



**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

### PERMIT TO CONSTRUCT

A/N R-299283  
Granted as of 6/22/2004

#### Equipment Description:

MODIFICATION OF THE EXISTING AIR POLLUTION CONTROL SYSTEM (PRIMARY BASINS), COVERED BY APPLICATION NO. 222813, CONSISTING OF:

1. FOUR SCRUBBERS, NOS. 5 THROUGH 8, EACH VERTICAL TYPE, PACKED TOWER, 10'-0" DIA. X 33'-0" H., WITH ASSOCIATED PUMPS.
2. CHEMICAL FEED SYSTEM WHICH MAY CONTAIN CAUSTIC SODA, HYDROGEN PEROXIDE AND BLEACH.
3. AUTOMATIC CHEMICAL FEED AND HYDROGEN SULFIDE (H<sub>2</sub>S) MONITORING SYSTEM.
4. EXHAUST SYSTEM WITH ASSOCIATED BLOWERS VENTING PRIMARY SEDIMENTATION BASINS NUMBERS ONE THROUGH 15.

#### BY THE ADDITION OF:

1. SCRUBBER NO.11, VERTICAL TYPE, PACKED TOWER, 10'-0" DIA. X 33'-0" H., WITH ASSOCIATED PUMPS.
2. EXHAUST SYSTEM WITH ASSOCIATED BLOWER VENTING PRIMARY SEDIMENTATION BASINS 16 THROUGH 31.

#### 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]



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4. WITHIN 180 DAYS FROM THE DATE OF THE INITIAL START-UP OF THE NEW CLARIFIERS, OCSO SHALL CONDUCT EMISSION VERIFICATION TEST IN ACCORDANCE WITH AQMD SAMPLING TEST PROCEDURES AND METHODS OF ANALYSIS. WRITTEN NOTICE OF THE TEST SHALL BE PROVIDED TO THE AQMD AT LEAST 7 DAYS PRIOR TO THE TEST SO THAT AN OBSERVER MAY BE PRESENT. A FINAL REPORT ON THE TEST RESULTS SHALL BE PROVIDED TO THE AQMD WITHIN 45 DAYS AFTER TESTING. THE VERIFICATION TEST SHALL INCLUDE SAMPLING OF INFLUENT WATER TO THE HEADWORKS AND THE NEW PRIMARY CLARIFIERS AND THE BELT PRESS FILTRATE FOR THE FOLLOWING:

- A. AMMONIA
- B. BENZENE
- C. CARBON DISULFIDE
- D. CARBON TETRACHLORIDE
- E. CHLOROBENZENE
- F. CHLOROFORM
- G. 1,4 (P)-DICHLOROBENZENE
- H. ETHYL BENZENE
- I. ETHYLENE DICHLORIDE (1,2-DICHLOROETHANE)
- J. HYDROGEN SULFIDE
- K. METHYL CHLOROFORM (1,1,1-TRICHLOROETHANE)
- L. METHYLENE CHLORIDE (DICHLOROMETHANE)
- M. METHYL-TERT-BUTYL ETHER (MTBE)
- N. STYRENE
- O. TETRACHLOROETHYLENE (PERCHLOROETHYLENE)
- P. TOLUENE
- Q. TRICHLOROETHYLENE
- R. VINYL CHLORIDE
- S. VINYLIDENE CHLORIDE
- T. XYLENES (MIXTURE AND ISOMERS)

THE RESULTS FROM THE LIQUID SAMPLING SHALL BE USED WITH EMISSION FACTORS DEVELOPED DURING THE COMPLIANCE TESTING OF P1-33 PRIMARY CLARIFIERS AND AB 2588 TESTING PROGRAM TO ESTIMATE EMISSIONS FROM THE NEW PRIMARY CLARIFIERS AND THE RELATED FACILITIES.

[RULE 1303(b)(2)- OFFSET], [RULE 1401]

5. A SUFFICIENT NUMBER OF SCRUBBERS, FROM 5 THROUGH 8 AND 11, SHALL BE IN OPERATION WHEN THE BASIC EQUIPMENT ARE IN OPERATION TO MAINTAIN THE SCRUBBER 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. 8, 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]



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6. WHEN THE SCRUBBERS ARE IN OPERATION, AUTOMATIC CHEMICAL FEED AND H<sub>2</sub>S MONITORING SYSTEM SHALL BE IN OPERATION AND MAINTAINED TO RECORD THE SCRUBBER OUTLET H<sub>2</sub>S CONCENTRATION, IN PPMV, EXCEPT DURING SHUTDOWN FOR MAINTENANCE. THE H<sub>2</sub>S MONITORING SYSTEM SHALL BE CALIBRATED PURSUANT TO MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.  
[RULE 402]
7. WHEN THE AUTOMATIC CHEMICAL FEED AND H<sub>2</sub>S MONITORING SYSTEM IS NOT OPERATING, PH OF THE SCRUBBING LIQUID AND THE SCRUBBER OUTLET H<sub>2</sub>S CONCENTRATION SHALL BE MEASURED AND RECORDED AT LEAST ONCE PER SHIFT.  
[RULE 402]
8. WHEN THE SCRUBBERS ARE IN OPERATION, THE DAILY AVERAGE CONCENTRATION OF SULFUR COMPOUNDS, CALCULATED AS H<sub>2</sub>S MEASURED AT THE OUTLET OF EACH SCRUBBER SHALL NOT EXCEED 2 PPMV AND 3 PPMV WHEN THE EXHAUST BLOWER IS OPERATING AT LOW AND HIGH SPEED, RESPECTIVELY.  
[RULE 402]
9. RECORDS SHALL BE KEPT AND MAINTAINED FOR THE DAILY AVERAGE H<sub>2</sub>S CONCENTRATION, IN PPMV, AT THE OUTLET OF EACH SCRUBBER WHILE IN OPERATION. THE RECORDS SHALL BE KEPT FOR AT LEAST FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.  
[RULE 204]

**THIS PERMIT TO CONSTRUCT R-299283 SUPERSEDES PERMIT TO CONSTRUCT 299283  
ISSUED 08/10/1999.**



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

**PERMIT TO CONSTRUCT**

**A/N 394229  
Granted as of 4/19/2002**

**Equipment Description:**

ODOR CONTROL SYSTEM CONSISTING OF (LOCATED AT PLANT NO. 1, WASTEHAULER STATION):

1. BIOFILTER, BIOREM, SINGLE MODULE, WITH INCOMING FOUL AIR HUMIDIFICATION CHAMBER, BIOFILTER MEDIA, IRRIGATION SYSTEM AND ASSOCIATED PUMPS.
2. TWO EXHAUST BLOWERS (ONE STAND-BY), 300 CFM CAPACITY.

**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. 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) PRIOR TO INSTALLATION OF THE EQUIPMENT. DEVIATIONS FROM THE ABOVE DESCRIPTION AND PROPOSED DESIGN AFFECTING EQUIPMENT PERFORMANCE OR EMISSIONS SHALL BE APPROVED IN WRITING BY THE AQMD.  
[RULE 204]
5. THE CONCENTRATION OF H<sub>2</sub>S FOR THE INLET AND OUTLET OF THE BIOFILTER SHALL BE MEASURED AT LEAST ONCE PER WEEK. THE H<sub>2</sub>S CONCENTRATION IN BIOFILTER EXHAUST SHALL NOT EXCEED 2 PPMV AVERAGED OVER THE NUMBER OF MEASUREMENTS TAKEN OVER ANY GIVEN WEEK.  
[RULE 402]
6. THE BED DEPTH AND BED PACKING SHALL BE DESIGNED TO ACHIEVE A MINIMUM EBRT OF 40 SECONDS.  
[RULE 402]
7. RECORDS TO DEMONSTRATE COMPLIANCE WITH THE CONDITIONS OF THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO THE SCAQMD PERSONNEL UPON REQUEST.  
[RULE 204]



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

### PERMIT TO CONSTRUCT

A/N 432418  
Granted as of 11/18/2004

#### Equipment Description:

ALTERATION OF THE EXISTING SEWAGE TREATMENT PLANT, COVERED BY PERMIT TO CONSTRUCT APPLICATION NO. 407071 (AND EXISTING P/O F66565), CONSISTING OF:

1. HEADWORKS STATION NO. 1 WITH TWO GRIT CHAMBERS, 28'-0" L. X 20'-0" W. X 14'-0" D., TWO SPLITTER BOXES, 15'-0" L. X 4'-0" W. X 7'-6" D., TWO GRIT CLASSIFIERS, AND ASSOCIATED PUMPS AND BLOWER.
2. HEADWORKS STATION NO. 2 WITH FIVE GRIT CHAMBERS, 38'-0" L. X 20'-0" W. X 14'-0" D., THREE SPLITTER BOXES, 15'-0" L. X 8'-0" W. X 15'-0" D., FOUR BAR SCREENS WITH A RAKE ASSEMBLY, EIGHT GATE OPERATORS, FIVE SPLITTER BOX WEIR GATE OPERATORS, AND ASSOCIATED PUMPS, BLOWERS AND COMPRESSOR.
3. FIFTEEN PRIMARY BASINS CONSISTING OF TWO 188'-0" L. X 40'-0" W. X 9'-0" D. RECTANGULAR BASINS WITH CONCRETE AND ALUMINUM COVERS, THREE 140'-0" DIA. X 9'-0" D. CIRCULAR BASINS WITH ALUMINUM GEODESIC DOME COVERS, TEN 10'-0" L. X 195'-0" W. X 10'-0" D. RECTANGULAR BASINS WITH CONCRETE AND ALUMINUM COVERS AND ASSOCIATED PUMPS AND BLOWERS.
4. FOUR TRICKLING FILTERS, EACH 180' DIA. X 6'-0" D., WITH TWO GATE OPERATORS AND ASSOCIATED PUMPS.
5. SECONDARY CLARIFIERS CONSISTING OF ONE 140'-0" DIA. X 9'-0" D., AND TWENTY-FOUR 150'-0" L. X 40'-0" W. X 10'-0" D. WITH ASSOCIATED PUMPS.
6. ACTIVATED SLUDGE PLANT PRIMARY EFFLUENT PUMP STATION WITH ASSOCIATED PUMPS.
7. TEN AERATION BASINS, EACH 275'-0" L. X 45'-0" W. X 15'-0" D. WITH ASSOCIATED BLOWERS.
8. SIX SLUDGE THICKENERS, EACH 40'-0" DIA. X 8'-0" D., WITH ASSOCIATED SWEEP DRIVER AND CONVEYORS.
9. TWELVE DIGESTER TANK CONSISTING OF FOUR 90'-0" DIA. X 30'-0" D, EACH 208,780 CUBIC FEET CAPACITY, EIGHT 110'-0" DIA. X 30'-0" D, EACH APPROXIMATELY 330,430 CUBIC FEET CAPACITY WITH ASSOCIATED PUMPS AND COMMUNUTERS.
10. THIRTY-TWO DIGESTER CLEANING BEDS, 58'-0" L. X 56'-0" W. X 3'-2" D.
11. DIGESTER GAS STORAGE TANKS, 25,000 CUBIC FEET CAPACITY, 42'-0" DIA. X 33'-6" H. WITH THREE COMPRESSORS.



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12. SLUDGE PROCESSING STATION WITH TWO GRINDERS, EIGHT DEWATERING FILTER PRESSES, TRANSFER PUMP HOPPERS, AUGERS, STORAGE HOPPERS AND A TRUCK LOAD-OUT HOPPER.

BY THE ADDITION OF:

1. SIXTEEN PRIMARY BASINS, 195'- 0" L. X 40'- 0" W. X 10'- 0" D., EACH WITH CONCRETE COVERS AND 6 MGD AVERAGE CAPACITY AND ASSOCIATED PUMPS AND BLOWERS.
2. FOUR EXISTING TRICKLING FILTERS (ITEM NO. 4 ABOVE) REPLACED WITH TWO NEW TRICKLING FILTERS, EACH 166' DIA. X 20' - 0" MEDIA DEPTH, AND ASSOCIATED PUMPS. EACH NEW TRICKLING FILTER WITH TWO EXHAUST STACKS, EACH STACK 40' HIGH, AND WITH A TOTAL AIR FLOW RATE OF 25,000 CFM PER TRICKLING FILTER.
3. ONE EXISTING SECONDARY CLARIFIER (ITEM NO. 5 ABOVE) REPLACED WITH TWO NEW SECONDARY CLARIFIERS CONSISTING OF 175' - 0" DIA. X 15' - 0" D. WITH ASSOCIATED PUMPS.
4. TWO NEW SECONDARY CLARIFIERS, EACH 150'- 0" L. X 40'- 0" W. X 10' - 0" D., WITH ASSOCIATED PUMPS (ITEM NO 5).

**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]
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 HEADWORKS FACILITIES, PRIMARY TREATMENT BASINS, AND SLUDGE PROCESS STATION SHALL NOT BE OPERATED UNLESS THEY ARE FULLY ENCLOSED AND THEIR EXHAUST AIR VENTED TO AIR POLLUTION CONTROL SYSTEMS, WHICH ARE IN FULL OPERATION AND HAVE VALID PERMITS TO CONSTRUCT OR OPERATE ISSUED BY THE SCAQMD.  
[RULE 402]
5. THE DAILY TOTAL INFLUENT FLOW, IN MILLION GALLONS PER DAY (MGD), TO THE HEADWORKS, PRIMARY TREATMENT PROCESS, AND SECONDARY TREATMENT PROCESS SHALL BE RECORDED.  
[RULE 204]



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## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

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6. THE TOTAL INFLUENT FLOW OF WASTEWATER TO THE PRIMARY WASTEWATER TREATMENT PROCESS SHALL NOT EXCEED 216 MILLION GALLONS PER DAY (MGD), AVERAGED ON A CALENDAR MONTH, EXCEPT DURING WET WEATHER PERIODS AND EMERGENCY PERIODS INVOLVING PUBLIC HEALTH AND SAFETY.  
[RULE 1304(a) (4)-MODELING & OFFSETS EXEMPTION]
  
7. THE TOTAL INFLUENT FLOW OF WASTEWATER TO THE SECONDARY WASTEWATER TREATMENT PROCESS SHALL NOT EXCEED 92 MILLION GALLONS PER DAY (MGD), AVERAGED ON A CALENDAR MONTH, EXCEPT DURING WET WEATHER PERIODS AND EMERGENCY PERIODS INVOLVING PUBLIC HEALTH AND SAFETY.  
[RULE 1304(a) (4)-MODELING & OFFSETS EXEMPTION]
  
8. THE HYDROGEN SULFIDE (H<sub>2</sub>S) CONCENTRATION (PPMV) IN THE EXHAUST STACKS OF EACH TRICKLING FILTER SHALL BE MEASURED AND RECORDED ON A DAILY BASIS.  
[RULE 402]
  
9. RAW DIGESTER GAS PRODUCED AT THIS FACILITY SHALL NOT BE RELEASED INTO THE ATMOSPHERE. ALL COLLECTED DIGESTER GAS SHALL BE EITHER BE COMBUSTED IN DIGESTER GAS FLARES, INTERNAL COMBUSTION ENGINES, OR BOILERS, WHICH HAVE VALID PERMITS TO CONSTRUCT OR OPERATE ISSUED BY THE SCAQMD, EXCEPT DURING MAINTENANCE WORK OR CLEANING OF THE DIGESTERS AND RELATED DIGESTER GAS SYSTEM WHICH REQUIRES ISOLATION OF THE DIGESTER GAS LINE, IN WHICH CASE COLLECTED DIGESTER GAS SHALL BE TREATED BY ACTIVATED CARBON.  
[RULE 402]



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

### PERMIT TO CONSTRUCT

A/N 453210  
Granted as of 10/17/2006

#### Equipment Description:

ALTERATION OF THE EXISTING SEWAGE TREATMENT PLANT (216 MGD), COVERED BY PERMIT TO CONSTRUCT APPLICATION NO.432418 (AND EXISTING P/O F66565), CONSISTING OF:

1. HEADWORKS STATION NO. 1 WITH TWO GRIT CHAMBERS, 28'-0" L. X 20'-0" W. X 14'-0" D., TWO SPLITTER BOXES, 15'-0" L. X 4'-0" W. X 7'-6" D., TWO GRIT CLASSIFIERS, AND ASSOCIATED PUMPS AND BLOWER.
2. HEADWORKS STATION NO. 2 WITH FIVE GRIT CHAMBERS, 38'-0" L. X 20'-0" W. X 14'-0" D., THREE SPLITTER BOXES, 15'-0" L. X 8'-0" W. X 15'-0" D., FOUR BAR SCREENS WITH A RAKE ASSEMBLY, EIGHT GATE OPERATORS, FIVE SPLITTER BOX WEIR GATE OPERATORS, AND ASSOCIATED PUMPS, BLOWERS AND COMPRESSOR.
3. FIFTEEN PRIMARY BASINS CONSISTING OF TWO 188'-0" L. X 40'-0" W. X 9'-0" D. RECTANGULAR BASINS WITH CONCRETE AND ALUMINUM COVERS, THREE 140'-0" DIA. X 9'-0" D. CIRCULAR BASINS WITH ALUMINUM GEODESIC DOME COVERS, TEN 10'-0" L. X 195'-0" W. X 10'-0" D. RECTANGULAR BASINS WITH CONCRETE AND ALUMINUM COVERS AND ASSOCIATED PUMPS AND BLOWERS.
4. FOUR TRICKLING FILTERS, EACH 180' DIA. X 6'-0" D., WITH TWO GATE OPERATORS AND ASSOCIATED PUMPS.
5. SECONDARY CLARIFIERS CONSISTING OF ONE 140'-0" DIA. X 9'-0" D. AND TWENTY-FOUR 150'-0" L. X 40'-0" W. X 10'-0" D. WITH ASSOCIATED PUMPS.
6. ACTIVATED SLUDGE PLANT PRIMARY EFFLUENT PUMP STATION WITH ASSOCIATED PUMPS.
7. TEN AERATION BASINS, EACH 275'-0" L. X 45'-0" W. X 15'-0" D. WITH ASSOCIATED BLOWERS.
8. SIX SLUDGE THICKENERS, EACH 40'-0" DIA. X 8'-0" D., WITH ASSOCIATED SWEEP DRIVER AND CONVEYORS.
9. TWELVE DIGESTER TANK CONSISTING OF FOUR 90'-0" DIA. X 30'-0" D, EACH 208,780 CUBIC FEET CAPACITY, EIGHT 110'-0" DIA. X 30'-0" D, EACH APPROXIMATELY 330,430 CUBIC FEET CAPACITY WITH ASSOCIATED PUMPS AND COMMINUTERS.
10. THIRTY-TWO DIGESTER CLEANING BEDS, 58'-0" L. X 56'-0" W. X 3'-2" D.
11. DIGESTER GAS STORAGE TANKS, 25,000 CUBIC FEET CAPACITY, 42'-0" DIA. X 33'-6" H. WITH THREE COMPRESSORS.



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12. SLUDGE PROCESSING STATION WITH TWO GRINDERS, EIGHT DEWATERING FILTER PRESSES, TRANSFER PUMP HOPPERS, AUGERS, STORAGE HOPPERS AND A TRUCK LOAD-OUT HOPPER.
  - 13.\* SIXTEEN PRIMARY BASINS, 195'-0" L. X 40'-0" W. X 10'-0" D., EACH WITH CONCRETE COVERS AND 6 MGD AVERAGE CAPACITY AND ASSOCIATED PUMPS AND BLOWERS.
  - 14.\* FOUR EXISTING TRICKLING FILTERS (ITEM NO. 4 ABOVE) REPLACED WITH TWO NEW TRICKLING FILTERS, EACH 166' DIA. X 20' - 0" MEDIA DEPTH, AND ASSOCIATED PUMPS. EACH NEW TRICKLING FILTER WITH TWO EXHAUST STACKS, EACH STACK 40' HIGH, AND WITH A TOTAL AIR FLOW RATE OF 25,000 CFM PER TRICKLING FILTER.
  - 15.\* ONE EXISTING SECONDARY CLARIFIER (ITEM NO. 5 ABOVE) REPLACED WITH TWO NEW SECONDARY CLARIFIERS CONSISTING OF 175' - 0" DIA. X 15' - 0" D. WITH ASSOCIATED PUMPS.
- \* Construction for the above items 13, 14, and 15 has been completed (under A/N 407071).

BY THE ADDITION OF: (OCSJ JOB NO. P1-82 ACTIVATED SLUDGE PLANT REHABILITATION) UNDER A/N 432418.

16. TWO NEW SECONDARY CLARIFIERS, EACH 150'-0" L. X 40'-0" W. X 10' - 0" D.

BY THE REMOVAL OF:

10. THIRTY-TWO DIGESTER CLEANING BEDS, 58'-0" L. X 56'-0" W. X 3' -2" D.

AND BY THE ADDITION OF:

17. NEW SECONDARY ACTIVATED SLUDGE FACILITY 2 (OCSJ JOB NO. P1-102), AND NEW SLUDGE DEWATERING BEDS (OCSJ JOB NO. P1-106) UNDER A/N 453210,
  - I. SIX AERATION BASINS (NOS. 11 THROUGH 16), COVERED, EACH 227' - 2" L. X 45' - 0" W. X 26' - 0" D., WITH ASSOCIATED AERATION BLOWERS, DIFFUSERS, MIXERS, AND PUMPS, AND VENTING THROUGH SIX STACKS, EACH 7' - 11" H., AND 10,000 SCFM.
  - II. SIX SECONDARY CLARIFIERS (NOS. 27, 29, 31, 32, 33, AND 34), UNCOVERED, EACH 155' DIA. X 16' SIDE WATER D., WITH ASSOCIATED RETURN ACTIVATED SLUDGE (RAS), WASTE ACTIVATED SLUDGE (WAS), AND SECONDARY SCUM PUMPS.
  - III. SODIUM HYPOCHLORITE (NaOCl) SOLUTION SYSTEM ADDITION (TO THE EXISTING BLEACH SYSTEM) FOR CHLORINATION OF THE TREATED EFFLUENT, RETURN ACTIVATED SLUDGE (RAS), WASTE ACTIVATED SLUDGE (WAS), AND SURFACE WASTE.
18. SLUDGE MANAGEMENT SYSTEM CONSISTING OF:
  - I. TRUCK WASH STATION
  - II. SAWDUST STORAGE
  - III. TWO (2) DEWATERING BEDS FOR PLANT CLEANING OPERATIONS, EACH 110' - 0" L. X 56' - 0" W., AND WITH APPROXIMATELY 580 CUBIC YARDS CAPACITY.
  - IV. ONE DEWATERING BED FOR PLANT CLEANING OPERATIONS, 100' - 0" L. X 24' - 0" W., WITH APPROXIMATELY 44 CUBIC YARDS CAPACITY.



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

### 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]
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. 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 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 HEADWORKS FACILITIES, PRIMARY TREATMENT BASINS, AND SLUDGE PROCESS STATION SHALL NOT BE OPERATED UNLESS THEY ARE FULLY ENCLOSED AND THEIR EXHAUST AIR VENTED TO AIR POLLUTION CONTROL SYSTEMS, WHICH ARE IN FULL OPERATION AND HAVE VALID PERMITS TO CONSTRUCT OR OPERATE ISSUED BY THE SCAQMD. IN THE EVENT AIR POLLUTION CONTROL SYSTEM(S) ARE SHUTDOWN FOR CONSTRUCTION OR MAINTENANCE WORK, THE H<sub>2</sub>S EMISSIONS SHALL NOT EXCEED THE CONCENTRATION LIMITS AS SPECIFIED IN THE SHUT DOWN OF AIR POLLUTION CONTROL EQUIPMENT PERMIT.  
[RULE 402]
6. THE DAILY TOTAL INFLUENT FLOW, IN MILLION GALLONS PER DAY (MGD), TO THE HEADWORKS, PRIMARY TREATMENT PROCESS, AND SECONDARY TREATMENT PROCESS SHALL BE RECORDED.  
[RULE 204]
7. THE TOTAL INFLUENT FLOW OF WASTEWATER TO THE PRIMARY WASTEWATER TREATMENT PROCESS SHALL NOT EXCEED 216 MILLION GALLONS PER DAY (MGD), AVERAGED ON A CALENDAR MONTH, EXCEPT DURING WET WEATHER PERIODS AND EMERGENCY PERIODS INVOLVING PUBLIC HEALTH AND SAFETY.  
[RULE 1304 (a) (4) – MODELING & OFFSETS EXEMPTION]



## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

8. THE TOTAL INFLUENT FLOW OF WASTEWATER TO THE SECONDARY WASTEWATER TREATMENT PROCESS SHALL NOT EXCEED 92 MILLION GALLONS PER DAY (MGD), AVERAGED ON A CALENDAR MONTH, EXCEPT DURING WET WEATHER PERIODS AND EMERGENCY PERIODS INVOLVING PUBLIC HEALTH AND SAFETY.  
[RULE 1304 (a) (4) – MODELING & OFFSETS EXEMPTION]
9. THE AVERAGE DAILY PRIMARY EFFLUENT FLOW RATE, TREATED BY THE NEW ACTIVATED SLUDGE FACILITY 2 (JOB NO. P1-102 CONSISTING OF SIX AERATION BASINS AND SIX SECONDARY 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 204]
10. WITHIN 60 DAYS AFTER ACHIEVING THE MAXIMUM INFLUENT FLOW RATE FOR THE ACTIVATED SLUDGE FACILITY 2 (JOB NO. P1-102), BUT NOT LATER THAN 180 DAYS AFTER INITIAL START-UP, ORANGE COUNTY SANITATION DISTRICT (OCS D) SHALL CONDUCT SOURCE TESTS TO DETERMINE EMISSIONS FROM AT LEAST TWO OF THE SIX NEW AERATION BASINS' EXHAUST STACKS, AND AT LEAST TWO OF THE SIX NEW SECONDARY CLARIFIERS' SURFACE 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 TWO OF THE AERATION BASINS AND TWO OF THE SECONDARY CLARIFIERS FOR:
  - A. TOTAL NON-METHANE HYDROCARBONS (TNMHC) AND TOXIC AIR CONTAMINANTS (TAC) PRESENT, (LBS/HR AND PPMV).
  - B. AMMONIA AND HYDROGEN SULFIDE (H<sub>2</sub>S), (LBS/HR AND PPMV).
  - C. CARBON DIOXIDE, OXYGEN AND NITROGEN
  - D. MOISTURE CONTENT, TEMPERATURE AND EXHAUST FLOW RATE.
11. ADEQUATE NUMBER OF SAMPLING PORTS WITH ITS SAFE ACCESS, SHALL BE INSTALLED AND MAINTAINED IN THE AERATION BASINS' EXHAUST STACK (JOB NO. P1-102) IN ACCORDANCE WITH SCAQMD'S RULE 217.  
[RULE 217]
12. ORANGE COUNTY SANITATION DISTRICT (OCS D) 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 AND 212" (VERSION 7.0, JULY 1, 2005), TO DETERMINE THE COMPLIANCE WITH RULE 1401. RESULTS SHALL BE SUBMITTED TO AQMD.  
[RULE 1401]



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13. IF SOURCE TESTS RESULTS INDICATE THAT THE TOTAL VOLATILE ORGANIC COMPOUNDS (VOC) EMISSIONS FROM THE AERATION BASINS EXCEED 13 LBS PER DAY OR AS DETERMINED BY AQMD, THEN OCSD SHALL CONDUCT IN DETAIL THE TECHNOLOGICAL FEASIBLE STUDY AND COST-EFFECTIVENESS ANALYSIS FOR A SUITABLE AIR POLLUTION CONTROL EQUIPMENT TO DETERMINE LOWEST ACHIEVABLE EMISSION RATE (LAER) FROM SUCH PROCESS.  
[RULE 1303 (a) (1) - BACT]
14. THE HYDROGEN SULFIDE (H<sub>2</sub>S) CONCENTRATION (PPMV) IN THE EXHAUST STACKS OF EACH TRICKLING FILTER SHALL BE MEASURED AND RECORDED ON A DAILY BASIS.  
[RULE 402]
15. 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]
16. THE SAWDUST USED IN THE SLUDGE MANAGEMENT SYSTEM SHALL BE STORED AND KEPT SUFFICIENTLY MOIST TO PREVENT ANY AIR BORNE PARTICULATE MATTER EMISSIONS.  
[RULE 402]
17. OCSD SHALL KEEP THE FOLLOWING DAILY RECORDS WITH REGARDS TO THE SLUDGE MANAGEMENT SYSTEM,
  - I. THE AMOUNT OF SLUDGE DEWATERED IN EACH DRYING BED.
  - II. NUMBER OF TRUCKS WASHED.
  - III. NUMBER OF LEAKY OR OVERFILLED TRUCKS.[RULE 204]
18. RECORDS TO DEMONSTRATE COMPLIANCE WITH THE CONDITIONS OF THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR AT LEAST FIVE YEARS AND MADE AVAILABLE TO THE SCAQMD PERSONNEL UPON REQUEST.  
[RULE 204]

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**PERMIT TO CONSTRUCT**

A/N 494460  
Granted as of —

**Equipment Description:**

BOILER, HURST BOILER AND WELDING COMPANY, MODEL S5-250-125W OR EQUIVALENT, FIRE-TUBE TYPE, WITH POWER FLAME INC., MODEL NVC8-G-30 LOW NO<sub>x</sub> BURNER OR EQUIVALENT, 10,500,000 BTU PER HOUR, WITH DIGESTER GAS AS PRIMARY FUEL, AND NATURAL GAS AS STAND-BY FUEL.

**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]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.  
[RULE 204]
3. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL PROVIDE TO SCAQMD FINAL BOILER DESIGN DRAWINGS, P & I DIAGRAMS, CONTROLS, EQUIPMENT SPECIFICATIONS (MAKE, MODEL, DIMENSIONS, SIZE AND MAXIMUM CAPACITY) PRIOR TO INSTALLATION OF THE EQUIPMENT.  
[RULE 204]
4. THIS EQUIPMENT SHALL BE PRIMARILY FIRED WITH DIGESTER GAS. NATURAL GAS MAY BE USED AS A STANDBY FUEL, IN THE EVENT DIGESTER GAS IS NOT AVAILABLE.  
[RULE 204, 1146]
5. 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]
6. WHEN IN OPERATION, TOTAL HEAT INPUT FOR THIS EQUIPMENT SHALL NOT EXCEED 10.5 MMBTU/HR. A LOG SHALL BE KEPT INDICATING THE TOTAL HEATING VALUE (BTU/SCF) OF FUEL GAS 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]



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7. 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]

8. EMISSIONS FOR OXIDES OF NITROGEN (NO<sub>x</sub>) AND CARBON MONOXIDE (CO) SHALL NOT EXCEED THE FOLLOWING LIMITS AND SHALL BE MEASURED BY VOLUME, ON A DRY BASIS, AT 3% O<sub>2</sub>.

<u>FUEL USED</u>	<u>NO<sub>x</sub> AS NO<sub>2</sub></u>	<u>CO</u>
DIGESTER GAS	30 PPMV	≤100 PPMV
NATURAL GAS	12 PPMV	≤50 PPMV

[RULE 1146, RULE 1303 (a) (1) – BACT/LAER]

9. ON AND AFTER JANUARY 1, 2015, EMISSIONS OF NO<sub>x</sub> SHALL NOT EXCEED 15 PPMV (CORRECTED TO 3% O<sub>2</sub>, DRY) WHILE FIRING ON DIGESTER GAS  
[RULE 1146]

10. THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT AN INITIAL SOURCE TEST, AND SUBSEQUENT SOURCE TESTS ONCE EVERY THREE YEARS THEREAFTER, 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 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)
- METHANE (INLET DIGESTER GAS)

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TOTAL NON-METHANE ORGANICS (EXHAUST & INLET DIGESTER GAS)  
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 H<sub>2</sub>S, 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]

10. MONITORING AND TESTING OF THE BOILER SHALL BE PERFORMED ACCORDING TO RULE 1146.  
[RULE 1146]

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

<u>POLLUTANT</u>	<u>POUNDS PER HOUR</u>
CO	0.90 (0.43 WITH NATURAL GAS)
NO <sub>x</sub>	0.44 (0.17 WITH NATURAL GAS)
PM <sub>10</sub>	0.056
ROG	0.083
SO <sub>x</sub>	0.13

[RULE 404, 431.1, 1303(a) (1)-BACT, 1303(b) (2) - OFFSET]

12. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH APPLICABLE REQUIREMENTS OF 40 CFR 63 SUBPART DDDDD.  
[40 CFR 63 SUBPART DDDDD]

13. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE KEPT AND MAINTAINED FOR A MINIMUM OF FIVE YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.  
[RULE 3004 (a) (1)]

**Periodic Monitoring:**

14. THE OPERATOR SHALL DETERMINE COMPLIANCE WITH THE EMISSION LIMIT(S) IN CONDITION NO. 11, AT LEAST ONCE EVERY FIVE YEARS USING AQMD-APPROVED TEST METHOD. THE TEST SHALL BE CONDUCTED WHEN THE EQUIPMENT IS OPERATING UNDER NORMAL CONDITIONS. THE OPERATOR SHALL COMPLY WITH ALL GENERAL TESTING, REPORTING, AND RECORDKEEPING REQUIREMENTS IN SECTIONS E AND K OF THIS PERMIT.  
[RULE 1303 - OFFSET, 3004 (a) (4)]



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## FACILITY PERMIT TO OPERATE ORANGE COUNTY SANITATION DISTRICT

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**Emissions And Requirements:**

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

CO: 2000 PPMV, RULE 407  
CO: 400 PPMV, @ 3% O<sub>2</sub>, DRY BASIS, RULE 1146  
PM: 0.1 GR/SCF, RULE 409