZER IS NOT OPERATING, COLORIMETRIC H₂S TUBES, HAND HELD H₂S ANALYZERS OR ANY OTHER DISTRICT APPROVED METHODS SHALL BE USED FOR H₂S MONITORING.
[RULE 204]
7. FOUL-AIR FLOW RATE (SCFM) MONITORING AND INDICATING DEVICE OR SYSTEM SHALL BE INSTALLED AND MAINTAINED IN THE FOUL AIR INLET DUCT TO EACH BIOFILTER.
[RULE 204]
8. FOUL-AIR FLOW RATE SHALL BE MONITORED AND RECORDED ON A DAILY BASIS. TOTAL FLOW RATE READING FOR INLET FOUL-AIR TO THREE (3) BIOFILTER CELLS SHALL NOT EXCEED 35, 000 SCFM.
[RULE 402, 1401]
9. THE INCOMING FOUL AIR HUMIDIFICATION AND SURFACE IRRIGATION SYSTEMS SHALL BE MAINTAINED IN GOOD OPERATING CONDITION, AT ALL TIMES, AND SHALL BE UTILIZED TO MAINTAIN THE DESIRED MOISTURE CONTENT FOR THE BIOFILTER MEDIA.
[RULE 204]
10. HYDROGEN SULFIDE (H₂S) AND AMMONIA (NH₃) EMISSIONS FROM EACH BIOFILTER SURFACE (MULTI-POINT) SHALL BE MONITORED AT LEAST ONCE A MONTH USING PORTABLE ANALYZERS. THE MULTI-POINT SURFACE READINGS (PPMV) SHALL BE AVERAGED AND RECORDED.
[RULE 204]
11. EMISSIONS OF H₂S FROM THE BIOFILTER SHALL NOT EXCEED 0.0175 LB/HR (93 PPBV AT THE SURFACE AT 35,000 CFM).
[RULE 204]
12. THE OWNER OR OPERATOR OF THE EQUIPMENT SHALL CONDUCT SOURCE PERFORMANCE TESTS UNDER THE FOLLOWING CONDITIONS:
 - I. A TEST PROTOCOL SHALL BE SUBMITTED TO AQMD NO LATER THAN 45 DAYS BEFORE THE PROPOSED TEST DATE AND SHALL BE APPROVED BY THE EXECUTIVE OFFICER BEFORE THE TEST COMMENCES. AT A MINIMUM, THE TEST PROTOCOL SHOULD INCLUDE THE FOLLOWING:
 - a. A DESCRIPTION OF THE EQUIPMENT TESTED. INCLUDE A PROCESS SCHEMATIC INDICATING SAMPLING LOCATIONS/PORTS; SAMPLING DUCT/STACK DIMENSIONS ALONG WITH UPSTREAM AND DOWNSTREAM FLOW DISTURBANCES (E.G. ELBOWS, TEES AND FANS).
 - b. A BRIEF PROCESS DESCRIPTION.



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- c. OPERATING CONDITIONS UNDER WHICH THE TEST WILL BE PERFORMED, INCLUDING INLET AIR FLOW RATE (SCFM), TEMPERATURE, AND % MOISTURE.
 - d. A DESCRIPTION OF THE SAMPLING AND ANALYTICAL METHODS FOR EACH CONSTITUENT MEASURED.
 - e. COMPLETE CALCULATIONS FOR FLOW RATES, CONCENTRATIONS (PPMV), EMISSION RATES AND CONTROL EFFICIENCIES.
 - f. A DESCRIPTION OF THE CALIBRATION AND QUALITY ASSURANCE PROCEDURES.
 - g. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES, PURSUANT TO RULE 217.
 - h. A STATEMENT DETERMINING THAT THE TESTING LABORATORY QUALIFIES AS AN "INDEPENDENT TESTING LABORATORY" UNDER RULE 304 (NO CONFLICT OF INTEREST) AND SIGNED BY THE RESPONSIBLE AUTHORITY.
- II. THE TESTS SHALL DETERMINE BIOFILTER'S INLET AND OUTLET EMISSIONS FOR TOTAL NON-METHANE ORGANIC COMPOUNDS (TNMOC), H₂S AND AMMONIA TO DETERMINE BIOFILTER'S CONTROL EFFICIENCY, IN WEIGHT PERCENT. TEST RESULTS SHOULD INCLUDE INLET AND OUTLET TNMOC AND AMMONIA CONCENTRATIONS (PPMV), AND EMISSIONS (LBS/HR), AND SPECIATED ANALYSIS FOR TNMOCS,
- III. THE TESTS SHALL BE CONDUCTED AND A WRITTEN REPORT SUBMITTED TO THE SCAQMD WITHIN 60 DAYS AT MAXIMUM FOUL-AIR INLET FLOW RATE AT WHICH THE EQUIPMENT WILL BE OPERATED, BUT NOT LATER THAN 180 DAYS AFTER INITIAL START-UP.
[RULE 204, 217, 402, 1401]
13. SMOKE BOMB TESTS SHALL BE CONDUCTED INITIALLY AND, THEREAFTER, EVERY THREE (3) YEARS TO DEMONSTRATE UNIFORM DISTRIBUTION OF AIR FLOWS, AREA OF COMPACTION AND/OR CHANNELING THAT NEEDS REPAIR.
[RULE 204]
14. ANY BREAKDOWN OR MALFUNCTION OF THIS EQUIPMENT RESULTING IN EXCESSIVE ODOR EMISSIONS INTO THE ATMOSPHERE SHALL BE REPORTED TO THE SCAQMD WITHIN TWENTY FOUR HOURS AFTER OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 430, 402]
15. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR AT LEAST FIVE YEARS, AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

PERMIT TO CONSTRUCT

A/N 545003

Granted as of 6-26-2014

Equipment Description:

ODOR CONTROL SYSTEM CONSISTING OF :

1. EXHAUST HEADER FROM FOUR (4) DISSOLVED AIR FLOATATION THICKENERS (DAFTS).
2. OPTIONAL EXHAUST FROM TWO (2) POLYMER MIX TANKS.
3. THREE (3) FOUL-AIR EXHAUST FANS (ONE STANDBY), EACH APPROXIMATELY 100 HP, TOTAL MAXIMUM 35,000 CFM CAPACITY.
4. IN-DUCT INLET AIR HUMIDIFICATION SYSTEM WITH APPROXIMATELY TWELVE (12) WATER SPRAY NOZZLES.
5. THREE (3) BIOFILTERS, CONCRETE WALLED, CUSTOM DESIGNED, EACH BIOFILTER APPROXIMATELY 20' W. X 33' L. X 9' D., CONTAINING PROPRIETARY INORGANIC MINERAL BASED MEDIA, EQUIPPED WITH A SURFACE IRRIGATION SYSTEM.

Conditions:

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT TO CONSTRUCT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]
4. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THE EQUIPMENT IS NOT COMPLETED WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]
5. FOUL-AIR INLET FLOW RATE (SCFM) MONITORING AND INDICATING DEVICE OR RECORDING SYSTEM SHALL BE INSTALLED AND MAINTAINED IN THE FOUL AIR INLET DUCT TO THE BIOFILTERS.
[RULE 204]



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6. FOUL-AIR INLET FLOW RATE TO THE BIOFILTERS SHALL BE MONITORED AND RECORDED AT LEAST ONCE EACH DAY. TOTAL AIR FLOW RATE MEASURED SHALL NOT EXCEED 35,000 SCFM, DAILY AVERAGE.
[RULE 402, 1401]
7. THE INCOMING FOUL AIR HUMIDIFICATION AND SURFACE IRRIGATION SYSTEMS SHALL BE MAINTAINED IN GOOD OPERATING CONDITION, AT ALL TIMES, AND SHALL BE UTILIZED TO MAINTAIN THE DESIRED MOISTURE CONTENT FOR THE BIOFILTER MEDIA.
[RULE 204]
8. WHEN IN OPERATION, HYDROGEN SULFIDE (H₂S) EMISSIONS FROM EACH BIOFILTER SURFACE (MULTI-POINT) SHALL BE MONITORED AT LEAST ONCE A MONTH USING PORTABLE ANALYZERS. THE MULTI-POINT SURFACE READINGS (PPMV) SHALL BE AVERAGED AND RECORDED.
[RULE 204]
9. H₂S EMISSIONS MEASURED FROM THE BIOFILTERS' SURFACES SHALL NOT EXCEED 1 PPMV.
[RULE 402, 1401]
10. THE OWNER OR OPERATOR OF THE EQUIPMENT SHALL CONDUCT SOURCE PERFORMANCE TESTS UNDER THE FOLLOWING CONDITIONS:
 - I. A TEST PROTOCOL SHALL BE SUBMITTED TO AQMD NO LATER THAN 45 DAYS BEFORE THE PROPOSED TEST DATE AND SHALL BE APPROVED BY THE EXECUTIVE OFFICER BEFORE THE TEST COMMENCES. AT A MINIMUM, THE TEST PROTOCOL SHOULD INCLUDE THE FOLLOWING:
 - a. A DESCRIPTION OF THE EQUIPMENT TESTED. INCLUDE A PROCESS SCHEMATIC INDICATING SAMPLING LOCATIONS/PORTS; SAMPLING DUCT/STACK DIMENSIONS ALONG WITH UPSTREAM AND DOWNSTREAM FLOW DISTURBANCES (E.G. ELBOWS, TEES AND FANS).
 - b. A BRIEF PROCESS DESCRIPTION.
 - c. OPERATING CONDITIONS UNDER WHICH THE TEST WILL BE PERFORMED, INCLUDING INLET AIR FLOW RATE (SCFM), TEMPERATURE, AND % MOISTURE.
 - d. A DESCRIPTION OF THE SAMPLING AND ANALYTICAL METHODS FOR EACH CONSTITUENT MEASURED.
 - e. COMPLETE CALCULATIONS FOR FLOW RATES, CONCENTRATIONS (PPMV), EMISSION RATES AND CONTROL EFFICIENCIES.
 - f. A DESCRIPTION OF THE CALIBRATION AND QUALITY ASSURANCE PROCEDURES.
 - g. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES, PURSUANT TO RULE 217.



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- h. A STATEMENT DETERMINING THAT THE TESTING LABORATORY QUALIFIES AS AN "INDEPENDENT TESTING LABORATORY" UNDER RULE 304 (NO CONFLICT OF INTEREST) AND SIGNED BY THE RESPONSIBLE AUTHORITY.
- II. THE TESTS SHALL DETERMINE BIOFILTER'S INLET AND OUTLET EMISSIONS FOR TOTAL NON-METHANE ORGANIC COMPOUNDS (TNMOC) AND AMMONIA (AT LEAST FOR ONE BIOFILTER), AND H₂S (FROM EACH BIOFILTER) TO DETERMINE BIOFILTER'S CONTROL EFFICIENCY, IN WEIGHT PERCENT. TEST RESULTS SHOULD INCLUDE INLET AND OUTLET H₂S, TNMOC AND AMMONIA CONCENTRATIONS (PPMV), AND EMISSIONS (LBS/HR), AND SPECIATED ANALYSIS FOR ORGANIC COMPOUNDS (EXHAUST FROM ONE BIOFILTER).
- III. THE TESTS SHALL BE CONDUCTED AFTER EQUIPMENT INITIAL START-UP, BUT NOT LATER THAN 180 DAYS, AT A MAXIMUM ACHIEVABLE INLET FOUL-AIR FLOW RATE AT WHICH THE EQUIPMENT WILL BE OPERATED. A WRITTEN REPORT SHALL BE SUBMITTED TO THE SCAQMD WITHIN 60 DAYS UPON SOURCE TESTS COMPLETION.
[RULE 204, 217, 402, 1401]
11. SMOKE BOMB TESTS SHALL BE CONDUCTED INITIALLY AND, THEREAFTER, EVERY THREE (3) YEARS TO DEMONSTRATE UNIFORM DISTRIBUTION OF AIR FLOWS OR IDENTIFY RESTRICTED OR CHANNELED AIR FLOW THAT NEEDS IMPROVEMENT.
[RULE 204]
12. ANY BREAKDOWN OR MALFUNCTION OF THIS EQUIPMENT RESULTING IN EXCESSIVE ODOR EMISSIONS INTO THE ATMOSPHERE SHALL BE REPORTED TO THE SCAQMD WITHIN TWENTY FOUR HOURS AFTER OCCURRENCE, AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 430, 402]
13. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR AT LEAST FIVE YEARS, AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

**A/N 545004
Granted as of 10/17/2013**

Equipment Description:

MODIFICATION TO BOILER, NO. 1, WITH PERMIT TO OPERATE D94235, BY THE REMOVAL OF THE EXISTING BURNER AND THE ADDITION OF A NEW BURNER, AMERICAN COMBUSTION TECHNOLOGY OR EQUAL, MODEL SLE-05-250 OR EQUAL, 10,205,800 BTU PER HOUR MAXIMUM, DIGESTER GAS AND NATURAL GAS (AS SECONDARY FUEL), AND REHABILITATION OF ANCILLARY EQUIPMENT

Conditions:

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS BOILER SHALL BE FIRED ON DIGESTER GAS AND OR NATURAL GAS ONLY. EXCEPT FOR PILOT GAS, NATURAL GAS SHALL ONLY BE USED IF DIGESTER GAS IS NOT AVAILABLE IN SUFFICIENT AMOUNT.
[RULE 204]
4. A FUEL METER SHALL BE INSTALLED AND MAINTAINED IN THE FUEL SUPPLY LINE(S) TO MEASURE, INDICATE AND RECORD THE AMOUNT OF FUEL(S) (SCFM) BURNED IN THIS EQUIPMENT.
[RULE 1303 (b) (1) & 1303 (b) (2) – MODELING & OFFSET]
5. WHEN IN OPERATION, TOTAL HEAT INPUT FOR THIS EQUIPMENT SHALL NOT EXCEED 10, 205, 800 BTU/HR. A DAILY LOG SHALL BE KEPT, INDICATING THE TOTAL HEATING VALUE (BTU/SCF) OF FUEL BURNED IN THIS EQUIPMENT, BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST MONTHLY BTU CONTENT READING.
[RULE 1303 (b) (1) & 1303 (b) (2) – MODELING & OFFSET]
6. THIS EQUIPMENT SHALL BE EQUIPPED WITH A CONTROL SYSTEM TO AUTOMATICALLY REGULATE THE COMBUSTION AIR AND FUEL RATE AS THE BOILER LOAD VARIES. THIS AUTOMATIC CONTROL SYSTEM SHALL BE ADJUSTED AND TUNED PERIODICALLY, ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS TO ASSURE ITS ABILITY TO REPEAT THE SAME PERFORMANCE AT THE SAME BURNER FIRING RATE.
[RULE 1146]
7. THE FLUE GAS RECIRCULATION SYSTEM SHALL BE IN FULL USE WHENEVER THE BOILER IS IN OPERATION.
[RULE 1303(a) (1)-BACT]



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8. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT AN INITIAL PERFORMANCE SOURCE TESTS, FOR EACH FUEL, UNDER THE FOLLOWING CONDITIONS:
- A. A TESTING LABORATORY CERTIFIED BY THE CALIFORNIA AIR RESOURCES BOARD AND IN COMPLIANCE WITH DISTRICT RULE 304 (NO CONFLICT OF INTEREST) SHALL CONDUCT THIS TEST.
 - B. A SOURCE TEST PROTOCOL SHALL BE SUBMITTED TO AQMD WITHIN 30 DAYS OF INITIAL START UP AND SHALL BE APPROVED BY AQMD BEFORE THE TEST COMMENCES. THE PROTOCOL SHALL INCLUDE PROPOSED OPERATING CONDITIONS OF THE EQUIPMENT DURING THE TEST, AND A DESCRIPTION OF ALL SAMPLING AND ANALYTICAL PROCEDURES TO BE USED.
 - C. SOURCE TESTING SHALL BE CONDUCTED WITHIN 60 CALENDAR DAYS AFTER NORMAL OPERATION OF THE EQUIPMENT HAS BEEN ESTABLISHED, BUT NO LATER THAN 180 DAYS AFTER INITIAL START UP.
 - D. THE INITIAL PERFORMANCE SOURCE TESTS SHALL BE PERFORMED WHEN THE BOILER IS OPERATING AT MAXIMUM, MINIMUM AND AVERAGE LOAD FOR EACH FUEL (DIGESTER GAS AND NATURAL GAS) TO BE BURNED. THE SAMPLING TIME AT EACH LOAD SHALL BE FOR A MINIMUM OF 15 CONSECUTIVE MINUTES.
 - E. TWO COPIES OF THE SOURCE TEST RESULTS SHALL BE SUBMITTED TO AQMD, ATTN. GAURANG RAWAL, WITHIN 60 DAYS OF THE TESTS COMPLETION. THE REPORT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

FUEL FLOW RATE (EACH FUEL)
FLUE GAS FLOW RATE (EACH FUEL)
TOTAL HEAT INPUT RATE, BTU/HR
TOTAL NON-METHANE ORGANICS (EXHAUST)
SPECIATED TRACE ORGANICS (EXHAUST, DIGESTER GAS)
TOTAL PARTICULATES (EXHAUST)
OXIDES OF NITROGEN (EXHAUST)
CARBON MONOXIDE (EXHAUST)
OXYGEN
DIGESTER GAS BTU (HHV), AND TOTAL SULFUR CONTENT (AS H₂S, PPMV)

THE REPORT SHALL PRESENT THE EMISSIONS DATA IN PARTS PER MILLION (PPMV) ON A DRY BASIS, POUNDS PER HOUR, AND LBS/MMBTU.
[RULE 217, RULE 404, RULE 1146, RULE 1303(A) (1), 1303 (B) (1), 1303(B) (2) - BACT, MODELING AND OFFSET, 1401]

9. THE SOURCE TEST PROTOCOL AND REPORT, PER CONDITION NO. 8, SHALL BE SUBMITTED TO,
SCAQMD – ATTN. GAURANG RAWAL
ENERGY/ PUBLIC SERVICES/WASTE MGMT. / TERMINALS - PERMITTING
ENGINEERING AND COMPLIANCE DIVISION
21865 COPLEY DRIVE
DIAMOND BAR, CA 91765



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10. EMISSIONS RESULTING FROM THIS EQUIPMENT SHALL NOT EXCEED THE FOLLOWING:

<u>POLLUTANT</u>	<u>POUNDS PER DAY</u>
CO	90.6
NOx	5.52 (3.1 WITH NATURAL GAS)
PM10	3.1
ROG	2.6
SOx	1.4

[RULE 1146, RULE 1303(a) (1), 1303(b) (2) - OFFSET]

Periodic Monitoring:

11. THE OPERATOR, AT LEAST ONCE EVERY FIVE YEARS, SHALL DETERMINE COMPLIANCE WITH THE EMISSION LIMITS IN CONDITION NO. 10 OF THIS PERMIT USING AQMD-APPROVED TEST METHODS. THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS. RULE 1146 COMPLIANCE TESTS MAY BE USED TO SATISFY PART OF THIS REQUIREMENT PROVIDED THAT MASS RATES ARE ALSO REPORTED. TO DEMONSTRATE COMPLIANCE WITH RULE 1146 CONCENTRATIONS LIMITS THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING, AND RECORDKEEPING REQUIREMENTS IN SECTIONS E AND K OF THIS PERMIT.

[RULE 1146, RULE 1303(a)(1) – BACT, 1303(b) (2) - OFFSET , RULE 3004 (a) (4) – PERIODIC MONITORING]

Emissions and Requirements:

12. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

- CO: 2000 PPMV, RULE 407
- CO: 400 PPMV, @ 3% O2, DRY BASIS, RULE 1146
- NOx: 30 PPMV, @ 3% O2, DRY BASIS, RULE 1146 (UNTIL 1/1/2015)
- NOx: 15 PPMV, @ 3% O2, DRY BASIS, ON AND AFTER JANUARY 1, 2015, DIGESTER GAS, RULE 1146
- NOx: 9 PPMV, @ 3% O2, DRY BASIS, ON AND AFTER JANUARY 1, 2015, NATURAL GAS, RULE 1146
- PM: RULE 404, SEE APPENDIX B.
- PM: 0.1 gr/scf, RULE 409
- SO2: 500 PPMV AS SO2, ORANGE COUNTY, RULE 53
- H2S: 40 PPMV TOTAL SULFUR, DIGESTER GAS



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

**A/N 545005
Granted as of 10/17/2013**

Equipment Description:

MODIFICATION TO BOILER, NO. 2, WITH PERMIT TO OPERATE D94232, BY THE REMOVAL OF THE EXISTING BURNER AND THE ADDITION OF A NEW BURNER, AMERICAN COMBUSTION TECHNOLOGY OR EQUAL, MODEL SLE-05-250 OR EQUAL, 10,205,800 BTU PER HOUR MAXIMUM, DIGESTER GAS AND NATURAL GAS (AS SECONDARY FUEL), AND REHABILITATION OF ANCILLARY EQUIPMENT

Conditions:

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS BOILER SHALL BE FIRED ON DIGESTER GAS AND OR NATURAL GAS ONLY. EXCEPT FOR PILOT GAS, NATURAL GAS SHALL ONLY BE USED IF DIGESTER GAS IS NOT AVAILABLE IN SUFFICIENT AMOUNT.
[RULE 204]
4. A FUEL METER SHALL BE INSTALLED AND MAINTAINED IN THE FUEL SUPPLY LINE(S) TO MEASURE, INDICATE AND RECORD THE AMOUNT OF FUEL(S) (SCFM) BURNED IN THIS EQUIPMENT.
[RULE 1303 (b) (1) & 1303 (b) (2) – MODELING & OFFSET]
5. WHEN IN OPERATION, TOTAL HEAT INPUT FOR THIS EQUIPMENT SHALL NOT EXCEED 10, 205, 800 BTU/HR. A DAILY LOG SHALL BE KEPT, INDICATING THE TOTAL HEATING VALUE (BTU/SCF) OF FUEL BURNED IN THIS EQUIPMENT, BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST MONTHLY BTU CONTENT READING.
[RULE 1303 (b) (1) & 1303 (b) (2) – MODELING & OFFSET]
6. THIS EQUIPMENT SHALL BE EQUIPPED WITH A CONTROL SYSTEM TO AUTOMATICALLY REGULATE THE COMBUSTION AIR AND FUEL RATE AS THE BOILER LOAD VARIES. THIS AUTOMATIC CONTROL SYSTEM SHALL BE ADJUSTED AND TUNED PERIODICALLY, ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS TO ASSURE ITS ABILITY TO REPEAT THE SAME PERFORMANCE AT THE SAME BURNER FIRING RATE.
[RULE 1146]



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7. THE FLUE GAS RECIRCULATION SYSTEM SHALL BE IN FULL USE WHENEVER THE BOILER IS IN OPERATION.
[RULE 1303(a) (1)-BACT]
8. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT AN INITIAL PERFORMANCE SOURCE TESTS, FOR EACH FUEL, UNDER THE FOLLOWING CONDITIONS:
- A. A TESTING LABORATORY CERTIFIED BY THE CALIFORNIA AIR RESOURCES BOARD AND IN COMPLIANCE WITH DISTRICT RULE 304 (NO CONFLICT OF INTEREST) SHALL CONDUCT THIS TEST.
 - B. A SOURCE TEST PROTOCOL SHALL BE SUBMITTED TO AQMD WITHIN 30 DAYS OF INITIAL START UP AND SHALL BE APPROVED BY AQMD BEFORE THE TEST COMMENCES. THE PROTOCOL SHALL INCLUDE PROPOSED OPERATING CONDITIONS OF THE EQUIPMENT DURING THE TEST, AND A DESCRIPTION OF ALL SAMPLING AND ANALYTICAL PROCEDURES TO BE USED.
 - C. SOURCE TESTING SHALL BE CONDUCTED WITHIN 60 CALENDAR DAYS AFTER NORMAL OPERATION OF THE EQUIPMENT HAS BEEN ESTABLISHED, BUT NO LATER THAN 180 DAYS AFTER INITIAL START UP.
 - D. THE INITIAL PERFORMANCE SOURCE TESTS SHALL BE PERFORMED WHEN THE BOILER IS OPERATING AT MAXIMUM, MINIMUM AND AVERAGE LOAD FOR EACH FUEL (DIGESTER GAS AND NATURAL GAS) TO BE BURNED. THE SAMPLING TIME AT EACH LOAD SHALL BE FOR A MINIMUM OF 15 CONSECUTIVE MINUTES.
 - E. TWO COPIES OF THE SOURCE TEST RESULTS SHALL BE SUBMITTED TO AQMD, ATTN. GAURANG RAWAL, WITHIN 60 DAYS OF THE TESTS COMPLETION. THE REPORT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

FUEL FLOW RATE (EACH FUEL)
FLUE GAS FLOW RATE (EACH FUEL)
TOTAL HEAT INPUT RATE, BTU/HR
TOTAL NON-METHANE ORGANICS (EXHAUST)
SPECIATED TRACE ORGANICS (EXHAUST, DIGESTER GAS)
TOTAL PARTICULATES (EXHAUST)
OXIDES OF NITROGEN (EXHAUST)
CARBON MONOXIDE (EXHAUST)
OXYGEN
DIGESTER GAS BTU (HHV), AND TOTAL SULFUR CONTENT (AS H₂S, PPMV)

THE REPORT SHALL PRESENT THE EMISSIONS DATA IN PARTS PER MILLION (PPMV) ON A DRY BASIS, POUNDS PER HOUR, AND LBS/MMBTU.

[RULE 217, RULE 404, RULE 1146, RULE 1303(A) (1), 1303 (B) (1), 1303(B) (2) - BACT, MODELING AND OFFSET, 1401]

9. THE SOURCE TEST PROTOCOL AND REPORT, PER CONDITION NO. 8, SHALL BE SUBMITTED TO,
SCAQMD – ATTN. GAURANG RAWAL
ENERGY/ PUBLIC SERVICES/WASTE MGMT. / TERMINALS - PERMITTING
ENGINEERING AND COMPLIANCE DIVISION
21865 COPLEY DRIVE
DIAMOND BAR, CA 91765



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

10. EMISSIONS RESULTING FROM THIS EQUIPMENT SHALL NOT EXCEED THE FOLLOWING:

<u>POLLUTANT</u>	<u>POUNDS PER DAY</u>
CO	90.6
NOx	5.52 (3.1 WITH NATURAL GAS)
PM10	3.1
ROG	2.6
SOx	1.4
[RULE 1146, RULE 1303(a) (1), 1303(b) (2) - OFFSET]	

Periodic Monitoring:

11. THE OPERATOR, AT LEAST ONCE EVERY FIVE YEARS, SHALL DETERMINE COMPLIANCE WITH THE EMISSION LIMITS IN CONDITION NO. 10 OF THIS PERMIT USING AQMD-APPROVED TEST METHODS. THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS. RULE 1146 COMPLIANCE TESTS MAY BE USED TO SATISFY PART OF THIS REQUIREMENT PROVIDED THAT MASS RATES ARE ALSO REPORTED. TO DEMONSTRATE COMPLIANCE WITH RULE 1146 CONCENTRATIONS LIMITS THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING, AND RECORDKEEPING REQUIREMENTS IN SECTIONS E AND K OF THIS PERMIT.
[RULE 1146, RULE 1303(a)(1) – BACT, 1303(b) (2) - OFFSET , RULE 3004 (a) (4) – PERIODIC MONITORING]

Emissions and Requirements:

12. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

- CO: 2000 PPMV, RULE 407
- CO: 400 PPMV, @ 3% O2, DRY BASIS, RULE 1146
- NOx: 30 PPMV, @ 3% O2, DRY BASIS, RULE 1146 (UNTIL 1/1/2015)
- NOx: 15 PPMV, @ 3% O2, DRY BASIS, ON AND AFTER JANUARY 1, 2015, DIGESTER GAS, RULE 1146
- NOx: 9 PPMV, @ 3% O2, DRY BASIS, ON AND AFTER JANUARY 1, 2015, NATURAL GAS, RULE 1146
- PM: RULE 404, SEE APPENDIX B.
- PM: 0.1 gr/scf, RULE 409
- SO2: 500 PPMV AS SO2, ORANGE COUNTY, RULE 53
- H2S: 40 PPMV TOTAL SULFUR, DIGESTER GAS



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

A/N 546364
Granted as of 4/16/2014

Equipment Description:

MODIFICATIONS TO THE RESOURCE RECOVERY SYSTEM NO. 1 (G27394) CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE (CG1-HB), COOPER BESSMER, SPARK IGNITION, FOUR STROKE, WITH A MODIFIED TURBOCHARGED-INTERCOOLED V-16 TYPE, MODEL NO. LSVB-16-SGC, 4166 HP, NATURAL GAS AND/OR DIGESTER GAS FIRED, DRIVING A 3000 KW ELECTRIC GENERATOR, WITH AN EXHAUST HEAT RECOVERY STEAM GENERATOR, 6,010,200 BTU/HR CAPACITY, UNFIRED.

BY THE ADDITION OF;

2. DIGESTER GAS CLEANING SYSTEM (DGCS), THREE VESSELS, EACH CONTAINING MINIMUM OF 9,900 LBS OF MEDIA, TOTAL 2100 CFM CAPACITY, WITH ASSOCIATED PIPING AND VALVES.

COMMON TO FIVE ENGINES (CG1-HB, CG2-HB, CG3-HB, CG4-HB AND CG5-HB)

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]
4. AT LEAST 30 DAYS PRIOR TO INSTALLATION OF THE EQUIPMENT, ORANGE COUNTY SANITATION DISTRICT (OCSD) SHALL PROVIDE TO SCAQMD FINAL DESIGN DRAWINGS, PROCESS AND FLOW DIAGRAM, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, SIZE AND MAXIMUM CAPACITY).
[RULE 204]
5. EFFECTIVE JANUARY 1, 2016, THIS EQUIPMENT SHALL ONLY BE VENTED TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL USE AND HAS A VALID PERMIT TO CONSTRUCT OR OPERATE ISSUED BY THE SCAQMD.
[RULE 1110.2]
6. THIS ENGINE SHALL HAVE AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2]



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

- 7. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE DIGESTER GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE QUANTITY OF DIGESTER GAS (IN SCFM) BURNED.
[RULE 204]
- 8. SAMPLING PORT SHALL BE INSTALLED FOR THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A FUEL GAS SAMPLE.
[RULE 204]
- 9. MONTHLY READINGS OF THE BTU CONTENT OF DIGESTER GAS (BTU/SCF) SUPPLIED TO THE ENGINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE 204]
- 10. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY.
[RULE 204]
- 11. THE TOTAL HEAT INPUT OF GASEOUS FUEL BURNED IN THIS ENGINE SHALL NOT EXCEED 33 MM BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS BURNED IN THIS ENGINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST MONTHLY BTU CONTENT READING.
[RULE 1303 (b) (1) AND 1303 (b) (2)-MODELING AND EMISSIONS OFFSET]
- 12. THIS EQUIPMENT SHALL BE OPERATED IN SUCH A MANNER THAT THE FOLLOWING EMISSION RATES ARE NOT EXCEEDED.

AIR CONTAMINANT	
CARBON MONOXIDE	600 PPMV AT 15% O2
PARTICULATES (PM10)	0.0058 GRAINS/ DSCF
ROG OR TNMHC (AS CARBON)	115 PPMV AT 15% O2
[RULE 1303 (a) (1), 1303(b) (1) AND 1303 (b) (2)-BACT, MODELING AND EMISSIONS OFFSET]	

- 13. EFFECTIVE JANUARY 1, 2016, THIS EQUIPMENT SHALL MEET THE EMISSIONS LIMITS (EXHAUST) OF TABLE III-B IN RULE 1110.2 (d) (1) (C), UNLESS THE OPERATOR DEMONSTRATES COMPLIANCE WITH THE LIMITS AND SCHEDULE IN RULE 1110.2 (d) (1) (H).
[RULE 1110.2]
- 14. THE COMBINED EMISSIONS FROM THE FOUR (4) CGS ENGINES, USING CALENDAR MONTHLY EMISSIONS DIVIDED BY 30, SHALL NOT EXCEED THE FOLLOWING (UNTIL JANUARY 1, 2016) :

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	2,644
NITROGEN OXIDES (AS NO2)	828
PARTICULATES (PM10)	72
ROG OR TNMHC (AS CH4)	372
SULFUR DIOXIDE	84
[RULE 1303 (b) (2)-EMISSIONS OFFSET]	



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

15. POST-COMBUSTION CONTROLLED EMISSIONS, INTO THE ATMOSPHERE, FROM THIS EQUIPMENT SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	497.6
NITROGEN OXIDES (AS NO ₂)	36.0
PARTICULATES (PM ₁₀)	18.0
ROG OR TNMHC (AS CH ₄)	25.60
SULFUR DIOXIDE	21.0
[RULE 204]	

16. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), OR AN ALTERNATIVE SYSTEM, AS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE ENGINE EXHAUST FOR CO, NO_x AND O₂ CONCENTRATIONS ON A DRY BASIS, EXCEPT DURING SHUTDOWN FOR MAINTENANCE OF THE SYSTEM. IN ADDITION, THE CEMS SHALL CONVERT THE ACTUAL CO AND NO_x TO MASS EMISSION RATES; AND RECORD THE ACTUAL AND CORRECTED ENGINE NO_x CONCENTRATION AT 15% O₂ AND MASS EMISSION RATES ON AN HOURLY AND DAILY BASIS.
[RULE 203, 218, RULE 1110.2]

17. WITHIN 180 DAYS AFTER INITIAL START-UP, (POST- MODIFICATION OF FIVE ENGINES; CG1-HB, CG2-HB, CG3-HB, CG4-HB AND CG5-HB), THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS, AT MAXIMUM ACHIEVABLE LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND, FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 45 DAYS AFTER TESTING. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED FOR APPROVAL, AT LEAST 30 DAYS PRIOR TO START OF THE TESTS TO THE SCAQMD, ENERGY/PUBLIC SERVICES/WASTE MANAGEMENT/TERMINAL PERMITTING, 21865 COPLEY DRIVE, DIAMOND BAR, CA 91765. THE SUBMITTAL SHALL INCLUDE A COPY OF THE ACTIVE PERMIT. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE SCAQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO:

- A. TOTAL NON-METHANE HYDROCARBONS (EXHAUST ONLY).
- B. CARBON MONOXIDE (EXHAUST ONLY)
- C. TOTAL PARTICULATE MATTER (EXHAUST ONLY).
- D. OXIDES OF NITROGEN (EXHAUST ONLY).
- E. OXYGEN (EXHAUST ONLY)
- F. FLOW RATE
- G. MOISTURE (EXHAUST ONLY)
- H. TOXIC AIR CONTAMINANTS (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
- I. ALDEHYDES (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
- J. TOTAL REDUCED SULFUR COMPOUNDS (DIGESTER GAS ONLY)
- K. NITROGEN AND CARBON DIOXIDE
- L. BTU CONTENTS (DIGESTER GAS ONLY)
- M. POWER OUTPUT



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

THE ROUTINE COMPLIANCE SOURCE TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH RULE 1110.2 REQUIREMENTS AND ABOVE REQUIREMENTS. APPROPRIATE SCAQMD STAFF SHALL BE NOTIFIED A MINIMUM OF 45 DAYS IN ADVANCE OF COMPLIANCE SOURCE TESTING TO DETERMINE IF PREVIOUSLY APPROVED SOURCE TEST PROTOCOL MAY BE USED IF NO EQUIPMENT AND PROCESS CHANGES HAVE BEEN MADE.

[RULE 404], [RULE 1110.2], [RULE 1303(b) (1) AND 1303(b) (2) - MODELING AND EMISSION OFFSET]

18. RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

19. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: RULE 1110.2 LIMIT
NOx: RULE 1110.2 LIMIT
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS.
VOC (TNMHC): RULE 1110.2 LIMIT
H2S: RULE 431.1



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

A/N 546365
Granted as of 4/16/2014

Equipment Description:

MODIFICATIONS TO THE RESOURCE RECOVERY SYSTEM NO. 2 (G27395) CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE (CG2-HB), COOPER BESSMER, SPARK IGNITION, FOUR STROKES, WITH A MODIFIED TURBOCHARGED-INTERCOOLED V-16 TYPE, MODEL NO. LSVB-16-SGC, 4166 HP, NATURAL GAS AND/OR DIGESTER GAS FIRED, DRIVING A 3000 KW ELECTRIC GENERATOR, WITH AN EXHAUST HEAT RECOVERY STEAM GENERATOR, 6,010,200 BTU/HR CAPACITY, UNFIRED.

BY THE ADDITION OF;

3. DIGESTER GAS CLEANING SYSTEM (DGCS), THREE VESSELS, EACH CONTAINING MINIMUM OF 9,900 LBS OF MEDIA, TOTAL 2100 CFM CAPACITY, WITH ASSOCIATED PIPING AND VALVES.

COMMON TO FIVE ENGINES (CG1-HB, CG2-HB, CG3-HB, CG4-HB AND CG5-HB)

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]
4. AT LEAST 30 DAYS PRIOR TO INSTALLATION OF THE EQUIPMENT, ORANGE COUNTY SANITATION DISTRICT (OCS D) SHALL PROVIDE TO SCAQMD FINAL DESIGN DRAWINGS, PROCESS AND FLOW DIAGRAM, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, SIZE AND MAXIMUM CAPACITY).
[RULE 204]
5. EFFECTIVE JANUARY 1, 2016, THIS EQUIPMENT SHALL ONLY BE VENTED TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL USE AND HAS A VALID PERMIT TO CONSTRUCT OR OPERATE ISSUED BY THE SCAQMD.
[RULE 1110.2]
6. THIS ENGINE SHALL HAVE AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2]



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

7. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE DIGESTER GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE QUANTITY OF DIGESTER GAS (IN SCFM) BURNED.
[RULE 204]
8. SAMPLING PORT SHALL BE INSTALLED FOR THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A FUEL GAS SAMPLE.
[RULE 204]
9. MONTHLY READINGS OF THE BTU CONTENT OF DIGESTER GAS (BTU/SCF) SUPPLIED TO THE ENGINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE 204]
10. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY.
[RULE 204]
11. THE TOTAL HEAT INPUT OF GASEOUS FUEL BURNED IN THIS ENGINE SHALL NOT EXCEED 33 MM BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS BURNED IN THIS ENGINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST MONTHLY BTU CONTENT READING.
[RULE 1303 (b) (1) AND 1303 (b) (2)-MODELING AND EMISSIONS OFFSET]
12. THIS EQUIPMENT SHALL BE OPERATED IN SUCH A MANNER THAT THE FOLLOWING EMISSION RATES ARE NOT EXCEEDED.

AIR CONTAMINANT

CARBON MONOXIDE	600 PPMV AT 15% O2
PARTICULATES (PM10)	0.0058 GRAINS/ DSCF
ROG OR TNMHC (AS CARBON)	115 PPMV AT 15% O2

[RULE 1303 (a) (1), 1303(b) (1) AND 1303 (b) (2)-BACT, MODELING AND EMISSIONS OFFSET]

13. EFFECTIVE JANUARY 1, 2016, THIS EQUIPMENT SHALL MEET THE EMISSIONS LIMITS (EXHAUST) OF TABLE III-B IN RULE 1110.2 (d) (1) (C), UNLESS THE OPERATOR DEMONSTRATES COMPLIANCE WITH THE LIMITS AND SCHEDULE IN RULE 1110.2 (d) (1) (H).
[RULE 1110.2]
14. THE COMBINED EMISSIONS FROM THE FOUR (4) CGS ENGINES, USING CALENDAR MONTHLY EMISSIONS DIVIDED BY 30, SHALL NOT EXCEED THE FOLLOWING (UNTIL JANUARY 1, 2016) :

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	2,644
NITROGEN OXIDES (AS NO2)	828
PARTICULATES (PM10)	72
ROG OR TNMHC (AS CH4)	372
SULFUR DIOXIDE	84

[RULE 1303 (b) (2)-EMISSIONS OFFSET]



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

15. POST-COMBUSTION CONTROLLED EMISSIONS, INTO THE ATMOSPHERE, FROM THIS EQUIPMENT SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	497.6
NITROGEN OXIDES (AS NO ₂)	36.0
PARTICULATES (PM ₁₀)	18.0
ROG OR TNMHC (AS CH ₄)	25.60
SULFUR DIOXIDE	21.0
[RULE 204]	

16. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), OR AN ALTERNATIVE SYSTEM, AS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE ENGINE EXHAUST FOR CO, NO_x AND O₂ CONCENTRATIONS ON A DRY BASIS, EXCEPT DURING SHUTDOWN FOR MAINTENANCE OF THE SYSTEM. IN ADDITION, THE CEMS SHALL CONVERT THE ACTUAL CO AND NO_x TO MASS EMISSION RATES; AND RECORD THE ACTUAL AND CORRECTED ENGINE NO_x CONCENTRATION AT 15% O₂ AND MASS EMISSION RATES ON AN HOURLY AND DAILY BASIS.
[RULE 203, 218, RULE 1110.2]

17. WITHIN 180 DAYS AFTER INITIAL START-UP, (POST- MODIFICATION OF FIVE ENGINES; CG1-HB, CG2-HB, CG3-HB, CG4-HB AND CG5-HB), THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS, AT MAXIMUM ACHIEVABLE LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND, FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 45 DAYS AFTER TESTING. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED FOR APPROVAL, AT LEAST 30 DAYS PRIOR TO START OF THE TESTS TO THE SCAQMD, ENERGY/PUBLIC SERVICES/WASTE MANAGEMENT/TERMINAL PERMITTING, 21865 COPLEY DRIVE, DIAMOND BAR, CA 91765. THE SUBMITTAL SHALL INCLUDE A COPY OF THE ACTIVE PERMIT. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE SCAQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO:

- A. TOTAL NON-METHANE HYDROCARBONS (EXHAUST ONLY).
- B. CARBON MONOXIDE (EXHAUST ONLY)
- C. TOTAL PARTICULATE MATTER (EXHAUST ONLY).
- D. OXIDES OF NITROGEN (EXHAUST ONLY).
- E. OXYGEN (EXHAUST ONLY)
- F. FLOW RATE
- G. MOISTURE (EXHAUST ONLY)
- H. TOXIC AIR CONTAMINANTS (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
- I. ALDEHYDES (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
- J. TOTAL REDUCED SULFUR COMPOUNDS (DIGESTER GAS ONLY)
- K. NITROGEN AND CARBON DIOXIDE
- L. BTU CONTENTS (DIGESTER GAS ONLY)
- M. POWER OUTPUT



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

THE ROUTINE COMPLIANCE SOURCE TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH RULE 1110.2 REQUIREMENTS AND ABOVE REQUIREMENTS. APPROPRIATE SCAQMD STAFF SHALL BE NOTIFIED A MINIMUM OF 45 DAYS IN ADVANCE OF COMPLIANCE SOURCE TESTING TO DETERMINE IF PREVIOUSLY APPROVED SOURCE TEST PROTOCOL MAY BE USED IF NO EQUIPMENT AND PROCESS CHANGES HAVE BEEN MADE.

[RULE 404], [RULE 1110.2], [RULE 1303(b) (1) AND 1303(b) (2) - MODELING AND EMISSION OFFSET]

18. RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

19. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: RULE 1110.2 LIMIT

NOx: RULE 1110.2 LIMIT

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS.

VOC (TNMHC): RULE 1110.2 LIMIT

H2S: RULE 431.1



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

A/N 546366
Granted as of 4/16/2014

Equipment Description:

MODIFICATIONS TO THE RESOURCE RECOVERY SYSTEM NO. 3 (G27396) CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE (CG3-HB), COOPER BESSMER, SPARK IGNITION, FOUR STROKES, WITH A MODIFIED TURBOCHARGED-INTERCOOLED V-16 TYPE, MODEL NO. LSVB-16-SGC, 4166 HP, NATURAL GAS AND/OR DIGESTER GAS FIRED, DRIVING A 3000 KW ELECTRIC GENERATOR, WITH AN EXHAUST HEAT RECOVERY STEAM GENERATOR, 6,010,200 BTU/HR CAPACITY, UNFIRED.

BY THE ADDITION OF;

4. DIGESTER GAS CLEANING SYSTEM (DGCS), THREE VESSELS, EACH CONTAINING MINIMUM OF 9,900 LBS OF MEDIA, TOTAL 2100 CFM CAPACITY, WITH ASSOCIATED PIPING AND VALVES.

COMMON TO FIVE ENGINES (CG1-HB, CG2-HB, CG3-HB, CG4-HB AND CG5-HB)

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]
4. AT LEAST 30 DAYS PRIOR TO INSTALLATION OF THE EQUIPMENT, ORANGE COUNTY SANITATION DISTRICT (OCSA) SHALL PROVIDE TO SCAQMD FINAL DESIGN DRAWINGS, PROCESS AND FLOW DIAGRAM, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, SIZE AND MAXIMUM CAPACITY).
[RULE 204]
5. EFFECTIVE JANUARY 1, 2016, THIS EQUIPMENT SHALL ONLY BE VENTED TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL USE AND HAS A VALID PERMIT TO CONSTRUCT OR OPERATE ISSUED BY THE SCAQMD.
[RULE 1110.2]
6. THIS ENGINE SHALL HAVE AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2]



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

7. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE DIGESTER GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE QUANTITY OF DIGESTER GAS (IN SCFM) BURNED.
[RULE 204]
8. SAMPLING PORT SHALL BE INSTALLED FOR THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A FUEL GAS SAMPLE.
[RULE 204]
9. MONTHLY READINGS OF THE BTU CONTENT OF DIGESTER GAS (BTU/SCF) SUPPLIED TO THE ENGINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE 204]
10. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY.
[RULE 204]
11. THE TOTAL HEAT INPUT OF GASEOUS FUEL BURNED IN THIS ENGINE SHALL NOT EXCEED 33 MM BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS BURNED IN THIS ENGINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST MONTHLY BTU CONTENT READING.
[RULE 1303 (b) (1) AND 1303 (b) (2)-MODELING AND EMISSIONS OFFSET]
12. THIS EQUIPMENT SHALL BE OPERATED IN SUCH A MANNER THAT THE FOLLOWING EMISSION RATES ARE NOT EXCEEDED.

AIR CONTAMINANT	
CARBON MONOXIDE	600 PPMV AT 15% O2
PARTICULATES (PM10)	0.0058 GRAINS/ DSCF
ROG OR TNMHC (AS CARBON)	115 PPMV AT 15% O2
[RULE 1303 (a) (1), 1303(b) (1) AND 1303 (b) (2)-BACT, MODELING AND EMISSIONS OFFSET]	

13. EFFECTIVE JANUARY 1, 2016, THIS EQUIPMENT SHALL MEET THE EMISSIONS LIMITS (EXHAUST) OF TABLE III-B IN RULE 1110.2 (d) (1) (C), UNLESS THE OPERATOR DEMONSTRATES COMPLIANCE WITH THE LIMITS AND SCHEDULE IN RULE 1110.2 (d) (1) (H).
[RULE 1110.2]
14. THE COMBINED EMISSIONS FROM THE FOUR (4) CGS ENGINES, USING CALENDAR MONTHLY EMISSIONS DIVIDED BY 30, SHALL NOT EXCEED THE FOLLOWING (UNTIL JANUARY 1, 2016) :

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	2,644
NITROGEN OXIDES (AS NO2)	828
PARTICULATES (PM10)	72
ROG OR TNMHC (AS CH4)	372
SULFUR DIOXIDE	84
[RULE 1303 (b) (2)-EMISSIONS OFFSET]	



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

15. POST-COMBUSTION CONTROLLED EMISSIONS, INTO THE ATMOSPHERE, FROM THIS EQUIPMENT SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	497.6
NITROGEN OXIDES (AS NO2)	36.0
PARTICULATES (PM10)	18.0
ROG OR TNMHC (AS CH4)	25.60
SULFUR DIOXIDE	21.0
[RULE 204]	

16. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), OR AN ALTERNATIVE SYSTEM, AS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE ENGINE EXHAUST FOR CO, NO_x AND O₂ CONCENTRATIONS ON A DRY BASIS, EXCEPT DURING SHUTDOWN FOR MAINTENANCE OF THE SYSTEM. IN ADDITION, THE CEMS SHALL CONVERT THE ACTUAL CO AND NO_x TO MASS EMISSION RATES; AND RECORD THE ACTUAL AND CORRECTED ENGINE NO_x CONCENTRATION AT 15% O₂ AND MASS EMISSION RATES ON AN HOURLY AND DAILY BASIS.
[RULE 203, 218, RULE 1110.2]

17. WITHIN 180 DAYS AFTER INITIAL START-UP, (POST- MODIFICATION OF FIVE ENGINES; CG1-HB, CG2-HB, CG3-HB, CG4-HB AND CG5-HB), THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS, AT MAXIMUM ACHIEVABLE LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND, FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 45 DAYS AFTER TESTING. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED FOR APPROVAL, AT LEAST 30 DAYS PRIOR TO START OF THE TESTS TO THE SCAQMD, ENERGY/PUBLIC SERVICES/WASTE MANAGEMENT/TERMINAL PERMITTING, 21865 COPLEY DRIVE, DIAMOND BAR, CA 91765. THE SUBMITTAL SHALL INCLUDE A COPY OF THE ACTIVE PERMIT. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE SCAQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO:

- A. TOTAL NON-METHANE HYDROCARBONS (EXHAUST ONLY).
- B. CARBON MONOXIDE (EXHAUST ONLY)
- C. TOTAL PARTICULATE MATTER (EXHAUST ONLY).
- D. OXIDES OF NITROGEN (EXHAUST ONLY).
- E. OXYGEN (EXHAUST ONLY)
- F. FLOW RATE
- G. MOISTURE (EXHAUST ONLY)
- H. TOXIC AIR CONTAMINANTS (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
- I. ALDEHYDES (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
- J. TOTAL REDUCED SULFUR COMPOUNDS (DIGESTER GAS ONLY)
- K. NITROGEN AND CARBON DIOXIDE
- L. BTU CONTENTS (DIGESTER GAS ONLY)
- M. POWER OUTPUT



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

THE ROUTINE COMPLIANCE SOURCE TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH RULE 1110.2 REQUIREMENTS AND ABOVE REQUIREMENTS. APPROPRIATE SCAQMD STAFF SHALL BE NOTIFIED A MINIMUM OF 45 DAYS IN ADVANCE OF COMPLIANCE SOURCE TESTING TO DETERMINE IF PREVIOUSLY APPROVED SOURCE TEST PROTOCOL MAY BE USED IF NO EQUIPMENT AND PROCESS CHANGES HAVE BEEN MADE.

[RULE 404], [RULE 1110.2], [RULE 1303(b) (1) AND 1303(b) (2) - MODELING AND EMISSION OFFSET]

18. RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

19. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: RULE 1110.2 LIMIT
NOx: RULE 1110.2 LIMIT
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS.
VOC (TNMHC): RULE 1110.2 LIMIT
H2S: RULE 431.1



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

**A/N 546367
Granted as of 4/16/2014**

Equipment Description:

MODIFICATIONS TO THE RESOURCE RECOVERY SYSTEM NO. 4 (G27397) CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE (CG4-HB), COOPER BESSMER, SPARK IGNITION, FOUR STROKES, WITH A MODIFIED TURBOCHARGED-INTERCOOLED V-16 TYPE, MODEL NO. LSVB-16-SGC, 4166 HP, NATURAL GAS AND/OR DIGESTER GAS FIRED, DRIVING A 3000 KW ELECTRIC GENERATOR, WITH AN EXHAUST HEAT RECOVERY STEAM GENERATOR, 6,010,200 BTU/HR CAPACITY, UNFIRED.

BY THE ADDITION OF;

5. DIGESTER GAS CLEANING SYSTEM (DGCS), THREE VESSELS, EACH CONTAINING MINIMUM OF 9,900 LBS OF MEDIA, TOTAL 2100 CFM CAPACITY, WITH ASSOCIATED PIPING AND VALVES.

COMMON TO FIVE ENGINES (CG1-HB, CG2-HB, CG3-HB, CG4-HB AND CG5-HB)

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]
4. AT LEAST 30 DAYS PRIOR TO INSTALLATION OF THE EQUIPMENT, ORANGE COUNTY SANITATION DISTRICT (OCS D) SHALL PROVIDE TO SCAQMD FINAL DESIGN DRAWINGS, PROCESS AND FLOW DIAGRAM, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, SIZE AND MAXIMUM CAPACITY).
[RULE 204]
5. EFFECTIVE JANUARY 1, 2016, THIS EQUIPMENT SHALL ONLY BE VENTED TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL USE AND HAS A VALID PERMIT TO CONSTRUCT OR OPERATE ISSUED BY THE SCAQMD.
[RULE 1110.2]
6. THIS ENGINE SHALL HAVE AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2]



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

7. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE DIGESTER GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE QUANTITY OF DIGESTER GAS (IN SCFM) BURNED.
[RULE 204]
8. SAMPLING PORT SHALL BE INSTALLED FOR THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A FUEL GAS SAMPLE.
[RULE 204]
9. MONTHLY READINGS OF THE BTU CONTENT OF DIGESTER GAS (BTU/SCF) SUPPLIED TO THE ENGINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE 204]
10. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY.
[RULE 204]
11. THE TOTAL HEAT INPUT OF GASEOUS FUEL BURNED IN THIS ENGINE SHALL NOT EXCEED 33 MM BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS BURNED IN THIS ENGINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST MONTHLY BTU CONTENT READING.
[RULE 1303 (b) (1) AND 1303 (b) (2)-MODELING AND EMISSIONS OFFSET]
12. THIS EQUIPMENT SHALL BE OPERATED IN SUCH A MANNER THAT THE FOLLOWING EMISSION RATES ARE NOT EXCEEDED.

AIR CONTAMINANT	
CARBON MONOXIDE	600 PPMV AT 15% O2
PARTICULATES (PM10)	0.0058 GRAINS/ DSCF
ROG OR TNMHC (AS CARBON)	115 PPMV AT 15% O2
[RULE 1303 (a) (1), 1303(b) (1) AND 1303 (b) (2)-BACT, MODELING AND EMISSIONS OFFSET]	

13. EFFECTIVE JANUARY 1, 2016, THIS EQUIPMENT SHALL MEET THE EMISSIONS LIMITS (EXHAUST) OF TABLE III-B IN RULE 1110.2 (d) (1) (C), UNLESS THE OPERATOR DEMONSTRATES COMPLIANCE WITH THE LIMITS AND SCHEDULE IN RULE 1110.2 (d) (1) (H).
[RULE 1110.2]
14. THE COMBINED EMISSIONS FROM THE FOUR (4) CGS ENGINES, USING CALENDAR MONTHLY EMISSIONS DIVIDED BY 30, SHALL NOT EXCEED THE FOLLOWING (UNTIL JANUARY 1, 2016) :

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	2,644
NITROGEN OXIDES (AS NO2)	828
PARTICULATES (PM10)	72
ROG OR TNMHC (AS CH4)	372
SULFUR DIOXIDE	84
[RULE 1303 (b) (2)-EMISSIONS OFFSET]	



**FACILITY PERMIT TO OPERATE
 ORANGE COUNTY SANITATION DISTRICT**

15. POST-COMBUSTION CONTROLLED EMISSIONS, INTO THE ATMOSPHERE, FROM THIS EQUIPMENT SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	497.6
NITROGEN OXIDES (AS NO ₂)	36.0
PARTICULATES (PM ₁₀)	18.0
ROG OR TNMHC (AS CH ₄)	25.60
SULFUR DIOXIDE	21.0
[RULE 204]	

16. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), OR AN ALTERNATIVE SYSTEM, AS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE ENGINE EXHAUST FOR CO, NO_x AND O₂ CONCENTRATIONS ON A DRY BASIS, EXCEPT DURING SHUTDOWN FOR MAINTENANCE OF THE SYSTEM. IN ADDITION, THE CEMS SHALL CONVERT THE ACTUAL CO AND NO_x TO MASS EMISSION RATES; AND RECORD THE ACTUAL AND CORRECTED ENGINE NO_x CONCENTRATION AT 15% O₂ AND MASS EMISSION RATES ON AN HOURLY AND DAILY BASIS.
 [RULE 203, 218, RULE 1110.2]

17. WITHIN 180 DAYS AFTER INITIAL START-UP, (POST- MODIFICATION OF FIVE ENGINES; CG1-HB, CG2-HB, CG3-HB, CG4-HB AND CG5-HB), THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS, AT MAXIMUM ACHIEVABLE LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND, FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 45 DAYS AFTER TESTING. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED FOR APPROVAL, AT LEAST 30 DAYS PRIOR TO START OF THE TESTS TO THE SCAQMD, ENERGY/PUBLIC SERVICES/WASTE MANAGEMENT/TERMINAL PERMITTING, 21865 COPLEY DRIVE, DIAMOND BAR, CA 91765. THE SUBMITTAL SHALL INCLUDE A COPY OF THE ACTIVE PERMIT. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE SCAQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO:

- A. TOTAL NON-METHANE HYDROCARBONS (EXHAUST ONLY).
- B. CARBON MONOXIDE (EXHAUST ONLY)
- C. TOTAL PARTICULATE MATTER (EXHAUST ONLY).
- D. OXIDES OF NITROGEN (EXHAUST ONLY).
- E. OXYGEN (EXHAUST ONLY)
- F. FLOW RATE
- G. MOISTURE (EXHAUST ONLY)
- H. TOXIC AIR CONTAMINANTS (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
- I. ALDEHYDES (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
- J. TOTAL REDUCED SULFUR COMPOUNDS (DIGESTER GAS ONLY)
- K. NITROGEN AND CARBON DIOXIDE
- L. BTU CONTENTS (DIGESTER GAS ONLY)
- M. POWER OUTPUT



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

THE ROUTINE COMPLIANCE SOURCE TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH RULE 1110.2 REQUIREMENTS AND ABOVE REQUIREMENTS. APPROPRIATE SCAQMD STAFF SHALL BE NOTIFIED A MINIMUM OF 45 DAYS IN ADVANCE OF COMPLIANCE SOURCE TESTING TO DETERMINE IF PREVIOUSLY APPROVED SOURCE TEST PROTOCOL MAY BE USED IF NO EQUIPMENT AND PROCESS CHANGES HAVE BEEN MADE.

[RULE 404], [RULE 1110.2], [RULE 1303(b) (1) AND 1303(b) (2) - MODELING AND EMISSION OFFSET]

18. RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

19. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
- CO: RULE 1110.2 LIMIT
 - NOx: RULE 1110.2 LIMIT
 - PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS.
 - VOC (TNMHC): RULE 1110.2 LIMIT
 - H2S: RULE 431.1



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

A/N 546368
Granted as of 4/16/2014

Equipment Description:

MODIFICATIONS TO THE RESOURCE RECOVERY SYSTEM NO. 5 (G27397) CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE (CG5-HB), COOPER BESSMER, SPARK IGNITION, FOUR STROKES, WITH A MODIFIED TURBOCHARGED-INTERCOOLED V-16 TYPE, MODEL NO. LSVB-16-SGC, 4166 HP, NATURAL GAS AND/OR DIGESTER GAS FIRED, DRIVING A 3000 KW ELECTRIC GENERATOR, WITH AN EXHAUST HEAT RECOVERY STEAM GENERATOR, 6,010,200 BTU/HR CAPACITY, UNFIRED.

BY THE ADDITION OF;

6. DIGESTER GAS CLEANING SYSTEM (DGCS), THREE VESSELS, EACH CONTAINING MINIMUM OF 9,900 LBS OF MEDIA, TOTAL 2100 CFM CAPACITY, WITH ASSOCIATED PIPING AND VALVES.

COMMON TO FIVE ENGINES (CG1-HB, CG2-HB, CG3-HB, CG4-HB AND CG5-HB)

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]
4. AT LEAST 30 DAYS PRIOR TO INSTALLATION OF THE EQUIPMENT, ORANGE COUNTY SANITATION DISTRICT (OCS D) SHALL PROVIDE TO SCAQMD FINAL DESIGN DRAWINGS, PROCESS AND FLOW DIAGRAM, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, SIZE AND MAXIMUM CAPACITY).
[RULE 204]
5. EFFECTIVE JANUARY 1, 2016, THIS EQUIPMENT SHALL ONLY BE VENTED TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL USE AND HAS A VALID PERMIT TO CONSTRUCT OR OPERATE ISSUED BY THE SCAQMD.
[RULE 1110.2]
6. THIS ENGINE SHALL HAVE AN OPERATIONAL NON-RESETTABLE TOTALIZING TIME METER TO DETERMINE THE ENGINE ELAPSED OPERATING TIME.
[RULE 1110.2]



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

7. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE DIGESTER GAS SUPPLY LINE TO THE ENGINE TO MEASURE AND RECORD THE QUANTITY OF DIGESTER GAS (IN SCFM) BURNED.
[RULE 204]
8. SAMPLING PORT SHALL BE INSTALLED FOR THE INLET GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A FUEL GAS SAMPLE.
[RULE 204]
9. MONTHLY READINGS OF THE BTU CONTENT OF DIGESTER GAS (BTU/SCF) SUPPLIED TO THE ENGINE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.
[RULE 204]
10. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF THE DAY.
[RULE 204]
11. THE TOTAL HEAT INPUT OF GASEOUS FUEL BURNED IN THIS ENGINE SHALL NOT EXCEED 33 MM BTU PER HOUR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE OF FUEL GAS BURNED IN THIS ENGINE BASED ON THE RECORDED FLOW RATE (SCFM) AND THE LATEST MONTHLY BTU CONTENT READING.
[RULE 1303 (b) (1) AND 1303 (b) (2)-MODELING AND EMISSIONS OFFSET]
12. THIS EQUIPMENT SHALL BE OPERATED IN SUCH A MANNER THAT THE FOLLOWING EMISSION RATES ARE NOT EXCEEDED.

AIR CONTAMINANT

CARBON MONOXIDE	600 PPMV AT 15% O2
PARTICULATES (PM10)	0.0058 GRAINS/ DSCF
ROG OR TNMHC (AS CARBON)	115 PPMV AT 15% O2

[RULE 1303 (a) (1), 1303(b) (1) AND 1303 (b) (2)-BACT, MODELING AND EMISSIONS OFFSET]

13. EFFECTIVE JANUARY 1, 2016, THIS EQUIPMENT SHALL MEET THE EMISSIONS LIMITS (EXHAUST) OF TABLE III-B IN RULE 1110.2 (d) (1) (C), UNLESS THE OPERATOR DEMONSTRATES COMPLIANCE WITH THE LIMITS AND SCHEDULE IN RULE 1110.2 (d) (1) (H).
[RULE 1110.2]
14. THE COMBINED EMISSIONS FROM THE FOUR (4) CGS ENGINES, USING CALENDAR MONTHLY EMISSIONS DIVIDED BY 30, SHALL NOT EXCEED THE FOLLOWING (UNTIL JANUARY 1, 2016) :

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	2,644
NITROGEN OXIDES (AS NO2)	828
PARTICULATES (PM10)	72
ROG OR TNMHC (AS CH4)	372
SULFUR DIOXIDE	84

[RULE 1303 (b) (2)-EMISSIONS OFFSET]



**FACILITY PERMIT TO OPERATE
 ORANGE COUNTY SANITATION DISTRICT**

15. POST-COMBUSTION CONTROLLED EMISSIONS, INTO THE ATMOSPHERE, FROM THIS EQUIPMENT SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	LBS/DAY
CARBON MONOXIDE	497.6
NITROGEN OXIDES (AS NO ₂)	36.0
PARTICULATES (PM ₁₀)	18.0
ROG OR TNMHC (AS CH ₄)	25.60
SULFUR DIOXIDE	21.0
[RULE 204]	

16. THE OPERATOR SHALL INSTALL AND MAINTAIN A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS), OR AN ALTERNATIVE SYSTEM, AS APPROVED BY THE EXECUTIVE OFFICER, TO MEASURE THE ENGINE EXHAUST FOR CO, NO_x AND O₂ CONCENTRATIONS ON A DRY BASIS, EXCEPT DURING SHUTDOWN FOR MAINTENANCE OF THE SYSTEM. IN ADDITION, THE CEMS SHALL CONVERT THE ACTUAL CO AND NO_x TO MASS EMISSION RATES; AND RECORD THE ACTUAL AND CORRECTED ENGINE NO_x CONCENTRATION AT 15% O₂ AND MASS EMISSION RATES ON AN HOURLY AND DAILY BASIS.
 [RULE 203, 218, RULE 1110.2]

17. WITHIN 180 DAYS AFTER INITIAL START-UP, (POST- MODIFICATION OF FIVE ENGINES; CG1-HB, CG2-HB, CG3-HB, CG4-HB AND CG5-HB), THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS, AT MAXIMUM ACHIEVABLE LOAD, IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND, FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 45 DAYS AFTER TESTING. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED FOR APPROVAL, AT LEAST 30 DAYS PRIOR TO START OF THE TESTS TO THE SCAQMD, ENERGY/PUBLIC SERVICES/WASTE MANAGEMENT/TERMINAL PERMITTING, 21865 COPLEY DRIVE, DIAMOND BAR, CA 91765. THE SUBMITTAL SHALL INCLUDE A COPY OF THE ACTIVE PERMIT. WRITTEN RESULTS OF SUCH PERFORMANCE TESTS SHALL BE SUBMITTED WITHIN 60 DAYS AFTER TESTING. NOTICE SHALL BE PROVIDED TO THE SCAQMD 10 DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO:

- A. TOTAL NON-METHANE HYDROCARBONS (EXHAUST ONLY).
- B. CARBON MONOXIDE (EXHAUST ONLY)
- C. TOTAL PARTICULATE MATTER (EXHAUST ONLY).
- D. OXIDES OF NITROGEN (EXHAUST ONLY).
- E. OXYGEN (EXHAUST ONLY)
- F. FLOW RATE
- G. MOISTURE (EXHAUST ONLY)
- H. TOXIC AIR CONTAMINANTS (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
- I. ALDEHYDES (EXHAUST ONLY), FOR ONE ENGINE PER YEAR
- J. TOTAL REDUCED SULFUR COMPOUNDS (DIGESTER GAS ONLY)
- K. NITROGEN AND CARBON DIOXIDE
- L. BTU CONTENTS (DIGESTER GAS ONLY)
- M. POWER OUTPUT



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

THE ROUTINE COMPLIANCE SOURCE TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH RULE 1110.2 REQUIREMENTS AND ABOVE REQUIREMENTS. APPROPRIATE SCAQMD STAFF SHALL BE NOTIFIED A MINIMUM OF 45 DAYS IN ADVANCE OF COMPLIANCE SOURCE TESTING TO DETERMINE IF PREVIOUSLY APPROVED SOURCE TEST PROTOCOL MAY BE USED IF NO EQUIPMENT AND PROCESS CHANGES HAVE BEEN MADE.

[RULE 404], [RULE 1110.2], [RULE 1303(b) (1) AND 1303(b) (2) - MODELING AND EMISSION OFFSET]

18. RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]

Emissions and Requirements:

19. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

CO: RULE 1110.2 LIMIT

NOx: RULE 1110.2 LIMIT

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS.

VOC (TNMHC): RULE 1110.2 LIMIT

H2S: RULE 431.1



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

**A/N 556626
Granted as of 6-26-2014**

Equipment Description:

ALTERATION OF THE EXISTING SEWAGE TREATMENT PLANT (250 MGD), P/O G25942, CONSISTING OF:

1. INFLUENT STATION (HEADWORKS "D") CONSISTING OF INFLUENT TRUNKLINES, INFLUENT DIVERSION AND METERING, SIX (5 DUTY + 1 STANDBY) BARSCREENS, SCREENING HANDLING, INFLUENT PUMPS, GRIT REMOVAL AND HANDLING, PRIMARY INFLUENT SPLITTER AND METERING, AND FERRIC CHLORIDE FACILITY.
2. WETWELL (WASTE SIDE STREAM PUMP STATION) WITH ASSOCIATED PUMPS.
3. SEVENTEEN PRIMARY BASINS, THREE 41'-0" W. X 179'-0" L. X 8'-0" D., WITH ALUMINUM COVERS, FOURTEEN 140'-0" DIA. X 9'-0" D., WITH ALUMINUM GEODESIC DOME COVERS, AND ASSOCIATED SLUDGE AND SCUM COLLECTORS AND PUMPS.
4. EIGHT ACTIVATED SLUDGE OXYGEN REACTORS, 139,656 CUBIC FEET CAPACITY, 46'-0" W. X 184'-0" L. X 16'-6" D., WITH ASSOCIATED MIXERS.
5. TWO PURE OXYGEN GENERATION UNITS, 40,000 GALLON CAPACITY EACH, WITH TWO STORAGE TANKS AND ASSOCIATED COMPRESSORS.
6. TWELVE SECONDARY CLARIFIERS, 61'-0" W. X 171'-0" L. X 14'-0" D., WITH ASSOCIATED SLUDGE COLLECTORS.
7. EAST SECONDARY SLUDGE PUMP STATION WITH ASSOCIATED PUMPS.
8. WEST SECONDARY SLUDGE PUMP STATION WITH ASSOCIATED PUMPS.
9. FOUR DISSOLVED AIR FLOATATION THICKENERS, EACH 55'-0" DIA. X 8'-6" D., WITH ASSOCIATED COLLECTOR DRIVES AND PUMPS.
10. TWENTY DIGESTER TANKS, TWO 90'-0" DIA. X 30'-0" D., EACH 190,800 CUBIC FEET CAPACITY, SIX 80'-0" DIA. X 33'-0" D., EACH 164,120 CUBIC FEET CAPACITY, THREE 80'-0" DIA. X 33'-0" D., EACH 166,630 CUBIC FEET CAPACITY, FOUR 105'-0" DIA. X 30'-0" D., EACH 293,680 CUBIC FEET CAPACITY, FIVE 80'-0" DIA. X 18'-0" H., WITH ASSOCIATED PUMPS AND GRINDERS. EQUIPPED WITH OPTIONAL PASSIVE CARBON ADSORBERS.
11. LOW PRESSURE DIGESTER GAS STORAGE TANK, 25,000 CUBIC FEET CAPACITY, 42'-0" DIA. X 30'-0" H., WITH ASSOCIATED COMPRESSORS.
12. FERROUS AND/OR FERRIC CHLORIDE INJECTION STATION WITH TWO STORAGE TANKS, EACH 12'-0" DIA. X 18'-0" H., AND ASSOCIATED PUMPS.



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13. SLUDGE PROCESSING STATION WITH ASSOCIATED GRINDERS, BELT FILTER PRESSES, DEWATERED BIOSOLIDS STORAGE SILOS (OR CAKE STORAGE BINS), AND TRUCK LOADING BAY..
14. TWO POLYMER STORAGE TANKS, EACH 20,000 GALLON CAPACITY, WITH ASSOCIATED PUMPS.
15. FOUR POLYMER MIX TANKS, EACH 8,500 GALLON CAPACITY, WITH ASSOCIATED MIXERS AND PUMPS.
16. PRIMARY EFFLUENT DIVERSION STRUCTURE.
17. THREE TRICKLING FILTERS, COVERED, PRIMARY EFFLUENT TREATMENT (TOTAL 60 MGD AVERAGE CAPACITY AND 182 MGD PEAK FLOW), EACH 150' DIA. X 28' H., OVERALL, WITH MODULAR PLASTIC CROSS - FLOW FILTER MEDIA, SPRAY NOZZLES, AND ASSOCIATED PUMPS.
18. FOUR SOLIDS CONTACT (SC) REACTORS, FOUR SLUDGE RE-AERATION (SR) REACTORS, UNCOVERED, TWO MIXED LIQUOR CHANNELS (TOTAL 1.68 MG VOLUME), AND WITH ASSOCIATED AIR BLOWERS.
19. SIX TRICKLING FILTER CLARIFIERS, UNCOVERED, EACH 135' DIA. X 19' SIDEWATER DEPTH, WITH FLOCCULATING CENTER WELLS, HYDRAULIC SLUDGE COLLECTORS, AND INBOARD LAUNDERS.
20. SLUDGE BLENDING FACILITY WITH TWO SLUDGE BLENDING TANKS (SBTs), EACH 26,000 GALLON CAPACITY, WITH ASSOCIATED PIPING AND PUMPS.

BY THE REMOVAL OF:

13. SLUDGE PROCESSING STATION WITH ASSOCIATED GRINDERS AND BELT FILTER PRESSES.
14. TWO POLYMER STORAGE TANKS, EACH 20,000 GALLON CAPACITY, WITH ASSOCIATED PUMPS.
15. FOUR POLYMER MIX TANKS, EACH 8,500 GALLON CAPACITY, WITH ASSOCIATED MIXERS AND PUMPS.

AND BY THE ADDITION OF:

DIGESTED SLUDGE DEWATERING FACILITY, LOCATED IN A BUILDING, (OCSO PROJECT P2-92)

21. CENTRATE WET WELL.
22. BIOSOLIDS LOADING SLUDGE PUMPS (5)
CENTRIFUGES (5): ANDRITZ SEPARATION, TYPE D7LL OR SIMILAR
CENTRATE PUMPS (2): FAIRBANKS MORSE, MAXIMUM 1474 GPM, 18.5 H.P. OR SIMILAR
CAKE PUMPS (5) - SCHWING BIOSET, MODEL KSP25 V (HD) L, 39 GPM, 150 H.P. OR SIMILAR
23. TWO POLYMER STORAGE TANKS, EACH APPROXIMATELY 7,500 GALLON CAPACITY, WITH ASSOCIATED PUMPS.
24. TWO POLYMER AGING TANKS, EACH APPROXIMATELY 5,000 GALLON CAPACITY, WITH ASSOCIATED PUMPS.



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]
4. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THE EQUIPMENT IS NOT COMPLETED WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]
5. ORANGE COUNTY SANITATION DISTRICT (OCS D) SHALL COMPLY WITH ALL APPLICABLE MITIGATION MEASURES STIPULATED IN THE STATEMENT OF FINDINGS, STATEMENT OF OVERRIDING CONSIDERATION, AND MITIGATION OR MONITORING PLAN DOCUMENT (THAT APPLIES TO PROJECT P2-92), WHICH IS PART OF THE CERTIFIED FINAL SUBSEQUENT ENVIRONMENTAL IMPACT REPORT (SEIR) FOR THIS FACILITY AS APPROVED BY THE LEAD AGENCY.
[CA PRC CEQA, 11-23-1970]
6. HEADWORKS FACILITY, PRIMARY BASINS, SLUDGE BLENDING FACILITY, DISSOLVED AIR FLOATATION THICKENERS, TRICKLING FILTER FACILITY AND NEW SLUDGE DEWATERING FACILITY (PROJECT P2-92) SHALL BE VENTED TO THEIR DESIGNATED AIR POLLUTION CONTROL SYSTEMS WHICH ARE IN OPERATION PER ITS' VALID PERMITS TO CONSTRUCT OR OPERATE ISSUED BY THE SCAQMD. IN THE EVENT AN AIR POLLUTION CONTROL SYSTEM IS REMOVED FROM OPERATION DURING CONSTRUCTION OR MAINTENANCE WORK, THE H₂S CONCENTRATION IN EXHAUST AIR SHALL BE BELOW THE LIMITS SPECIFIED IN THE REMOVED AIR POLLUTION CONTROL SYSTEM'S PERMIT. EACH SUCH CONSTRUCTION OR MAINTENANCE EVENT SHALL BE RECORDED IN A DAILY LOG.
[RULE 402, 1303(a) (1)-BACT, 1401]
7. AFTER COMPLETION OF CONSTRUCTION OF P2-92, THE BUILDING ENCLOSING THE DIGESTED SLUDGE DEWATERING FACILITY SHALL REMAIN CLOSED AT ALL TIMES, EXCEPT TO ALLOW PERSONNEL TO ENTER OR EXIT; AFTER COMPLETION OF CONSTRUCTION OF P2-92, THE BUILDING ENCLOSING THE DIGESTED SLUDGE DEWATERING FACILITY SHALL REMAIN CLOSED AT ALL TIMES, EXCEPT TO ALLOW PERSONNEL TO ENTER OR EXIT; FACILITATE OPERATIONS/MAINTENANCE ACTIVITIES OR TO ALLEVIATE SAFETY ISSUES.
[RULE 204, 402]
8. THE FERROUS AND/OR FERRIC CHLORIDE INJECTION STATION SHALL BE IN USE TO THE EXTENT NECESSARY TO MAINTAIN THE H₂S CONCENTRATION IN THE DIGESTER GAS TO THE PERMITTED LIMIT.
[RULE 431.1]



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

9. RAW DIGESTER GAS PRODUCED AT THIS FACILITY SHALL NOT BE RELEASED INTO THE ATMOSPHERE, EXCEPT DURING MOMENTARY AUTOMATIC ACTIVATION OF PRESSURE RELIEF SAFETY DEVICES. ALL COLLECTED DIGESTER GAS SHALL BE EITHER COMBUSTED IN DIGESTER GAS FLARES, INTERNAL COMBUSTION ENGINES, OR BOILERS WITH VALID AQMD PERMIT, OR SHALL BE TREATED THROUGH OPTIONAL PASSIVE CARBON ADSORBERS. EACH SUCH PRESSURE RELIEF ACTIVATION SHALL BE MAINTAINED IN A DAILY LOG.
[RULE 402, RULE 1401]
10. RAW DIGESTER GAS RELEASES DUE TO EQUIPMENT FAILURE SHALL BE REPORTED IN ACCORDANCE WITH RULE 430. UPON DISCOVERY OF SUCH EMISSIONS, IMMEDIATE REMEDIAL MEASURES SHALL BE PUT INTO ACTION TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
[RULE 402, RULE 430]
11. THE CALENDAR MONTHLY AVERAGE DAILY PRIMARY EFFLUENT FLOW RATE, TO THE SECONDARY TREATMENT PROCESS, SHALL NOT EXCEED 150 MILLIONS GALLONS PER DAY, EXCEPT DURING WET WEATHER PERIODS AND EMERGENCY PERIODS INVOLVING PUBLIC HEALTH SAFETY. THE RECORDS FOR THE PRIMARY EFFLUENT AVERAGE DAILY FLOW RATE (MGD), TREATED BY THE SECONDARY PROCESS, SHALL BE KEPT ON FILE.
[RULE 1303(b) (2) -OFFSETS, 402, 1401]
12. THE CALENDAR MONTHLY AVERAGE DAILY FLOW RATE OF WASTEWATER TREATED AT THIS FACILITY SHALL NOT EXCEED 250 MILLION GALLONS PER DAY (MGD) EXCEPT DURING WET WEATHER PERIODS. THE RECORDS FOR THE WASTEWATER FLOW RATE (MGD) MEASURED SHALL BE RECORDED AND KEPT ON FILE.
[RULE 1303(b) (2) -OFFSETS, 402, 1401]



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

A/N 556627
Granted as of 6-26-2014

Equipment Description:

AIR POLLUTION CONTROL SYSTEM FOR THE NEW SLUDGE DEWATERING FACILITY (P2-92),
CONSISTING OF;

1. FOUL-AIR DUCT(S) FROM THE CENTRIFUGES, CAKE (BIOSOLIDS) BINS AND CENTRATE WET WELL.
2. TWO BLOWERS, ONE STANDBY, HARTZELL SERIES 41 TYPE FA, OR SIMILAR, CAPABLE OF APPROXIMATELY 7500 CFM AT 12" STATIC PRESSURE.
3. WET SCRUBBER, PACKED BED, APPROXIMATELY 4' DIA. X 8' H., WITH 4' H. POLYPROPYLENE PACKING MATERIAL, SPRAY NOZZLES, WATER RECIRCULATION, MAKE-UP WATER AND ACID SUPPLY (AS BACK-UP) LINES, SUMP WITH PH PROBE, AND ASSOCIATED PUMPS.
4. BIOFILTER, CELL A, B AND C, CUSTOM MADE, APPROXIMATELY 20' W. X 43' L. X 22' H., OVERALL DIMENSIONS, WITH APPROXIMATELY 8' H. INORGANIC ENGINEERED MEDIA, AND AN IRRIGATION SPRAY(S) SYSTEM.
5. TREATED AIR EXHAUST STACK, 2' DIA. X 47' - 6" H. ABOVE GRADE.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL BE OPERATED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
[RULE 204]
4. THIS PERMIT SHALL EXPIRE IF CONSTRUCTION OF THE EQUIPMENT IS NOT COMPLETED WITHIN ONE YEAR FROM THE DATE OF ISSUANCE OF THIS PERMIT UNLESS AN EXTENSION IS GRANTED BY THE EXECUTIVE OFFICER.
[RULE 205]



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

5. ORANGE COUNTY SANITATION DISTRICT (OCSA) SHALL COMPLY WITH ALL APPLICABLE MITIGATION MEASURES STIPULATED IN THE STATEMENT OF FINDINGS, STATEMENT OF OVERRIDING CONSIDERATION, AND MITIGATION OR MONITORING PLAN DOCUMENT (THAT APPLIES TO PROJECT P2-92), WHICH IS PART OF THE CERTIFIED FINAL SUBSEQUENT ENVIRONMENTAL IMPACT REPORT (SEIR) FOR THIS FACILITY AS APPROVED BY THE LEAD AGENCY.
[CA PRC CEQA, 11-23-1970]
6. A FLOW METER SHALL BE INSTALLED AND MAINTAINED AT THE INLET STREAM TO THE WET SCRUBBER TO INDICATE THE TOTAL AIR FLOW RATE IN CUBIC FEET PER MINUTE (CFM). THE TOTAL AIR FLOW RATE SHALL NOT EXCEED 7,500 CFM, DAILY AVERAGE. IN CASE A PRESSURE SENSOR DEVICE IS USED IN PLACE OF THE FLOW METER, A CONVERSION CHART SHALL BE MAINTAINED TO INDICATE THE CORRESPONDING FLOW RATE, IN CFM, TO THE PRESSURE READING.
[RULE 203]
7. A PRESSURE DIFFERENTIAL GAUGE INDICATING THE PRESSURE DROP ACROSS THE SCRUBBER PACKING BED SHALL BE INSTALLED AND MAINTAINED. THE PRESSURE DROP ACROSS THE PACKING BED SHALL BE MAINTAINED BELOW 2 INCHES OF WATER COLUMN, WHEN THE SCRUBBER IS IN OPERATION.
[RULE 203]
8. A PH METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE PH OF THE SCRUBBING SOLUTION (SUMP), WHENEVER SULFURIC ACID IS USED. THE PH OF THE SCRUBBING SOLUTION SHALL BE MAINTAINED BETWEEN 1 TO 8.
[RULE 203]
9. WHEN THE EQUIPMENT IS IN OPERATION, THE INLET FLOW RATE, SCRUBBING SOLUTION FLOW RATE, PH OF THE SCRUBBING SOLUTION, PRESSURE DIFFERENTIAL ACROSS THE SCRUBBER PACKING BED SHALL BE MONITORED AND RECORDED AT LEAST ONCE A DAY FOR THE FIRST MONTH OF OPERATION AND WEEKLY THEREAFTER.
[RULE 203]
10. WHEN BIOFILTER IS IN OPERATION, THE CONCENTRATION, PPMV, OF HYDROGEN SULFIDE (H₂S), IN EXHAUST AIR (STACK) SHALL BE MONITORED AND RECORDED, AT LEAST DAILY. THE BIOFILTER SURFACE IRRIGATION SYSTEM SHALL BE MAINTAINED IN GOOD OPERATING CONDITION AT ALL TIMES AND SHALL BE UTILIZED TO MAINTAIN THE DESIRED MOISTURE CONTENT FOR THE BIOFILTER MEDIA.
[RULE 402, 1401]
11. EMISSIONS FROM THIS EQUIPMENT MEASURED IN THE EXHAUST STACK SHALL NOT EXCEED THE FOLLOWING:

HYDROGEN SULFIDE (H ₂ S)	1 PPMV- DAILY AVERAGE
AMMONIA (NH ₃)	5 PPMV- DAILY AVERAGE

[RULE 402, 1401]
12. IF THE OPERATION OF THIS EQUIPMENT RESULTS IN CONSIDERABLE NUMBER OF ODOR COMPLAINTS, MITIGATION MEASURES SHALL BE IMPLEMENTED IMMEDIATELY.
[RULE 402]



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13. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR AT LEAST FIVE YEARS, AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 203]



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

**A/N 557229
Granted as of 4/16/2014**

Equipment Description:

STORAGE TANK, NO. 26KTNK001, AQUEOUS UREA SOLUTION (32.5% v), ABOVE GROUND, 2,000 GALLON CAPACITY, VENTING TO ATMOSPHERE.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
3. THIS EQUIPMENT SHALL ONLY BE USED FOR STORAGE OF AQUEOUS UREA SOLUTION.



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

**A/N 557230
Granted as of 4/16/2014**

Equipment Description:

STORAGE TANK, NO. 26KTNK005, AQUEOUS UREA SOLUTION (32.5% v), ABOVE GROUND, 2,000 GALLON CAPACITY, VENTING TO ATMOSPHERE.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
3. THIS EQUIPMENT SHALL ONLY BE USED FOR STORAGE OF AQUEOUS UREA SOLUTION.



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

PERMIT TO CONSTRUCT

A/N 559228
Granted as of 4/16/2014

Equipment Description:

AIR POLLUTION CONTROL SYSTEM NO. 1 CONSISTING OF:

1. CATALYTIC OXIDIZER, JOHNSON MATTHEY INC. OR EQUAL, MODEL NO. 91449 OR EQUAL, ALUMINUM OXIDE OR PLATINUM CATALYST ACTIVE MATERIAL, WITH 200 CPSI OXIDATION CATALYST OR EQUAL, 18.67 CUBIC FEET TOTAL VOLUME, WITH ASSOCIATED AUTOMATIC TEMPERATURE AND PRESSURE MONITORING DEVICES AND CONTROLS, AND WITH PROVISIONS FOR ADDING TWO LAYERS OF CATALYST.
2. SELECTIVE CATALYTIC REDUCTION, JOHNSON MATTHEY INC. OR EQUAL, MODEL NO. 79449 OR EQUAL, METALLIC SUBSTRATE, 37.33 CUBIC FOOT TOTAL VOLUME AND WITH PROVISIONS FOR ADDING TWO LAYERS OF CATALYST.
3. AQUEOUS UREA SOLUTION DOSING UNIT, INJECTORS, AND WITH ASSOCIATED AUTOMATIC TEMPERATURE, PRESSURE MONITORING AND CONTROL DEVICES.
4. EXHAUST STACK, 2'-6" DIA. X 59' H., ABOVE GROUND.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. AT LEAST 30 DAYS PRIOR TO INSTALLATION OF THE EQUIPMENT, ORANGE COUNTY SANITATION DISTRICT (OCSA) SHALL PROVIDE TO SCAQMD FINAL DESIGN DRAWINGS, PROCESS AND FLOW DIAGRAM, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, SIZE AND MAXIMUM CAPACITY).
[RULE 204]
4. THE OPERATOR SHALL INSTALL AND MAINTAIN TEMPERATURE MEASURING AND RECORDING SYSTEMS TO MEASURE AND RECORD THE INLET AND OUTLET TEMPERATURES OF THE OXIDATION CATALYST AND THE SELECTIVE REDUCTION CATALYST. THE TEMPERATURES SHALL BE CONTINUOUSLY MEASURED AND RECORDED. THE TEMPERATURE GAUGES SHALL BE ACCURATE TO PLUS OR MINUS 5 PERCENT, AND BE CALIBRATED ONCE EVERY TWELVE MONTHS.
[RULE 204]



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5. THE OPERATOR SHALL INSTALL AND MAINTAIN DIFFERENTIAL PRESSURE AND RECORDING SYSTEMS TO MEASURE AND RECORD THE INLET AND OUTLET PRESSURES ACROSS THE OXIDATION CATALYST AND THE SELECTIVE REDUCTION CATALYST. HE DIFFERENTIAL PRESSURES SHALL BE CONTINUOUSLY MEASURED AND RECORDED.
[RULE 204]
6. BASED ON THE OPERATING PARAMETERS' MEASURED AND MONITORED RESULTS OVER THE TWO-YEAR PERIOD (PER CONDITION #4 AND #5), OPERATING PARAMETERS' RANGE SHALL BE ESTABLISHED FOR THE PERMIT TO OPERATE.
[RULE 204]
7. EXCEPT DURING STARTUP AND SHUTDOWN OF THE SCR SYSTEM, THE UREA FEED CONTROL SYSTEM SHALL BE IN OPERATION.
[RULE 204]
8. THE OPERATOR SHALL INSTALL AND MAINTAIN A UREA FLOW RATE MEASURING AND RECORDING SYSTEM TO ACCURATELY INDICATE AND RECORD THE UREA INJECTION RATE TO THE SELECTIVE CATALYTIC REDUCTION SYSTEM.
[RULE 204]
9. THE OPERATOR SHALL INSTALL AND MAINTAIN A NO_x ANALYZER TO MEASURE SCR INLET NO_x CONCENTRATION AND CALIBRATED ANNUALLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
[RULE 204]
10. WHEN SCR IS IN OPERATION, THE OPERATOR SHALL ANALYZE THE UREA INJECTION RATE, AND THE SCR INLET AND OUTLET NO_x EMISSION RATE TO ESTIMATE THE AMMONIA CONCENTRATION IN THE SCR OUTLET, BASED ON ONE HOUR AVERAGE.
[RULE 204]
11. SAMPLING PORTS SHALL BE INSTALLED AT THE INLET AND OUTLET OF THE AIR POLLUTION CONTROL SYSTEM.
[RULE 204]
12. THE AMMONIA SLIP SHALL BE TESTED WITHIN 180 DAYS AFTER INITIAL START-UP (POST MODIFICATION), AND ANNUALLY THEREAFTER. THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND, FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 45 DAYS AFTER TESTING.
[RULE 1303(b) (1)], [RULE 1401]
13. RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

Emissions and Requirements:

14. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
NH3 (AMMONIA SLIP): 5 PPMV AT 15% O2, 60 MINUTE AVERAGE, AFTER SCR START UP.
[RULE 1303(b) (1)], [RULE 1402]



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

**A/N 559229
Granted as of 4/16/2014**

Equipment Description:

AIR POLLUTION CONTROL SYSTEM NO. 2 CONSISTING OF:

1. CATALYTIC OXIDIZER, JOHNSON MATTHEY INC. OR EQUAL, MODEL NO. 91449 OR EQUAL, ALUMINUM OXIDE OR PLATINUM CATALYST ACTIVE MATERIAL, WITH 200 CPSI OXIDATION CATALYST OR EQUAL, 18.67 CUBIC FEET TOTAL VOLUME, WITH ASSOCIATED AUTOMATIC TEMPERATURE AND PRESSURE MONITORING DEVICES AND CONTROLS, AND WITH PROVISIONS FOR ADDING TWO LAYERS OF CATALYST.
2. SELECTIVE CATALYTIC REDUCTION, JOHNSON MATTHEY INC. OR EQUAL, MODEL NO. 79449 OR EQUAL, METALLIC SUBSTRATE, 37.33 CUBIC FOOT TOTAL VOLUME AND WITH PROVISIONS FOR ADDING TWO LAYERS OF CATALYST.
3. AQUEOUS UREA SOLUTION DOSING UNIT, INJECTORS, AND WITH ASSOCIATED AUTOMATIC TEMPERATURE, PRESSURE MONITORING AND CONTROL DEVICES.
4. EXHAUST STACK, 2'-6" DIA. X 59' H., ABOVE GROUND.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. AT LEAST 30 DAYS PRIOR TO INSTALLATION OF THE EQUIPMENT, ORANGE COUNTY SANITATION DISTRICT (OCSA) SHALL PROVIDE TO SCAQMD FINAL DESIGN DRAWINGS, PROCESS AND FLOW DIAGRAM, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, SIZE AND MAXIMUM CAPACITY).
[RULE 204]
4. THE OPERATOR SHALL INSTALL AND MAINTAIN TEMPERATURE MEASURING AND RECORDING SYSTEMS TO MEASURE AND RECORD THE INLET AND OUTLET TEMPERATURES OF THE OXIDATION CATALYST AND THE SELECTIVE REDUCTION CATALYST. THE TEMPERATURES SHALL BE CONTINUOUSLY MEASURED AND RECORDED. THE TEMPERATURE GAUGES SHALL BE ACCURATE TO PLUS OR MINUS 5 PERCENT, AND BE CALIBRATED ONCE EVERY TWELVE MONTHS.
[RULE 204]



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5. THE OPERATOR SHALL INSTALL AND MAINTAIN DIFFERENTIAL PRESSURE AND RECORDING SYSTEMS TO MEASURE AND RECORD THE INLET AND OUTLET PRESSURES ACROSS THE OXIDATION CATALYST AND THE SELECTIVE REDUCTION CATALYST. THE DIFFERENTIAL PRESSURES SHALL BE CONTINUOUSLY MEASURED AND RECORDED.
[RULE 204]
6. BASED ON THE OPERATING PARAMETERS' MEASURED AND MONITORED RESULTS OVER THE TWO-YEAR PERIOD (PER CONDITION #4 AND #5), OPERATING PARAMETERS' RANGE SHALL BE ESTABLISHED FOR THE PERMIT TO OPERATE.
[RULE 204]
7. EXCEPT DURING STARTUP AND SHUTDOWN OF THE SCR SYSTEM, THE UREA FEED CONTROL SYSTEM SHALL BE IN OPERATION.
[RULE 204]
8. THE OPERATOR SHALL INSTALL AND MAINTAIN A UREA FLOW RATE MEASURING AND RECORDING SYSTEM TO ACCURATELY INDICATE AND RECORD THE UREA INJECTION RATE TO THE SELECTIVE CATALYTIC REDUCTION SYSTEM.
[RULE 204]
9. THE OPERATOR SHALL INSTALL AND MAINTAIN A NO_x ANALYZER TO MEASURE SCR INLET NO_x CONCENTRATION AND CALIBRATED ANNUALLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
[RULE 204]
10. WHEN SCR IS IN OPERATION, THE OPERATOR SHALL ANALYZE THE UREA INJECTION RATE, AND THE SCR INLET AND OUTLET NO_x EMISSION RATE TO ESTIMATE THE AMMONIA CONCENTRATION IN THE SCR OUTLET, BASED ON ONE HOUR AVERAGE.
[RULE 204]
11. SAMPLING PORTS SHALL BE INSTALLED AT THE INLET AND OUTLET OF THE AIR POLLUTION CONTROL SYSTEM.
[RULE 204]
12. THE AMMONIA SLIP SHALL BE TESTED WITHIN 180 DAYS AFTER INITIAL START-UP (POST MODIFICATION), AND ANNUALLY THEREAFTER. THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND, FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 45 DAYS AFTER TESTING.
[RULE 1303(b) (1)], [RULE 1401]
13. RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

Emissions and Requirements:

14. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
NH₃ (AMMONIA SLIP): 5 PPMV AT 15% O₂, 60 MINUTE AVERAGE, AFTER SCR START UP.
[RULE 1303(b) (1)], [RULE 1402]



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

A/N 559230
Granted as of 4/16/2014

Equipment Description:

AIR POLLUTION CONTROL SYSTEM NO. 3 CONSISTING OF:

1. CATALYTIC OXIDIZER, JOHNSON MATTHEY INC. OR EQUAL, MODEL NO. 91449 OR EQUAL, ALUMINUM OXIDE OR PLATINUM CATALYST ACTIVE MATERIAL, WITH 200 CPSI OXIDATION CATALYST OR EQUAL, 18.67 CUBIC FEET TOTAL VOLUME, WITH ASSOCIATED AUTOMATIC TEMPERATURE AND PRESSURE MONITORING DEVICES AND CONTROLS, AND WITH PROVISIONS FOR ADDING TWO LAYERS OF CATALYST.
2. SELECTIVE CATALYTIC REDUCTION, JOHNSON MATTHEY INC. OR EQUAL, MODEL NO. 79449 OR EQUAL, METALLIC SUBSTRATE, 37.33 CUBIC FOOT TOTAL VOLUME AND WITH PROVISIONS FOR ADDING TWO LAYERS OF CATALYST.
3. AQUEOUS UREA SOLUTION DOSING UNIT, INJECTORS, AND WITH ASSOCIATED AUTOMATIC TEMPERATURE, PRESSURE MONITORING AND CONTROL DEVICES.
4. EXHAUST STACK, 2'-6" DIA. X 59' H., ABOVE GROUND.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. AT LEAST 30 DAYS PRIOR TO INSTALLATION OF THE EQUIPMENT, ORANGE COUNTY SANITATION DISTRICT (OCSA) SHALL PROVIDE TO SCAQMD FINAL DESIGN DRAWINGS, PROCESS AND FLOW DIAGRAM, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, SIZE AND MAXIMUM CAPACITY).
[RULE 204]
4. THE OPERATOR SHALL INSTALL AND MAINTAIN TEMPERATURE MEASURING AND RECORDING SYSTEMS TO MEASURE AND RECORD THE INLET AND OUTLET TEMPERATURES OF THE OXIDATION CATALYST AND THE SELECTIVE REDUCTION CATALYST. THE TEMPERATURES SHALL BE CONTINUOUSLY MEASURED AND RECORDED. THE TEMPERATURE GAUGES SHALL BE ACCURATE TO PLUS OR MINUS 5 PERCENT, AND BE CALIBRATED ONCE EVERY TWELVE MONTHS.
[RULE 204]
5. THE OPERATOR SHALL INSTALL AND MAINTAIN DIFFERENTIAL PRESSURE AND RECORDING SYSTEMS TO MEASURE AND RECORD THE INLET AND OUTLET PRESSURES ACROSS THE



**FACILITY PERMIT TO OPERATE
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OXIDATION CATALYST AND THE SELECTIVE REDUCTION CATALYST. THE DIFFERENTIAL PRESSURES SHALL BE CONTINUOUSLY MEASURED AND RECORDED.

[RULE 204]

6. BASED ON THE OPERATING PARAMETERS' MEASURED AND MONITORED RESULTS OVER THE TWO-YEAR PERIOD (PER CONDITION #4 AND #5), OPERATING PARAMETERS' RANGE SHALL BE ESTABLISHED FOR THE PERMIT TO OPERATE.
[RULE 204]
7. EXCEPT DURING STARTUP AND SHUTDOWN OF THE SCR SYSTEM, THE UREA FEED CONTROL SYSTEM SHALL BE IN OPERATION.
[RULE 204]
8. THE OPERATOR SHALL INSTALL AND MAINTAIN A UREA FLOW RATE MEASURING AND RECORDING SYSTEM TO ACCURATELY INDICATE AND RECORD THE UREA INJECTION RATE TO THE SELECTIVE CATALYTIC REDUCTION SYSTEM.
[RULE 204]
9. THE OPERATOR SHALL INSTALL AND MAINTAIN A NO_x ANALYZER TO MEASURE SCR INLET NO_x CONCENTRATION AND CALIBRATED ANNUALLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
[RULE 204]
10. WHEN SCR IS IN OPERATION, THE OPERATOR SHALL ANALYZE THE UREA INJECTION RATE, AND THE SCR INLET AND OUTLET NO_x EMISSION RATE TO ESTIMATE THE AMMONIA CONCENTRATION IN THE SCR OUTLET, BASED ON ONE HOUR AVERAGE.
[RULE 204]
11. SAMPLING PORTS SHALL BE INSTALLED AT THE INLET AND OUTLET OF THE AIR POLLUTION CONTROL SYSTEM.
[RULE 204]
12. THE AMMONIA SLIP SHALL BE TESTED WITHIN 180 DAYS AFTER INITIAL START-UP (POST MODIFICATION), AND ANNUALLY THEREAFTER. THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND, FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 45 DAYS AFTER TESTING.
[RULE 1303(b) (1)], [RULE 1401]
13. RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]



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Emissions and Requirements:

14. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
NH₃ (AMMONIA SLIP): 5 PPMV AT 15% O₂, 60 MINUTE AVERAGE, AFTER SCR START UP.
[RULE 1303(b) (1)], [RULE 1402]



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

**A/N 559231
Granted as of 4/16/2014**

Equipment Description:

AIR POLLUTION CONTROL SYSTEM NO. 4 CONSISTING OF:

1. CATALYTIC OXIDIZER, JOHNSON MATTHEY INC. OR EQUAL, MODEL NO. 91449 OR EQUAL, ALUMINUM OXIDE OR PLATINUM CATALYST ACTIVE MATERIAL, WITH 200 CPSI OXIDATION CATALYST OR EQUAL, 18.67 CUBIC FEET TOTAL VOLUME, WITH ASSOCIATED AUTOMATIC TEMPERATURE AND PRESSURE MONITORING DEVICES AND CONTROLS, AND WITH PROVISIONS FOR ADDING TWO LAYERS OF CATALYST.
2. SELECTIVE CATALYTIC REDUCTION, JOHNSON MATTHEY INC. OR EQUAL, MODEL NO. 79449 OR EQUAL, METALLIC SUBSTRATE, 37.33 CUBIC FOOT TOTAL VOLUME AND WITH PROVISIONS FOR ADDING TWO LAYERS OF CATALYST.
3. AQUEOUS UREA SOLUTION DOSING UNIT, INJECTORS, AND WITH ASSOCIATED AUTOMATIC TEMPERATURE, PRESSURE MONITORING AND CONTROL DEVICES.
4. EXHAUST STACK, 2'-6" DIA. X 59' H., ABOVE GROUND.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. AT LEAST 30 DAYS PRIOR TO INSTALLATION OF THE EQUIPMENT, ORANGE COUNTY SANITATION DISTRICT (OCSD) SHALL PROVIDE TO SCAQMD FINAL DESIGN DRAWINGS, PROCESS AND FLOW DIAGRAM, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, SIZE AND MAXIMUM CAPACITY).
[RULE 204]
4. THE OPERATOR SHALL INSTALL AND MAINTAIN TEMPERATURE MEASURING AND RECORDING SYSTEMS TO MEASURE AND RECORD THE INLET AND OUTLET TEMPERATURES OF THE OXIDATION CATALYST AND THE SELECTIVE REDUCTION CATALYST. THE TEMPERATURES SHALL BE CONTINUOUSLY MEASURED AND RECORDED. THE TEMPERATURE GAUGES SHALL BE ACCURATE TO PLUS OR MINUS 5 PERCENT, AND BE CALIBRATED ONCE EVERY TWELVE MONTHS.
[RULE 204]
5. THE OPERATOR SHALL INSTALL AND MAINTAIN DIFFERENTIAL PRESSURE AND RECORDING SYSTEMS TO MEASURE AND RECORD THE INLET AND OUTLET PRESSURES ACROSS THE



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OXIDATION CATALYST AND THE SELECTIVE REDUCTION CATALYST. THE DIFFERENTIAL PRESSURES SHALL BE CONTINUOUSLY MEASURED AND RECORDED.

[RULE 204]

6. BASED ON THE OPERATING PARAMETERS' MEASURED AND MONITORED RESULTS OVER THE TWO-YEAR PERIOD (PER CONDITION #4 AND #5), OPERATING PARAMETERS' RANGE SHALL BE ESTABLISHED FOR THE PERMIT TO OPERATE.
[RULE 204]
7. EXCEPT DURING STARTUP AND SHUTDOWN OF THE SCR SYSTEM, THE UREA FEED CONTROL SYSTEM SHALL BE IN OPERATION.
[RULE 204]
8. THE OPERATOR SHALL INSTALL AND MAINTAIN A UREA FLOW RATE MEASURING AND RECORDING SYSTEM TO ACCURATELY INDICATE AND RECORD THE UREA INJECTION RATE TO THE SELECTIVE CATALYTIC REDUCTION SYSTEM.
[RULE 204]
9. THE OPERATOR SHALL INSTALL AND MAINTAIN A NO_x ANALYZER TO MEASURE SCR INLET NO_x CONCENTRATION AND CALIBRATED ANNUALLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
[RULE 204]
10. WHEN SCR IS IN OPERATION, THE OPERATOR SHALL ANALYZE THE UREA INJECTION RATE, AND THE SCR INLET AND OUTLET NO_x EMISSION RATE TO ESTIMATE THE AMMONIA CONCENTRATION IN THE SCR OUTLET, BASED ON ONE HOUR AVERAGE.
[RULE 204]
11. SAMPLING PORTS SHALL BE INSTALLED AT THE INLET AND OUTLET OF THE AIR POLLUTION CONTROL SYSTEM.
[RULE 204]
12. THE AMMONIA SLIP SHALL BE TESTED WITHIN 180 DAYS AFTER INITIAL START-UP (POST MODIFICATION), AND ANNUALLY THEREAFTER. THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND, FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 45 DAYS AFTER TESTING.
[RULE 1303(b) (1)], [RULE 1401]
13. RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]



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Emissions and Requirements:

14. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
NH3 (AMMONIA SLIP): 5 PPMV AT 15% O2, 60 MINUTE AVERAGE, AFTER SCR START UP.
[RULE 1303(b) (1)], [RULE 1402]



**FACILITY PERMIT TO OPERATE
ORANGE COUNTY SANITATION DISTRICT**

PERMIT TO CONSTRUCT

**A/N 559232
Granted as of 4/16/2014**

Equipment Description:

AIR POLLUTION CONTROL SYSTEM NO. 5 CONSISTING OF:

1. CATALYTIC OXIDIZER, JOHNSON MATTHEY INC. OR EQUAL, MODEL NO. 91449 OR EQUAL, ALUMINUM OXIDE OR PLATINUM CATALYST ACTIVE MATERIAL, WITH 200 CPSI OXIDATION CATALYST OR EQUAL, 18.67 CUBIC FEET TOTAL VOLUME, WITH ASSOCIATED AUTOMATIC TEMPERATURE AND PRESSURE MONITORING DEVICES AND CONTROLS, AND WITH PROVISIONS FOR ADDING TWO LAYERS OF CATALYST.
2. SELECTIVE CATALYTIC REDUCTION, JOHNSON MATTHEY INC. OR EQUAL, MODEL NO. 79449 OR EQUAL, METALLIC SUBSTRATE, 37.33 CUBIC FOOT TOTAL VOLUME AND WITH PROVISIONS FOR ADDING TWO LAYERS OF CATALYST.
3. AQUEOUS UREA SOLUTION DOSING UNIT, INJECTORS, AND WITH ASSOCIATED AUTOMATIC TEMPERATURE, PRESSURE MONITORING AND CONTROL DEVICES.
4. EXHAUST STACK, 2'-6" DIA. X 59' H., ABOVE GROUND.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. AT LEAST 30 DAYS PRIOR TO INSTALLATION OF THE EQUIPMENT, ORANGE COUNTY SANITATION DISTRICT (OCS) SHALL PROVIDE TO SCAQMD FINAL DESIGN DRAWINGS, PROCESS AND FLOW DIAGRAM, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, SIZE AND MAXIMUM CAPACITY).
[RULE 204]
4. THE OPERATOR SHALL INSTALL AND MAINTAIN TEMPERATURE MEASURING AND RECORDING SYSTEMS TO MEASURE AND RECORD THE INLET AND OUTLET TEMPERATURES OF THE OXIDATION CATALYST AND THE SELECTIVE REDUCTION CATALYST. THE TEMPERATURES SHALL BE CONTINUOUSLY MEASURED AND RECORDED. THE TEMPERATURE GAUGES SHALL BE ACCURATE TO PLUS OR MINUS 5 PERCENT, AND BE CALIBRATED ONCE EVERY TWELVE MONTHS.
[RULE 204]
5. THE OPERATOR SHALL INSTALL AND MAINTAIN DIFFERENTIAL PRESSURE AND RECORDING SYSTEMS TO MEASURE AND RECORD THE INLET AND OUTLET PRESSURES ACROSS THE



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OXIDATION CATALYST AND THE SELECTIVE REDUCTION CATALYST. THE DIFFERENTIAL PRESSURES SHALL BE CONTINUOUSLY MEASURED AND RECORDED.
[RULE 204]

6. BASED ON THE OPERATING PARAMETERS' MEASURED AND MONITORED RESULTS OVER THE TWO-YEAR PERIOD (PER CONDITION #4 AND #5), OPERATING PARAMETERS' RANGE SHALL BE ESTABLISHED FOR THE PERMIT TO OPERATE.
[RULE 204]
7. EXCEPT DURING STARTUP AND SHUTDOWN OF THE SCR SYSTEM, THE UREA FEED CONTROL SYSTEM SHALL BE IN OPERATION.
[RULE 204]
8. THE OPERATOR SHALL INSTALL AND MAINTAIN A UREA FLOW RATE MEASURING AND RECORDING SYSTEM TO ACCURATELY INDICATE AND RECORD THE UREA INJECTION RATE TO THE SELECTIVE CATALYTIC REDUCTION SYSTEM.
[RULE 204]
9. THE OPERATOR SHALL INSTALL AND MAINTAIN A NO_x ANALYZER TO MEASURE SCR INLET NO_x CONCENTRATION AND CALIBRATED ANNUALLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
[RULE 204]
10. WHEN SCR IS IN OPERATION, THE OPERATOR SHALL ANALYZE THE UREA INJECTION RATE, AND THE SCR INLET AND OUTLET NO_x EMISSION RATE TO ESTIMATE THE AMMONIA CONCENTRATION IN THE SCR OUTLET, BASED ON ONE HOUR AVERAGE.
[RULE 204]
11. SAMPLING PORTS SHALL BE INSTALLED AT THE INLET AND OUTLET OF THE AIR POLLUTION CONTROL SYSTEM.
[RULE 204]
12. THE AMMONIA SLIP SHALL BE TESTED WITHIN 180 DAYS AFTER INITIAL START-UP (POST MODIFICATION), AND ANNUALLY THEREAFTER. THE OPERATOR SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH THE APPROVED TEST PROCEDURES AND, FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN 45 DAYS AFTER TESTING.
[RULE 1303(b) (1)], [RULE 1401]
13. RECORDS SHALL BE KEPT AND MAINTAINED TO PROVE COMPLIANCE WITH ALL CONDITIONS FOR THIS PERMIT. THE RECORDS SHALL BE KEPT ON FILE FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 204]



FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

Emissions and Requirements:

14. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:
NH₃ (AMMONIA SLIP): 5 PPMV AT 15% O₂, 60 MINUTE AVERAGE, AFTER SCR START UP.
[RULE 1303(b) (1)], [RULE 1402]