



## FACILITY PERMIT TO OPERATE

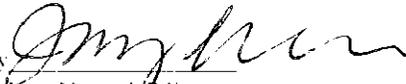
**ORANGE COUNTY SANITATION DISTRICT  
22212 BROOKHURST ST  
HUNTINGTON BEACH, CA 92646**

### 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

### TABLE OF CONTENTS

Section	Description	Revision #	Date Issued
A	Facility Information	0	01/12/2009
B	RECLAIM Annual Emission Allocation	0	01/12/2009
C	Facility Plot Plan	TO BE DEVELOPED	
D	Facility Description and Equipment Specific Conditions	2	03/04/2011
E	Administrative Conditions	0	01/12/2009
F	RECLAIM Monitoring and Source Testing Requirements	0	01/12/2009
G	Recordkeeping and Reporting Requirements for RECLAIM Sources	0	01/12/2009
H	Permit To Construct and Temporary Permit to Operate	2	06/07/2012
I	Compliance Plans & Schedules	0	01/12/2009
J	Air Toxics	0	01/12/2009
K	Title V Administration	0	01/12/2009
Appendix			
A	NOx and SOx Emitting Equipment Exempt From Written Permit Pursuant to Rule 219	0	01/12/2009
B	Rule Emission Limits	0	01/12/2009



---

**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
428642	9/22/2004	SEWAGE TREATMENT (>5 MG/D) ANAEROBIC	3
428804	9/22/2004	ODOR CONTROL UNIT	6
453240	10/19/2006	SEWAGE TREATMENT (>5 MG/D) ANAEROBIC	10
453244	10/19/2006	ODOR CONTROL UNIT	15
457410	10/24/2006	ACTIVATED CARBON ADSORBER, DRUM VENT SINGLE SOURCE	18
519422	6/07/2012	ODOR CONTROL SYSTEM, GRANULAR ACTIVATED CARBON	20
518276	6/07/2012	ODOR CONTROL UNIT, BIOFILTER	22

**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

### PERMIT TO CONSTRUCT

A/N 428642  
Granted as of 9/22/2004

#### Equipment Description:

ALTERATION OF THE EXISTING SEWAGE TREATMENT PLANT, 250 MGD. COVERED BY PERMIT TO OPERATE D93957 (A/N 222809), CONSISTING OF:

1. INFLUENT STATION "B" WITH A WET WELL AND ASSOCIATED PUMPS.
2. INFLUENT STATION "C" WITH FIVE BAR SCREENS, FIVE RAKES, A WET WELL, EIGHT GRIT TANKS. EACH 20'-0" W. X 28'-0" L. X 12'-6" D., GRIT HOPPER. 6'-0" W. X 6'-0" L. X 15'-0" H., THREE COVERED DISTRIBUTION BOXES. 40'-0" DIA. X 10'-0" D., AND ASSOCIATED BLOWERS AND CONVEYORS.
3. TWO FERRIC CHLORIDE STORAGE TANKS, EACH 20,300 GALLON CAPACITY WITH ASSOCIATED PUMPS.
4. POLYMER FEED SYSTEM WITH FOUR STORAGE TANKS, 11,400 GALLON CAPACITY EACH.
5. TWO POLYMER MIX TANKS, EACH 2,540 GALLON CAPACITY, WITH ASSOCIATED MIXERS AND PUMPS.
6. 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.
7. EIGHT ACTIVATED SLUDGE OXYGEN REACTORS, 139,656 CUBIC FEET CAPACITY, 46'-0" W. X 184'-0" L. X 16'-6" D., WITH ASSOCIATED MIXERS.
8. TWO PURE OXYGEN GENERATION UNITS, 40,000 GALLON CAPACITY EACH, WITH TWO STORAGE TANKS AND ASSOCIATED COMPRESSORS.
9. TWELVE SECONDARY CLARIFIERS, 61'-0" W. X 171'-0" L. X 14'-0" D., WITH ASSOCIATED SLUDGE COLLECTORS.
10. WETWELL (WESTSIDE STREAM PUMP STATION), 20'-0" W. X 20'-0" L. X 25'-0" D., WITH ASSOCIATED PUMPS.
11. EAST SECONDARY SLUDGE PUMP STATION WITH ASSOCIATED PUMPS.
12. WEST SECONDARY SLUDGE PUMP STATION WITH ASSOCIATED PUMPS.



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

13. FOUR DISSOLVED AIR FLOATATION THICKENERS, EACH 55'-0" DIA. X 8'-6" D., WITH ASSOCIATED COLLECTOR DRIVES AND PUMPS.
14. 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.
15. TWENTY DIGESTER CLEANING BEDS, NINETEEN 142'0" W. X 50'-0" L. X 6'-0" D., AND ONE 79'-0" W. X 50'-0" L. X 6'-0" D.
16. LOW PRESSURE DIGESTER GAS STORAGE TANK, 25,000 CUBIC FEET CAPACITY, 42'-0" DIA. X 30'-0" H., WITH ASSOCIATED COMPRESSORS.
17. FERROUS AND/OR FERRIC CHLORIDE INJECTION STATION WITH TWO STORAGE TANKS, EACH 12'-0" DIA. X 18'-0" H., AND ASSOCIATED PUMPS.
18. SLUDGE PROCESSING STATION WITH ASSOCIATED GRINDERS, BELT FILTER PRESSES, DEWATERED STORAGE HOPPERS, AND TRUCK LOADING HOPPER.
19. TWO POLYMER STORAGE TANKS, EACH 20,000 GALLON CAPACITY, WITH ASSOCIATED PUMPS.
20. FOUR POLYMER MIX TANKS, EACH 8,500 GALLON CAPACITY, WITH ASSOCIATED MIXERS AND PUMPS.

BY THE REMOVAL OF: (ITEM NOS. 1 THROUGH 5 ABOVE)

1. INFLUENT STATION "B" WITH A WET WELL AND ASSOCIATED PUMPS.
2. INFLUENT STATION "C" WITH FIVE BAR SCREENS, FIVE RAKES, A WET WELL, EIGHT GRIT TANKS, EACH 20'-0" W. X 28'-0" L. X 12'-6" D., GRIT HOPPER, 6'-0" W. X 6'-0" L. X 15'-0" H., THREE COVERED DISTRIBUTION BOXES, 40'-0" DIA. X 10'-0" D., AND ASSOCIATED BLOWERS AND CONVEYORS.
3. TWO FERRIC CHLORIDE STORAGE TANKS, EACH 20,300 GALLON CAPACITY WITH ASSOCIATED PUMPS.
4. POLYMER FEED SYSTEM WITH FOUR STORAGE TANKS, 11,400 GALLON CAPACITY EACH.
5. TWO POLYMER MIX TANKS, EACH 2,540 GALLON CAPACITY, WITH ASSOCIATED MIXERS AND PUMPS.

AND BY THE ADDITION OF:

1. INFLUENT STATION (HEADWORKS "D") CONSISTING OF INFLUENT TRUNKLINES, INFLUENT METERING, SIX (5 DUTY + 1 STANDBY) BARSCREENS, SCREEN HANDLING, INFLUENT PUMPS, GRIT REMOVAL AND HANDLING, PRIMARY INFLUENT SPLITTER AND METERING, AND FERRIC CHLORIDE FACILITY.



## 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. THE INFLUENT STATION "D". (HEADWORKS "D". INFLUENT TRUNKLINES. METERING. BAR SCREENS. SCREENING HANDLING, INFLUENT PUMPS, GRIT REMOVAL AND HANDLING, PRIMARY INFLUENT STRIPPER AND METERING). PRIMARY BASINS. DISSOLVED AIR FLOATATION THICKENERS. AND SLUDGE PROCESSING STATION SHALL NOT BE OPERATED UNLESS THEY ARE VENTED TO AIR POLLUTION CONTROL SYSTEMS WHICH HAVE BEEN ISSUED PERMITS TO CONSTRUCT OR PERMITS TO OPERATE BY THE EXECUTIVE OFFICER, AND WHICH ARE IN FULL OPERATION IN ACCORDANCE WITH THE RESPECTIVE PERMITS.  
[RULE 402, 1401]
5. THE FERROUS AND/OR FERRIC CHLORIDE INJECTION STATION SHALL BE IN USE TO THE EXTENT NECESSARY TO MAINTAIN THE H<sub>2</sub>S CONCENTRATION IN THE DIGESTER GAS TO THE PERMITTED LIMIT WHENEVER THE DIGESTERS IT SERVES ARE IN OPERATION.  
[RULE 431.1]
6. ALL THE DIGESTER GAS PRODUCED AT THIS FACILITY SHALL BE INCINERATED IN THE FACILITY FLARES, ENGINES, OR BOILERS, EXCEPT DURING MAINTENANCE WORK OR CLEANING OF THE DIGESTERS, WHICH REQUIRES ISOLATION OF THE DIGESTER GAS LINE.  
[RULE 402]
7. A 0.25 INCH DIAMETER GAS SAMPLING VALVE WITH THE ADEQUATE AND SAFE ACCESS SHALL BE PROVIDED BY CSDOC ON THE DIGESTER GAS DISCHARGE PIPING FROM EACH DIGESTER.  
[RULE 204]
8. ANY EMISSIONS OF RAW DIGESTER GAS FROM THIS FACILITY TO THE ATMOSPHERE SHALL BE REPORTED TO AQMD 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, 430]
9. THE 30-DAY AVERAGE DAILY FLOW RATE OF WASTEWATER TREATED AT THIS FACILITY SHALL NOT EXCEED 250 MILLION GALLONS PER DAY (MGD) EXCEPT DURING WET WEATHER PERIODS. RECORDS FOR THE WASTEWATER FLOW RATE (MGD) MEASURED SHALL BE RECORDED AND KEPT ON FILE.  
[RULE 1303(b) (2) OFFSETS]

**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:
1. 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:
1. 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.
  2. 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:**

1. 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]



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

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. 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 H<sub>2</sub>S CONCENTRATIONS, AS MEASURED BY THE AUTOMATIC CHEMICAL FEED AND H<sub>2</sub>S MONITORING SYSTEM, LESS THAN THE MAXIMUM OUTLET H<sub>2</sub>S 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 (H<sub>2</sub>S) MONITORING SYSTEM SHALL BE IN OPERATION AND MAINTAINED TO RECORD THE SCRUBBER INLET AND OUTLET H<sub>2</sub>S CONCENTRATIONS, IN PPMV, EXCEPT DURING SHUTDOWN FOR MAINTENANCE. THE H<sub>2</sub>S MONITORING SYSTEM SHALL BE CALIBRATED PERIODICALLY PURSUANT TO MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.  
[RULE 204]



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

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.  
[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 H<sub>2</sub>S MONITORING SYSTEM IS NOT OPERATING, PH OF THE SCRUBBING LIQUID, SCRUBBER SOLUTION RECIRCULATION RATE (GPM), THE SCRUBBER INLET AND OUTLET H<sub>2</sub>S 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 H<sub>2</sub>S 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 (OCSA) 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-



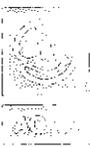
**FACILITY PERMIT TO OPERATE  
ORANGE COUNTY SANITATION DISTRICT**

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 (H<sub>2</sub>S) CONTROL EFFICIENCY  
(WT%).
- F. METALLIC COMPOUNDS, SUCH AS ARSENIC, BERYLLIUM, CADMIUM, HEXAVALENT  
CHROMIUM, NICKEL, ETC.

[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 453240  
Granted as of 10/19/2006

#### Equipment Description:

ALTERATION OF THE EXISTING SEWAGE TREATMENT PLANT (250 MGD), COVERED BY PERMIT TO CONSTRUCT APPLICATION NO.428642 (AND EXISTING P/O D93957), CONSISTING OF:

1. INFLUENT STATION "B" WITH A WET WELL AND ASSOCIATED PUMPS.
2. INFLUENT STATION "C" WITH FIVE BAR SCREENS, FIVE RAKES, A WET WELL, EIGHT GRIT TANKS, EACH 20'-0" W. X 28'-0" L. X 12'-6" D., GRIT HOPPER, 6'-0" W. X 6'-0" L. X 15'-0" H., THREE COVERED DISTRIBUTION BOXES, 40'-0" DIA. X 10'-0" D., AND ASSOCIATED BLOWERS AND CONVEYORS.
3. TWO FERRIC CHLORIDE STORAGE TANKS, EACH 20,300 GALLON CAPACITY WITH ASSOCIATED PUMPS.
4. POLYMER FEED SYSTEM WITH FOUR STORAGE TANKS, 11,400 GALLON CAPACITY EACH.
5. TWO POLYMER MIX TANKS, EACH 2,540 GALLON CAPACITY, WITH ASSOCIATED MIXERS AND PUMPS.
6. 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.
7. EIGHT ACTIVATED SLUDGE OXYGEN REACTORS, 139,656 CUBIC FEET CAPACITY, 46'-0" W. X 184'-0" L. X 16'-6" D., WITH ASSOCIATED MIXERS.
8. TWO PURE OXYGEN GENERATION UNITS, 40,000 GALLON CAPACITY EACH, WITH TWO STORAGE TANKS AND ASSOCIATED COMPRESSORS.
9. TWELVE SECONDARY CLARIFIERS, 61'-0" W. X 171'-0" L. X 14'-0" D., WITH ASSOCIATED SLUDGE COLLECTORS.
10. WETWELL (WASTE SIDE STREAM PUMP STATION), 20'-0" W. X 20'-0" L. X 25'-0" D., WITH ASSOCIATED PUMPS.
11. EAST SECONDARY SLUDGE PUMP STATION WITH ASSOCIATED PUMPS.
12. WEST SECONDARY SLUDGE PUMP STATION WITH ASSOCIATED PUMPS.
13. FOUR DISSOLVED AIR FLOATATION THICKENERS, EACH 55'-0" DIA. X 8'-6" D., WITH ASSOCIATED COLLECTOR DRIVES AND PUMPS.



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

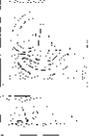
14. TWENTY DIGESTER TANKS, TWO 90'-0" DIA. X 30'-0" D., EACH 190,800 CUBIC FEET CAPACITY, SIX 80'-0" DIA. X 33'-0" D., EACH 164,120 CUBIC FEET CAPACITY, THREE 80'-0" DIA. X 33'-0" D., EACH 166,630 CUBIC FEET CAPACITY, FOUR 105'-0" DIA. X 30'-0" D., EACH 293,680 CUBIC FEET CAPACITY, FIVE 80'-0" DIA. X 18'-0" H., WITH ASSOCIATED PUMPS AND GRINDERS.
15. TWENTY DIGESTER CLEANING BEDS, NINETEEN 142'-0" W. X 50'-0" L. X 6'-0" D., AND ONE 79'-0" W. X 50'-0" L. X 6'-0" D.
16. LOW PRESSURE DIGESTER GAS STORAGE TANK, 25,000 CUBIC FEET CAPACITY, 42'-0" DIA. X 30'-0" H., WITH ASSOCIATED COMPRESSORS.
17. FERROUS AND/OR FERRIC CHLORIDE INJECTION STATION WITH TWO STORAGE TANKS, EACH 12'-0" DIA. X 18'-0" H., AND ASSOCIATED PUMPS.
18. SLUDGE PROCESSING STATION WITH ASSOCIATED GRINDERS, BELT FILTER PRESSES, DEWATERED STORAGE HOPPERS, AND TRUCK LOADING HOPPER.
19. TWO POLYMER STORAGE TANKS, EACH 20,000 GALLON CAPACITY, WITH ASSOCIATED PUMPS.
20. FOUR POLYMER MIX TANKS, EACH 8,500 GALLON CAPACITY, WITH ASSOCIATED MIXERS AND PUMPS.

BY THE REMOVAL OF: (ITEM NOS. 1 THROUGH 3 AND 15 ABOVE)

1. INFLUENT STATION "B" WITH A WET WELL AND ASSOCIATED PUMPS.
2. INFLUENT STATION "C" WITH FIVE BAR SCREENS, FIVE RAKES, A WET WELL, EIGHT GRIT TANKS, EACH 20'-0" W. X 28'-0" L. X 12'-6" D., GRIT HOPPER, 6'-0" W. X 6'-0" L. X 15'-0" H., THREE COVERED DISTRIBUTION BOXES, 40'-0" DIA. X 10'-0" D., AND ASSOCIATED BLOWERS AND CONVEYORS.
3. TWO FERRIC CHLORIDE STORAGE TANKS, EACH 20,300 GALLON CAPACITY WITH ASSOCIATED PUMPS.
4. POLYMER FEED SYSTEM WITH FOUR STORAGE TANKS, 11,400 GALLON CAPACITY EACH.
5. TWO POLYMER MIX TANKS, EACH 2,540 GALLON CAPACITY, WITH ASSOCIATED MIXERS AND PUMPS.
15. TWENTY DIGESTER CLEANING BEDS, NINETEEN 142'-0" W. X 50'-0" L. X 6'-0" D., AND ONE 79'-0" W. X 50'-0" L. X 6'-0" D.

BY THE ADDITION OF: (A/N 428642, NEW HEADWORKS FACILITY, OCSD JOB NO. P2-66)

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.



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

AND BY THE ADDITION OF: (A/N 453240, OCSJ JOB NO. P2-90 AND P2-91)

3. PRIMARY EFFLUENT DIVERSION STRUCTURE WITH A PIPELINE TO THE P2-90 FACILITIES.
4. TRICKLING FILTER PUMP STATION WITH SIX VERTICAL TURBINE SOLIDS HANDLING PUMPS.
5. THREE TRICKLING FILTERS, COVERED, TOTAL 60 MGD, AVERAGE, PRIMARY EFFLUENT TREATMENT CAPACITY (182 MGD PEAK FLOW), EACH 150' DIA. X 28' H., OVERALL, WITH 10' OF MODULAR PLASTIC CROSS - FLOW FILTER MEDIA, PRIMARY EFFLUENT ROTARY DISTRIBUTOR ARMS, NOZZLES, ASSOCIATED PUMPS, AND FOUL-AIR VENTING TO AN AIR POLLUTION CONTROL SYSTEM (A/N 453244).
6. 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.
7. SIX TRICKLING FILTER CLARIFIERS, UNCOVERED, EACH 135' DIA. X 19' SIDEWATER DEPTH, WITH FLOCCULATING CENTER WELLS, HYDRAULIC SLUDGE COLLECTORS, AND INBOARD LAUNDERS.
8. THREE RETURN SECONDARY SLUDGE PUMPS STATIONS.
9. SLUDGE BLENDING FACILITY (JOB NO. P2-91 TO PROCESS SLUDGE FROM THE EXISTING PRIMARY CLARIFIERS}, CONSISTING OF:  
  
TWO SLUDGE BLENDING TANKS (SBTs), EACH 26,000 GALLON CAPACITY, WITH ASSOCIATED PIPING AND PUMPS, AND VENTING 400 CFM OF FOUL AIR TO AN ODOR CONTROL EQUIPMENT (A/N 457410).
10. PROVISIONS FOR ADDING SODIUM HYPOCHLORITE (NaOCI) FOR EFFLUENT DISINFECTION.

**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]



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

4. ORANGE COUNTY SANITATION DISTRICT (OCSD) SHALL MAKE A WRITTEN REQUEST FOR AND OBTAIN AN EXTENSION OF TIME TO CONSTRUCT THIS EQUIPMENT ON AN ANNUAL BASIS UNTIL SUCH TIME CONSTRUCTION IS COMPLETED AND THE EQUIPMENT IS PUT INTO OPERATION. AT LEAST 30 DAYS PRIOR TO THE EXPIRATION DATE OF THE PERMIT TO CONSTRUCT, OCSD SHALL PROVIDE IN THE WRITTEN REQUEST, VERIFIABLE DATA TO AQMD IN ORDER TO SHOW COMPLIANCE WITH THE CONSTRUCTION SCHEDULE AS PROVIDED IN THE APPLICATION UNDER WHICH THIS PERMIT TO CONSTRUCT IS GRANTED. IF THERE ARE CHANGES TO THE INCREMENTS OF PROGRESS AND/OR CONSTRUCTION SCHEDULE, THEY WILL NOT BECOME EFFECTIVE UNTIL OCSD RECEIVES WRITTEN CONFIRMATION OF SUCH CHANGES FROM AQMD.  
[RULE 204]
5. THE INFLUENT STATION "D", (HEADWORKS "D", INFLUENT TRUNKLINES, METERING, BAR SCREENS, SCREENING HANDLING, INFLUENT PUMPS, GRIT REMOVAL AND HANDLING, PRIMARY INFLUENT SPLITTER AND METERING), PRIMARY BASINS, AERATION BASINS INFLUENT SPLITTER BOX, DISSOLVED AIR FLOATATION THICKENERS, AND SLUDGE PROCESSING STATION SHALL NOT BE OPERATED UNLESS THEY ARE VENTED TO THEIR DESIGNATED AIR POLLUTION CONTROL SYSTEM WHICH ARE IN OPERATION AND HAVE VALID PERMITS TO CONSTRUCT OR OPERATE ISSUED BY THE SCAQMD. IN THE EVENT AN AIR POLLUTION CONTROL SYSTEM IS REMOVED FROM OPERATION DUE TO CONSTRUCTION OR MAINTENANCE WORK, THE H<sub>2</sub>S CONCENTRATION AT THE INLET OR AT THE OUTLET OF THE SUBSEQUENT AIR POLLUTION CONTROL SYSTEM SHALL BE BELOW THE LIMITS SPECIFIED IN THE REMOVED AIR POLLUTION CONTROL SYSTEM'S PERMIT.  
[RULE 402, 1401]
6. THE FERROUS AND/OR FERRIC CHLORIDE INJECTION STATION SHALL BE IN USE TO THE EXTENT NECESSARY TO MAINTAIN THE H<sub>2</sub>S CONCENTRATION IN THE DIGESTER GAS TO THE PERMITTED LIMIT WHENEVER THE DIGESTERS IT SERVES ARE IN OPERATION.  
[RULE 431.1]
7. RAW DIGESTER GAS PRODUCED AT THIS FACILITY SHALL NOT BE RELEASED INTO THE ATMOSPHERE. 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 A PERMITTED AIR POLLUTION CONTROL DEVICE(S).  
[RULE 402, RULE 1401]
8. A 0.25 INCH DIAMETER GAS SAMPLING VALVE WITH THE ADEQUATE AND SAFE ACCESS SHALL BE PROVIDED BY OCSD ON THE DIGESTER GAS DISCHARGE PIPING FROM EACH DIGESTER.  
[RULE 217]
9. THE 30-DAY 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]



---

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

---

10. THE AVERAGE DAILY PRIMARY EFFLUENT FLOW RATE, TREATED BY THE NEW TRICKLING FILTER FACILITY (JOB NO. P2-90 CONSISTING OF THREE TRICKLING FILTERS, FOUR SOLIDS CONTACT REACTORS, FOUR SLUDGE AERATION REACTORS, AND SIX TRICKLING FILTER CLARIFIERS), SHALL NOT EXCEED 60 MILLION GALLONS PER DAY (MGD), AVERAGED ON A CALENDAR MONTH, EXCEPT DURING WET WEATHER PERIODS AND EMERGENCY PERIODS INVOLVING PUBLIC HEALTH AND SAFETY.  
[RULE 402, RULE 1401]
  
11. AT ANY GIVEN TIME ONLY ONE SLUDGE BLENDING TANK (SBT) SHALL BE IN OPERATION AND VENTING TO ODOR CONTROL EQUIPMENT, WHICH IS IN OPERATION, AND HAS A VALID TO CONSTRUCT OR OPERATE ISSUED FROM THE SCAQMD.  
[RULE 402, RULE 1401]



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

### PERMIT TO CONSTRUCT

A/N 453244  
Granted as of 10/19/2006

#### Equipment Description:

AIR POLLUTION CONTROL SYSTEM, CONSISTING OF:

1. FOUL AIR EXHAUST DUCTS FROM THREE (3) TRICKLING FILTERS, TRICKLING FILTER FACILITY'S (JOB NO. P2-90), IN PARALLEL.
2. THREE (3) EXHAUST BLOWERS, IN PARALLEL, EACH 11,000 SCFM, 25 H.P.
3. THREE (3) CAUSTIC IMPREGNATED ACTIVATED CARBON UNITS, IN PARALLEL, EACH CONTAINING MINIMUM OF 10,600 LBS OF ACTIVATED CARBON BY NORIT AMERICAS OR WESTATES OR EQUIVALENT, EACH VENTING A SINGLE TRICKLING FILTER.
4. THREE (3) EXHAUST STACKS, EACH 2.0'- 3" DIA. X 28' HIGH, AND WITH H<sub>2</sub>S MONITORING PROVISION.

#### 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. 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]
4. IDENTIFICATION TAG (S) OR NAMEPLATE (S) SHALL BE DISPLAYED ON THE EQUIPMENT TO SHOW MANUFACTURER MODEL NO. AND SERIAL NO. THE TAG (S) OR PLATE (S) SHALL BE ISSUED BY THE MANUFACTURER AND SHALL BE AFFIXED TO THE EQUIPMENT IN A PERMANENT AND CONSPICUOUS POSITION.  
[RULE 204]



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

5. A FLOW METER SHALL BE INSTALLED AND MAINTAINED AT THE INLET STREAM TO EACH OF THE CARBON UNIT TO INDICATE THE TOTAL FOUL AIR EXHAUST FROM THE TRICKLING FILTER TREATED, IN STANDARD CUBIC FEET PER MINUTE (SCFM). IN CASE A PRESSURE SENSOR DEVICE IS USED TO DETERMINE FLOW RATE, IN PLACE OF THE FLOW METER, A CONVERSION CHART SHALL BE MAINTAINED TO INDICATE THE CORRESPONDENT FLOW RATE, IN SCFM, TO THE PRESSURE READING.  
[RULE 204]
6. MAXIMUM FOUL AIR EXHAUST FLOW RATE FROM EACH TRICKLING FILTER TO BE TREATED BY EACH CARBON UNIT SHALL NOT EXCEED 11,000 SCFM.  
[RULE 204, 402, 1401]
7. THIS EQUIPMENT SHALL BE OPERATED IN SUCH A MANNER THAT THE PRESSURE ACROSS THE CARBON BED IS LESS THAN 6.0 INCHES WATER COLUMN. TO COMPLY WITH THIS CONDITION THE OPERATOR SHALL INSTALL AND MAINTAIN A DIFFERENTIAL PRESSURE GAUGE TO ACCURATELY INDICATE THE DIFFERENTIAL PRESSURE ACROSS THE CARBON BED. THE OPERATOR SHALL DETERMINE AND RECORD THE PARAMETER BEING MONITORED ONCE EVERY WEEK.  
[RULE 1303 (a) (1)-BACT]
8. WITHIN 60 DAYS AFTER STEADY STATE FLOW RATE FOR THE AIR POLLUTION CONTROL (APC) SYSTEM, BUT NOT LATER THAN 180 DAYS AFTER INITIAL START-UP, ORANGE COUNTY SANITATION DISTRICT (OCS) SHALL CONDUCT SOURCE TESTS FOR EACH OF THE APC SYSTEM TO DETERMINE EMISSIONS, 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, REFINERY 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 THE EMISSIONS TO ATMOSPHERE FROM EACH OF THE APC SYSTEM FOR:
  - A. TOTAL NON-METHANE HYDROCARBONS (TNMHC) AND TOXIC AIR CONTAMINANTS (TAC) PRESENT, (LBS/HR AND PPMV).
  - B. AMMONIA, (LBS/HR AND PPMV).
  - C. HYDROGEN SULFIDE (H<sub>2</sub>S), (LBS/HR AND PPMV).
  - D. CARBON DIOXIDE, OXYGEN AND NITROGEN
  - E. MOISTURE CONTENT, TEMPERATURE AND EXHAUST FLOW RATE.[RULE 204, 1401]
9. WHENEVER THE CARBON UNIT IS IN OPERATION THE HYDROGEN SULFIDE (H<sub>2</sub>S) CONCENTRATION IN THE EXHAUST SHALL BE MONITORED USING AN AUTOMATIC H<sub>2</sub>S MONITORING DEVICE OR MEASURED MANUALLY AT LEAST ONCE A SHIFT USING AN APPROVED AND CALIBRATED INSTRUMENT. DAILY AVERAGE H<sub>2</sub>S MEASUREMENT READINGS SHALL BE RECORDED AND MAINTAINED ON FILE.  
[RULE 402, 1401]



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

10. THE DAILY AVERAGE HYDROGEN SULFIDE (H<sub>2</sub>S) CONCENTRATION MEASURED IN THE EXHAUST FOR EACH OF THE CARBON UNIT SHALL NOT EXCEED 1 PPMV.  
[RULE 402, 1401]
11. WHENEVER THE AVERAGE HYDROGEN SULFIDE (H<sub>2</sub>S) CONCENTRATION IS 0.9 PPMV OR HIGHER, THEN IMMEDIATE CORRECTIVE MEASURES SHALL BE TAKEN, INCLUDING FRESH ACTIVATED CARBON REPLACEMENT AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS. THE OPERATOR SHALL RECORD THE DATE AND QUANTITY OF CARBON AT EACH REPLACEMENT EVENT.  
[RULE 204]
12. SPENT CARBON REMOVED FROM THIS SYSTEM SHALL BE MAINTAINED OR STORED IN CLOSED CONTAINERS PRIOR TO REMOVAL FROM SITE.  
[RULE 402]
13. RECORDS SHALL BE MAINTAINED AS REQUIRED BY THIS PERMIT 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 457410  
Granted as of 10/24/2006**

**Equipment Description:**

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. FOUL AIR EXHAUST DUCTS FROM TWO (2) SLUDGE BLENDING TANKS (ONE STAND-BY), IN PARALLEL.
2. TWO (2) EXHAUST BLOWERS (ONE STAND-BY), IN PARALLEL, EACH 400 CFM, 1.5 H.P.
3. TWO (2) ADSORBERS (ONE STAND-BY), IN PARALLEL, CALGON CARBON CORPORATION, MODEL HF-400S, OR EQUIVALENT, EACH CONTAINING MINIMUM OF 200 LBS OF GRANULAR ACTIVATED CARBON.
4. TWO (2) EXHAUST STACKS (ONE STAND-BY), EACH 0'- 8" DIA. X 8' HIGH.

**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. AT LEAST 30 DAYS PRIOR TO INSTALLATION, THE OPERATOR SHALL PROVIDE WRITTEN DOCUMENTATION OF THE ADSORBER MANUFACTURER, SPECIFICATIONS AND AMOUNTS OF ADSORBENT.  
[RULE 204]
4. THE OPERATOR SHALL INSTALL AND MAINTAIN DIFFERENTIAL PRESSURE GAUGES TO ACCURATELY INDICATE THE DIFFERENTIAL PRESSURE ACROSS EACH CARBON BED AND EACH EXHAUST BLOWER.  
[RULE 402]
5. NO LATER THAN 180 DAYS AFTER INITIAL START UP, THE OPERATOR SHALL PROVIDE MINIMUM AND MAXIMUM EXPECTED OPERATING DIFFERENTIAL PRESSURES FOR THE ADSORBER AND THE BLOWER.  
[RULE 204]



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

6. HYDROGEN SULFIDE (H<sub>2</sub>S) CONCENTRATION (PPMV) IN THE EXHAUST SHALL BE CONTINUOUSLY MONITORED OR MEASURED MANUALLY AND RECORDED AT LEAST ONCE A DAY USING A DISTRICT APPROVED DEVICE.  
[RULE 204]
7. THE HYDROGEN SULFIDE (H<sub>2</sub>S) CONCENTRATION IN THE EXHAUST SHALL NOT EXCEED 1 PPMV.  
[RULE 402, 1401]
8. IF THE AVERAGE HYDROGEN SULFIDE (H<sub>2</sub>S) CONCENTRATION IS DETECTED 0.9 PPMV OR HIGHER, THE CARBON SHALL BE REPLACED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.  
[RULE 402]
9. SPENT CARBON REMOVED FROM THIS SYSTEM SHALL BE MAINTAINED OR STORED IN CLOSED CONTAINERS PRIOR TO REMOVAL FROM SITE.  
[RULE 402]
10. RECORDS SHALL BE MAINTAINED AS REQUIRED BY THIS PERMIT INCLUDING CARBON CHANGE OVER DATE(S) 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 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.  
[RULE 204]



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

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 (H<sub>2</sub>S) 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 H<sub>2</sub>S TUBES OR ANY OTHER DISTRICT APPROVED METHOD.  
[RULE 204]
10. THE HYDROGEN SULFIDE (H<sub>2</sub>S) CONCENTRATION (PPMV) IN THE EXHAUST OF THE ODOR CONTROL SYSTEM SHALL BE MEASURED AND RECORDED AT LEAST ONCE A WEEK USING COLORIMETRIC H<sub>2</sub>S TUBES, HANDHELD H<sub>2</sub>S ANALYZER, OR ANY OTHER DISTRICT APPROVED METHOD.  
[RULE 204]
11. IN OPERATION, THE HYDROGEN SULFIDE (H<sub>2</sub>S) 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 (H<sub>2</sub>S) 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



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

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 (H<sub>2</sub>S) ANALYZER SHALL BE INSTALLED AND MAINTAINED IN THE MAIN FOUL-AIR HEADER PRIOR TO FOUL-AIR DISTRIBUTION TO THE BIOFILTERS. FOUL-AIR H<sub>2</sub>S CONCENTRATION (PPMV) SHALL BE MONITORED ON A MONTHLY BASIS AND RESULTS RECORDED. WHEN H<sub>2</sub>S ANALYZER IS NOT OPERATING, COLORIMETRIC H<sub>2</sub>S TUBES, HAND HELD H<sub>2</sub>S ANALYZERS OR ANY OTHER DISTRICT APPROVED METHODS SHALL BE USED FOR H<sub>2</sub>S 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 (H<sub>2</sub>S) AND AMMONIA (NH<sub>3</sub>) 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 H<sub>2</sub>S 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.



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

- 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), H<sub>2</sub>S 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]