

## **FACILITY PERMIT TO CONSTRUCT EASTERN MUNICIPAL WATER 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.

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**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 CONSTRUCT EASTERN MUNICIPAL WATER DISTRICT

### PERMIT TO CONSTRUCT

**GRANTED AS OF: June 27,2006  
A/N 440505**

#### **Equipment Description:**

MODIFICATION TO SEWAGE TREATMENT FACILITY, 11 MGD TOTAL CAPACITY, CONSISTING OF:

I. CONVENTIONAL ACTIVATED SLUDGE PLANT, 3 MGD, AEROBIC DIGESTION CONSISTING OF:

1. LIFT STATION WITH ASSOCIATED PUMPS AND MOTORS.
2. HEADWORKS WITH RAW SEWAGE PUMPING AND GRINDING SYSTEM, WET WELL AND ASSOCIATED PUMPS.
3. GRIT REMOVAL CHAMBER, 14'-0" W. X 15'-0" L. X 13'-0" D., WITH A SCREW AUGER AND ASSOCIATED PUMPS.
4. TWO PRIMARY CLARIFIERS, EACH 15'-0" W. X 65'-0" L. X 10'-0" D. WITH ASSOCIATED PUMPS.
5. EQUALIZATION BASIN, 1 MILLION GALLON CAPACITY.
6. TWO AERATION TANKS, EACH 30'-0" W. X 150'-0" L. X 15'-0" D.
7. THREE SECONDARY CLARIFICATION TANKS, EACH 16'-0" W. X 84'-0" L. X 10'-0" D., WITH ASSOCIATED PUMPS.
8. SECONDARY SLUDGE WET WELL, 15'-0" W. X 15'-0" L. X 15'-0" D. WITH ASSOCIATED PUMPS.
9. CHLORINE CONTACT BASIN, 18'-0" W. X 31'-0" L. X 12'-0" D. WITH ASSOCIATED PUMPS.
10. EFFLUENT PUMPING STATION WITH ASSOCIATED PUMPS.
11. AEROBIC DIGESTER, 30'-0" W. X 150'-0 L. X 15'-0" D.
12. SEPTAGE RECEIVING SYSTEM WITH A 20,000 GALLON HOLDING TANK.
13. SLUDGE PUMPING STATION AND ASSOCIATED PUMPS.
14. AQUA BELT AND POLYMER ADDITION STATION.
15. TREATED EFFLUENT DISCHARGE SYSTEM WITH FIVE EVAPORATION PERCOLATION PONDS WITH A TOTAL STORAGE VOLUME OF 263 MILLION GALLONS.
16. TWELVE SLUDGE DRYING BEDS, EACH 100'-0" W. X 160'-0" L.

II. BARDENPHO PROCESS PLANT, 8 MGD, CONSISTING OF:

1. LIFT STATION WITH ASSOCIATED PUMPS.
2. HEADWORKS BUILDING WITH BAR SCREENS, ASSOCIATED PUMPS AND CONVEYORS.
3. GRIT CHAMBER, NON-AERATED GRAVITY SETTLING TYPE, COVERED, 13,000 GALLON CAPACITY WITH ASSOCIATED MIXERS, CLASSIFIERS AND PUMPS.
4. BARDENPHO PROCESS AREA, SECONDARY TREATMENT, CONSISTING OF:
  - A. FERMENTATION BASINS, EACH 170,000 GALLON CAPACITY WITH ASSOCIATED MIXERS.
  - B. PRIMARY DENITRIFICATION BASIN, 1,100,000 GALLONS WITH ASSOCIATED MIXERS.
  - C. NITRIFICATION BASIN, 3,600,000 GALLON CAPACITY WITH ASSOCIATED MIXERS AND PUMPS.
  - D. TWO SECONDARY DENITRIFICATION BASINS, EACH 500,000 GALLONS WITH ASSOCIATED PUMPS.
  - E. REAERATION BASINS, 140,000 GALLONS WITH ASSOCIATED AERATION BLOWER.

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5. TWO SECONDARY CLARIFIERS, EACH 1,400,000 GALLONS WITH ASSOCIATED SKIMMERS.
6. RAS/WAS PUMP STATION WITH ASSOCIATED PUMPS AND GRINDERS.
7. SLUDGE DEWATERING FACILITY WITH THREE BELT PRESSES, EACH TWO METER, ONE 150 GALLON POLYMER STORAGE TANK, ONE 710 CUBIC FEET SLUDGE HOPPER WITH TRUCK LOADOUT, ASSOCIATED PUMPS AND CONVEYORS.
8. FLOW EQUALIZATION BASIN, 3,600,000 GALLONS WITH ASSOCIATED MIXERS/AERATORS.
9. FLASH MIX PUMP STATION WITH A FLASH MIXING PUMP, CHLORINE, ALUM AND POLYMER INJECTION POINTS.
10. FLOCCULATION BASIN, 45,000 GALLONS.
11. TWO ALUM AND TWO POLYMER MIX FEED PUMPS.
12. SIX TERTIARY FILTERS, EACH 200 SQUARE FEET, SAND BED TYPE.
13. CHLORINE INJECTION/SPLITTER BOX.
14. CHLORINE CONTACT TANK, SPLIT FLOW, THREE COMPARTMENTS, EACH COMPARTMENT, 500,000 GALLONS CAPACITY.
15. SO<sub>2</sub> INJECTION BOX.
16. EFFLUENT PUMPING STATION AND ASSOCIATED PUMPS.
17. LIQUID ALUM STORAGE TANK, 12'-0" DIA. X 24'-0" H., 18,000 GALLON CAPACITY.
18. POLYMER SOLUTION STORAGE TANK, 8'-0" DIA. X 18'-0" H., 6,000 GALLON CAPACITY.
19. POLYMER EMULSION STORAGE TANK, 3'-0" DIA. X 4'-0" H., 150 GALLON CAPACITY.
20. SODIUM HYDROXIDE STORAGE TANK, 2210 GALLON CAPACITY WITH ASSOCIATED PUMPS.
21. ONE (1) SLUDGE DRYING BED, 240'-0" W. X 625'-0" L. X 0'-8" D.
22. ONE (1) SEPTAGE RECEIVING SYSTEM.

BY ADDITION OF THE FOLLOWING TO THE BARDENPHO PROCESS:

1. TWO SECONDARY CLARIFIERS, EACH 1,400,000 GALLONS WITH ASSOCIATED SKIMMERS.

BY REMOVAL OF THE FOLLOWING FROM THE BARDENPHO PROCESS:

1. CHLORINE CONTACT BASIN, 18'-0"W. X 31'-0" L. X 12'-0" D. WITH ASSOCIATED PUMPS.
2. EFFLUENT PUMPING STATION WITH ASSOCIATED PUMPS.
3. FLOW EQUALIZATION BASIN, 3,600,000 GALLONS WITH ASSOCIATED MIXERS/AERATORS.
4. FLASH MIX PUMP STATION WITH A FLASH MIXING PUMP, CHLORINE, ALUM AND POLYMER INJECTION POINTS.
5. FLOCCULATION BASIN, 45,000 GALLONS.
6. TWO ALUM AND TWO POLYMER MIX FEED PUMPS.
7. SIX TERTIARY FILTERS, EACH 200 SQUARE FEET, SAND BED TYPE.
8. CHLORINE INJECTION/SPLITTER BOX.
9. CHLORINE CONTACT TANK, SPLIT FLOW, THREE COMPARTMENTS, EACH COMPARTMENT, 500,000 GALLONS CAPACITY.
10. SO<sub>2</sub> INJECTION BOX.
11. EFFLUENT PUMPING STATION AND ASSOCIATED PUMPS.
12. LIQUID ALUM STORAGE TANK, 12'-0" DIA. X 24'-0" H., 18,000 GALLON CAPACITY.
13. POLYMER SOLUTION STORAGE TANK, 8'-0" DIA. X 18'-0" H., 6,000 GALLON CAPACITY.
14. POLYMER EMULSION STORAGE TANK, 3'-0" DIA. X 4'-0" H., 150 GALLON CAPACITY.
15. SODIUM HYDROXIDE STORAGE TANK, 2210 GALLON CAPACITY WITH ASSOCIATED PUMPS.

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AND ADDITION OF THE FOLLOWING TO THE TERTIARY TREATMENT PLANT, 22 MGD CAPACITY:

1. TWO FLOW EQUALIZATION BASINS, EACH 1,800,000 GALLONS WITH ASSOCIATED MIXERS/AERATORS.
2. TWO FLOW EQUALIZATION BASINS, EACH 4,800,000 GALLONS WITH ASSOCIATED MIXERS/AERATORS.
3. OUT-OF-COMPLIANCE POND, 12,300,000 GALLON CAPACITY.
4. FLASH MIX PUMP STATION WITH A FLASH MIXING PUMP, CHLORINE, ALUM AND POLYMER INJECTION POINTS.
5. FLOCCULATION BASIN, 45,000 GALLONS.
6. TWO ALUM AND TWO POLYMER MIX FEED PUMPS.
7. TWO FLOCCULATION BASINS WITH ASSOCIATED MIXERS, 2 CELLS PER BASIN, EACH CELL 18'-0" W. X 12'-0" L. X 18'-0" DEEP.
8. SIX TERTIARY FILTERS, EACH 200 SQUARE FEET, SAND BED TYPE.
9. ONE TEMPORARY TERTIARY FILTER, ROTARY DISC CLOTH TYPE, WITH A RATED 5.5 MGD PEAK FLOW.
10. SIX TERTIARY FILTERS, EACH 636 SQUARE FEET, ROTARY DISC CLOTH TYPE.
11. ONE TEMPORARY CHLORINE CONTACT BASIN, 79'-3" L. X 79'-3" W. X 5'-0" H.
12. FOUR CHLORINE CONTACT BASINS, 11'-0" W. (EACH PASS) X 110'-0" L. (EACH PASS) WITH FIVE PASSES, WITH ASSOCIATED PUMPS.
13. CHLORINE INJECTION/SPLITTER BOX.
14. SO<sub>2</sub> INJECTION BOX.
15. EFFLUENT PUMPING STATION AND ASSOCIATED PUMPS.
16. TREATED EFFLUENT DISCHARGE SYSTEM WITH FIVE EVAPORATION PERCOLATION PONDS WITH A TOTAL STORAGE VOLUME OF 263 MILLION GALLONS.
17. LIQUID ALUM STORAGE TANK, 12'-0" DIA. X 24'-0" H., 18,000 GALLON CAPACITY.
18. POLYMER SOLUTION STORAGE TANK, 8'-0" DIA. X 18'-0" H., 6,000 GALLON CAPACITY.
19. POLYMER EMULSION STORAGE TANK, 3'-0" DIA. X 4'-0" H., 150 GALLON CAPACITY.
20. SODIUM HYDROXIDE STORAGE TANK, 2210 GALLON CAPACITY WITH ASSOCIATED PUMPS.

### 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 AND MAINTAINED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.  
[RULE 204]

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4. THE AVERAGE DAILY INFLUENT WASTEWATER TREATED BY THIS EQUIPMENT, ON AN ANNUAL BASIS, SHALL NOT EXCEED 11 MILLION GALLONS PER DAY (MGD), EXCEPT DURING WET WEATHER CONDITIONS.  
[RULE 1303]
5. THE WET WELL SHALL REMAIN SEALED EXCEPT DURING INSPECTION AND MAINTENANCE. THE OPERATOR SHALL KEEP RECORDS OF MAINTENANCE PERFORMED AT THE WET WELL.  
[RULE 1303]
6. THE FACILITY OPERATOR SHALL CONDUCT H<sub>2</sub>S MONITORING, USING AN ITX MULTI-GAS MONITOR OR EQUIVALENT ELECTROCHEMICAL SENSOR ACCURATE TO 1 PPM, DURING INSPECTION AND MAINTENANCE OF THE WET WELL COMPARTMENT. THE MONITOR SHALL BE PROPERLY CALIBRATED BEFORE EACH DAILY USE. THE MONITORING SHALL BE CONDUCTED OUTSIDE OF THE WET WELL ENTRANCE DOOR AND THE AREA ABOVE THE WET WELL COMPARTMENT. RESULTS OF THE H<sub>2</sub>S MONITORING SHALL BE RECORDED AT A MINIMUM OF 15 MINUTE INTERVALS.  
[RULE 431.1]
7. WHENEVER THE H<sub>2</sub>S CONCENTRATION MONITORED DURING INSPECTION AND MAINTENANCE OF THE WET WELL COMPARTMENT EXCEEDS DETECTION LIMITS OF THE H<sub>2</sub>S MONITORING DEVICE, RELATIVE TO BACKGROUND CONCENTRATIONS, THE WET WELL INSPECTIONS/MAINTENANCE EVENT SHALL BE DISCONTINUED AND THE WET WELL DOOR SHALL BE CLOSED.  
[RULE 402]

### **Periodic Monitoring:**

8. THE FACILITY OWNER OF OPERATOR SHALL MEASURE AND RECORD THE QUANTITY OF WASTEWATER TREATED BY THIS EQUIPMENT.  
[RULE 1303, RULE 3004(a)(4)]

## FACILITY PERMIT TO CONSTRUCT EASTERN MUNICIPAL WATER DISTRICT

### PERMIT TO CONSTRUCT

**GRANTED AS OF: Nov. 9, 2007  
A/N 466467**

#### **Equipment Description:**

WASTEWATER TREATMENT PLANT, 25 MGD CAPACITY, CONSISTING OF THE FOLLOWING:

- I. CONVENTIONAL ACTIVATED SLUDGE PLANT NO.1, 3 MGD CAPACITY, AEROBIC DIGESTION CONSISTING OF:
  1. LIFT STATION WITH ASSOCIATED PUMPS AND MOTORS.
  2. HEADWORKS WITH RAW SEWAGE PUMPING AND GRINDING SYSTEM, WET WELL AND ASSOCIATED PUMPS.
  3. GRIT REMOVAL CHAMBER, 14'-0" W. X 15'-0" L. X 13'-0" D., WITH A SCREW AUGER AND ASSOCIATED PUMPS.
  4. TWO PRIMARY CLARIFIERS, EACH 15'-0" W. X 65'-0" L. X 10'-0" D. WITH ASSOCIATED PUMPS.
  5. EQUALIZATION BASIN, 1 MILLION GALLON CAPACITY.
  6. TWO AERATION TANKS, EACH 30'-0" W. X 150'-0" L. X 15'-0" D.
  7. THREE SECONDARY CLARIFICATION TANKS, EACH 16'-0" W. X 84'-0" L. X 10'-0" D. WITH ASSOCIATED PUMPS.
  8. SECONDARY SLUDGE WET WELL, 15'-0" W. X 15'-0" L. X 15'-0" D. WITH ASSOCIATED PUMPS.
  9. AEROBIC DIGESTER, 30'-0" W. X 150'-0" L. X 15'-0" D.
  10. SEPTAGE RECEIVING SYSTEM WITH A 20,000 GALLON HOLDING TANK.
  11. SLUDGE PUMPING STATION AND ASSOCIATED PUMPS.
  12. AQUA BELT AND POLYMER ADDITION STATION.
  13. TREATED EFFLUENT DISCHARGE SYSTEM WITH FIVE EVAPORATION PERCOLATION POUNDS WITH A TOTAL STORAGE VOLUME OF 263 MILLION GALLONS.
  14. TERTIARY FILTER, 10'-0" W. X 20'-0" L.
  15. CHLORINE CONTACT BASIN, 86'-9" W. X 86'-9" L.
  16. TWELVE SLUDGE DRYING BEDS, EACH 100'-0" W. X 160'-0" L.
  
- II. CONVENTIONAL ACTIVATED SLUDGE PLANT, NO.2, 12 MGD CAPACITY, ANAEROBIC, CONSISTING OF:
  1. INFLUENT PUMP STATION WITH ASSOCIATED PUMPS AND MOTORS.
  2. HEADWORKS BUILDING WITH BAR SCREENS, ASSOCIATED PUMPS AND CONVEYORS.
  3. GRIT CHAMBERS, THREE TANKS, EACH 18'-0" W. X 11'-4" D.
  4. PRIMARY INFLUENT SPLITTER BOX, 26'-7" W. X 16'-10" L. X 24'-3" D.
  5. THREE PRIMARY CLARIFIERS, EACH 100'-0" DIA. X 14'-0" D.
  6. PRIMARY EFFLUENT SPLITTER BOX, 29'-0" W. X 20'-9" L. X 20'-3" D.
  7. BARDENPHO PROCESS AREA, SECONDARY TREATMENT CONSISTING OF:
    - A. FERMENTATION BASINS, EACH 170,000 GALLONS CAPACITY WITH ASSOCIATED MIXERS.
    - B. PRIMARY DENITRIFICATION BASIN, 1,100,000 GALLONS CAPACITY, WITH ASSOCIATED PUMPS AND BUBBLE AERATION SYSTEM.

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- C. NITRIFICATION BASIN, 3,600,000 GALLONS CAPACITY WITH ASSOCIATED PUMPS AND BUBBLE AERATION SYSTEM.
  - D. TWO SECONDARY DENITRIFICATION BASINS, EACH 500,000 GALLONS WITH ASSOCIATED PUMPS AND BUBBLE AERATION SYSTEM.
  - E. ONE REAERATION BASIN, 140,000 GALLONS WITH ASSOCIATED AERATION BLOWER.
- 8. THREE SECONDARY CLARIFIERS, 125'-0" DIA. X 10'-0" D.
  - 9. RAS/WAS PUMP STATION WITH ASSOCIATED PUMPS AND GRINDERS.
  - 10. SLUDGE DEWATERING FACILITY WITH THREE BELT PRESSES, EACH 2 METERS, A 150 GALLON POLYMER STORAGE TANK, A 710 CUBIC FEET SLUDGE HOPPER WITH TRUCK LOADOUT, ASSOCIATED PUMPS AND CONVEYORS.
  - 11. ONE SLUDGE DRYING BED , 240'-0" W. X 625'-0" L. X 0'-8" D.
  - 12. ONE SEPTAGE RECEIVING SYSTEM.
- III. CONVENTIONAL ACTIVATED SLUDGE PLANT, NO.3, 10 MGD, ANAEROBIC, CONSISTING OF:
- 1. AERATION BASIN, 189'-0" W. X 311'-0" L. X 15'- 7" D.
  - 2. TWO SECONDARY CLARIFIERS, 125'-0" DIA. X 10'-0" D.
  - 3. STORAGE TANK, FERRIC CHLORIDE.
  - 4. ANAEROBIC DIGESTER, 35'-0" H. X 90'-0" D.
  - 5. STORAGE TANK, DIGESTER GAS, LOW PRESSURE, 7,500 CU.FT.,
  - 6. KNOCKOUT TANK,
  - 7. COMPRESSOR.
  - 8. SLUDGE STORAGE TANK, 1.29 MGAL.
- IV. TERTIARY TREATMENT PLANT, 22 MGD CAPACITY, CONSISTING OF:
- 1. TERTIARY INFLUENT PUMP STATION, 14'-2" W., X 14'-2" L.
  - 2. TWO FLOW EQUALIZATION BASINS, EACH 1,800,000 GALLONS CAPACITY WITH ASSOCIATED MIXERS/AERATORS.
  - 3. TWO FLOW EQUALIZATION BASINS, EACH 4,800,000 GALLONS CAPACITY, WITH ASSOCIATED MIXERS/AERATORS.
  - 4. OUT-OF-COMPLIANCE POND, 12,300,000 GALLONS CAPACITY.
  - 5. FLASH MIX PUMP STATION WITH A FLASH MIXING PUMP, CHLORINE, ALUM AND POLYMER INJECTION POINTS.
  - 6. FLOCCULATION BASIN, 45,000 GALLONS, CAPACITY.
  - 7. FLOCCULATION BASIN, 87,000 GALLONS, CAPACITY.
  - 8. TWO ALUM AND TWO POLYMER MIX FEED PUMPS.
  - 9. SIX TERTIARY FILTER, EACH 200 SQUARE FEET, SAND BED TYPE.
  - 10. FIVE TERTIARY FILTERS, EACH 636 SQUARE FEET, ROTARY DISC CLOTH TYPE.
  - 11. FOUR CHLORINE CONTACT BASINS, 110'-0" L. (EA. PASS) X 11'-0" W. (EA.PASS) WITH FIVE PASSES, WITH ASSOCIATED PUMPS.
  - 12. CHLORINE INJECTION/SPLITTER BOX.
  - 13. SO2 INJECTION BOX.
  - 14. EFFLUENT PUMPING STATION AND ASSOCIATED PUMPS.
  - 15. TREATED EFFLUENT DISCHARGE SYSTEM WITH FIVE EVAPORATION PERCOLATION POUNDS WITH A TOTAL STORAGE VOLUME OF 263 MILLION GALLONS.
  - 16. LIQUID ALUM STORAGE TANK, 12'-0" DIA. X 24'-0" H., 18,000 GALLONS CAPACITY.
  - 17. POLYMER SOLUTION STORAGE TANK, 8'-0" DIA. X 18'-0" H. , 6,000 GALLONS CAPACITY.
  - 18. POLYMER EMULSION STORAGE TANK, 3'-0" DIA. X 4'-0" H., 150 GALLONS CAPACITY.
  - 19. SODIUM HYDROXIDE STORAGE TANK, 2,210 GALLON CAPACITY WITH ASSOCIATED PUMPS.

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**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 MAXIMUM QUANTITY OF WASTEWATER TREATED BY THIS EQUIPMENT SHALL NOT EXCEED 25 MILLION GALLONS IN ANY ONE DAY, EXCEPT DURING WET WEATHER CONDITIONS.  
[RULE 1303]
5. UNLESS IT IS VENTED TO AN AIR POLLUTION CONTROL DEVICE, THE PLANT NO.1, INFLUENT WET WELL SHALL REMAIN SEALED EXCEPT DURING INSPECTION AND MAINTENANCE. THE OPERATOR SHALL KEEP RECORDS OF MAINTENANCE PERFORMED AT THE WET WELL.  
[RULE 204, RULE 402]
6. IF THE PLANT NO.1 INFLUENT WET WELL IS NOT VENTED TO AN AIR POLLUTION CONTROL DEVICE, THE FACILITY OPERATOR SHALL CONDUCT H<sub>2</sub>S MONITORING, USING AN ITX MULTI-GAS MONITOR OR EQUIVALENT ELECTROCHEMICAL SENSOR ACCURATE TO 1 PPM, DURING THE INSPECTION AND MAINTENANCE OF THE WET WELL COMPARTMENT. THE MONITOR SHALL BE PROPERLY CALIBRATED BEFORE EACH DAILY USE. THE MONITORING SHALL BE CONDUCTED OUTSIDE OF THE WET WELL ENTRANCE DOOR AND THE AREA ABOVE THE WET WELL COMPARTMENT. RESULTS OF THE H<sub>2</sub>S MONITORING SHALL BE RECORDED AT A MINIMUM OF 60 MINUTE INTERVALS.  
[RULE 402]
7. WHENEVER THE H<sub>2</sub>S CONCENTRATION WHICH IS MONITORED DURING THE INSPECTION AND MAINTENANCE OF THE PLANT NO.1 INFLUENT WET WELL COMPARTMENT, EXCEEDS DETECTION LIMITS OF THE H<sub>2</sub>S MONITORING DEVICE RELATIVE TO BACKGROUND CONCENTRATIONS, THE WET WELL INSPECTION/MAINTENANCE EVENT SHALL BE DISCONTINUED AND THE WET WELL DOOR SHALL BE CLOSED.  
[RULE 402]
8. THE TOTAL SULFUR COMPOUNDS OF THE FUEL GAS (LESS THE NATURAL GAS) BURNED AT THIS FACILITY, CALCULATED AS HYDROGEN SULFIDE, SHALL NOT EXCEED 5 POUNDS PER DAY.  
[RULE 431.1]
9. THE TOTAL SULFUR COMPOUNDS OF THE FUEL GAS (LESS THE NATURAL GAS) BURNED AT THIS FACILITY, CALCULATED AS HYDROGEN SULFIDE, SHALL BE DETERMINED AT A FREQUENCY AND BY METHODS WHICH ARE APPROVED BY THE EXECUTIVE OFFICER..  
[RULE 431.1]

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10. A CONTINUOUS FLOW INDICATOR/TOTALIZING AND RECORDING SYSTEM SHALL BE INSTALLED AND MAINTAINED TO MEASURE AND RECORD THE DIGESTER GAS PRODUCED BY THE ANAEROBIC DIGESTION PROCESS.  
[RULE 431.1]
11. ALL DIGESTER GAS PRODUCED BY THE ANAEROBIC DIGESTION PROCESS SHALL BE STORED, COMBUSTED, OR TREATED BY EQUIPMENT WHICH IS ADEQUATELY SIZED TO HANDLE THE TOTAL GAS FLOWS AND WHICH HAVE VALID PERTS TO CONSTRUCT/OPERATE. RAW DIGESTER GAS SHALL NOT BE RELEASED TO THE ATMOSPHERE.  
[RULE 204]
12. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS THE HEADWORKS, GRIT CHAMBERS, PRIMARY INFLUENT SPLITTER BOX, PRIMARY CLARIFIERS, PRIMARY SCUM PIT, PRIMARY EFFLUENT SPLITTER BOX, SLUDGE DEWATERING BUILDING, SEPTAGE RECEIVING STATION AND SCUM DECANT PUMP STATION IS VENTED TO AN AIR POLLUTION CONTROL SYSTEM WHICH IS IN FULL USE AND HAS A VALID PERMIT TO OPERATE ISSUED BY THE SCAQMD.  
[RULE 204, RULE 402]
13. PRIOR TO COMMENCING CONSTRUCTION OF THE FOLLOWING EQUIPMENT, EMWD SHALL SUBMIT IN WRITING THE FOLLOWING SPECIFICATIONS AND SHALL OBTAIN SCAQMD APPROVAL:
  - A. FERRIC CHLORIDE STORAGE TANK, VOLUME, AND DIMENSIONS.
  - B. ANAEROBIC DIGESTER TANK, VOLUME AND DIMENSIONS.
  - C. DIGESTER GAS STORAGE TANK, WORKING PRESSURE, VOLUME, AND DIMENSION.
  - D. BIOGAS MOISTURE KNOCKOUT TANK, PARTICULATE REMOVAL EFFICIENCY, VOLUME AND DIMENSIONS.
  - E. BIOGAS COMPRESSOR, HORSEPOWER, RATED CAPACITY.[RULE 204]
14. MODIFICATION/CONSTRUCTION OF THIS EQUIPMENT HAS BEEN ESTIMATED TO TAKE MORE THAN ONE YEAR. IF MORE THAN ONE YEAR IS NEEDED TO COMPLETE CONSTRUCTION, THE EMWD SHALL SUBMIT A WRITTEN REQUEST FOR AND OBTAIN AN EXTENSION OF TIME TO CONSTRUCT FROM THE EXECUTIVE OFFICER ON AN ANNUAL-BASIS UNTIL SUCH TIME AS CONSTRUCTION IS COMPLETED AND THE EQUIPMENT IS PLACE INTO OPERATION. WITH EACH AFOREMENTIONED WRITTEN REQUEST FOR EXTENSION, VERIFIABLE DATA SHALL BE SUBMITTED TO THE EXECUTIVE OFFICER THAT CONSTRUCTION PROGRESS HAS BEEN MADE.  
[RULE 204]
15. WITHIN ONE YEAR OF COMPLETION OF CONSTRUCTION, EMWD SHALL SUBMIT AS-BUILT SPECIFICATION AND DRAWINGS.  
[RULE 204]
16. DAILY RECORDS SHALL BE KEPT TO SHOW COMPLIANCE WITH THE ABOVE CONDITIONS FOR A PERIOD OF AT LEAST TWO YEARS AND SHALL BE MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.  
[RULE 204]

### **Periodic Monitoring:**

17. THE FACILITY OWNER OR OPERATOR SHALL MEASURE AND RECORD THE QUANTITY OF WASTEWATER TREATED BY THIS EQUIPMENT.  
[RULE 1303, RULE 3004(a)(4)]

## FACILITY PERMIT TO CONSTRUCT EASTERN MUNICIPAL WATER DISTRICT

### PERMIT TO CONSTRUCT

**GRANTED AS OF: October 3, 2008**  
**A/N 471708**

#### **Equipment Description:**

AIR POLLUTION CONTROL SYSTEM CONSISTING OF:

1. FOUR BIOFILTERS, CUSTOM, OPERATING IN PARALLEL, 95'-5" W X 65'-5" L., EACH, WITH AT LEAST 3 FT OF ACTIVE MEDIA.
2. FOUR BLOWERS, EACH 35,000 CFM
3. EXHAUST SYSTEM, 70,000 CFM MAXIMUM CAPACITY, VENTING THE INFLUENT LIFT STATION HEADWORKS, HEADWORKS BYPASS CHANNEL, GRIT CHAMBER, SCUM DECANT PUMP STATION, PRIMARY INFLUENT SPLITTER BOX, PRIMARY CLARIFIERS (3), PRIMARY EFFLUENT SPLITTER BOX, SLUDGE DEWATERING BUILDING, AND SEPTAGE RECEIVING STATION.

#### **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. 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 WITHIN THE BIOFILTER.  
[RULE 402]
4. THE OPERATOR SHALL INSTALL AND MAINTAIN A FLOW METER TO MEASURE AND INDICATE THE INLET FLOW RATE TO EACH BIOFILTER.  
[RULE 204]
5. THE FLOW RATE AT THE INLET TO EACH BIOFILTER SHALL NOT EXCEED 17,500 CFM.  
[RULE 204]
6. ONCE EVERY SIX MONTHS, SMOKE TESTS SHALL BE CONDUCTED TO ENSURE EVEN DISTRIBUTION OF FOUL AIR THROUGH EACH BIOFILTER.  
[RULE 402]

## FACILITY PERMIT TO CONSTRUCT EASTERN MUNICIPAL WATER DISTRICT

7. THE CONCENTRATION OF H<sub>2</sub>S AT EACH BIOFILTER SURFACE (TOPS AND SIDES) SHALL BE MEASURED, USING COLORIMETRIC TUBES OR A PORTABLE H<sub>2</sub>S ANALYZER, AT LEAST ONCE PER WEEK, AT A MINIMUM OF 10 POINTS WHICH ARE SPACED EQUALLY APART OVER THE ENTIRE SURFACE OF THE BIOFILTER . THE AVERAGED H<sub>2</sub>S CONCENTRATION BASED ON THE AVERAGE MEASUREMENTS SHALL NOT EXCEED THE FOLLOWING, UNLESS OTHERWISE APPROVED IN WRITING BY THE EXECUTIVE OFFICER:

TOTAL SULFUR AS H<sub>2</sub>S            0.25 PPMV (AVERAGE)

MONITORING RECORDS SHALL BE KEPT AND MAINTAINED ON FILE  
[RULE 402]

8. WITHIN 180 DAYS AFTER INITIAL STARTUP OF THIS EQUIPMENT, THE APPLICANT SHALL CONDUCT PERFORMANCE TESTS, IN ACCORDANCE WITH SCAQMD APPROVED TEST PROCEDURES AND FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN THIRTY DAYS AFTER TESTING. WRITTEN NOTICE OF THE PERFORMANCE TEST SHALL BE PROVIDED TO THE SCAQMD TEN DAYS PRIOR TO TESTING SO THAT AN OBSERVER MAY BE PRESENT. THE TESTS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE INLET TO THE BIOFILTER AND THE EXHAUST FROM THE BIOFILTER FOR:

- A. TOTAL NON-METHANE HYDROCARBONS
- B. SPECIATED ORGANICS
- C. HYDROGEN SULFIDE
- D. C1 THROUGH C3 SULFUR COMPOUNDS (SPECIATED) (INLET ONLY)
- E. AMMONIA, NH<sub>4</sub>
- F. OXYGEN
- G. MOISTURE CONTENT
- H. TEMPERATURE
- I. FLOW RATE
- J. OVERALL CONTROL EFFICIENCY OF THE BIOFILTER FOR TOTAL NON-METHANE HYDROCARBONS, HYDROGEN SULFIDE, AND AMMONIA.

[RULE 204]

A TEST PROTOCOL SHALL BE SUBMITTED TO AQMD NO LATER THAN 60 DAYS BEFORE THE PROPOSED TEST DATE AND SHALL BE APPROVED BY THE EXECUTIVE OFFICER BEFORE THE TEST COMMENCES. AT A MINIMUM, THE PROTOCOL SHALL INCLUDE THE FOLLOWING:

- I. A DESCRIPTION OF THE EQUIPMENT TESTED. INCLUDE A PROCESS SCHEMATIC INDICATING SAMPLING LOCATION/PORTS, SAMPLING DUCT/STACK DIMENSIONS ALONG WITH UPSTREAM AND DOWNSTREAM FLOW DISTURBANCES (ELBOWS, TEES, FANS, ETC.)
- II. A BRIEF PROCESS DESCRIPTION.
- III. A DESCRIPTION OF THE SAMPLING AND ANALYTICAL METHODS FOR EACH CONSTITUENT TO BE MEASURED.
- IV. A DESCRIPTION OF THE CALIBRATION AND QUALITY ASSURANCE PROCEDURES.
- V. 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.
- VI. SAMPLING FACILITIES SHALL COMPLY WITH THE DISTRICT GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING FACILITIES, PURSUANT TO RULE 217.

[RULE 204, AND RULE 217]

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9. THE OPERATOR SHALL SUBMIT TO SCAQMD A COPY OF WRITTEN RESULTS OF THE SOURCE TEST WITHIN 45 DAYS OF THE SOURCE TEST. THE REPORT SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL PARAMETERS MEASURED, CONCENTRATION (PPMV), MASS EMISSION RATE (LBS PER HOUR), AND CONTROL EFFICIENCY OF THE BIOFILTER FOR TNMOCS, SPECIATED ORGANICS, HYDROGEN SULFIDE AND AMMONIA, AND ANY OTHER INFORMATION AS REQUIRED BY CONDITION NO. 8.
10. THE OPERATOR SHALL CONDUCT A HEALTH RISK ASSESSMENT BASED ON THE RESULTS OF THE SOURCE TEST TO DEMONSTRATE COMPLIANCE WITH RULE 1401 REQUIREMENTS BASED ON THE ACTUAL EMISSION. THE HEALTH RISK ASSESSMENT SHALL BE SUBMITTED TO SCAQMD WITH 45 DAYS AFTER THE COMPLETION OF THE SOURCE TEST.
11. THE BIOFILTER MEDIA SHALL BE REPLACED OR REPLENISHED AS NEEDED TO MAINTAIN ADEQUATE PERFORMANCE.  
[RULE 402]
12. THE OPERATOR SHALL MAINTAIN ADEQUATE RECORDS TO VERIFY COMPLIANCE WITH THE CONDITIONS ABOVE. SUCH RECORDS SHALL BE KEPT ON THE PREMISES FOR AT LEAST FIVE YEARS AND BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST.  
[RULE 204]

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### PERMIT TO CONSTRUCT

**GRANTED AS OF: Feb. 27, 2007**  
**A/N 475857**

#### **Equipment Description:**

DIGESTER GAS FLARING SYSTEM CONSISTING OF:

ENCLOSED FLARE, 9.32 MMBTU/HR MAXIMUM HEAT INPUT, APPROX 30'-0" HIGH, VAREX MODEL 249, JOHN ZINK MODEL ZTOF, BEKAERT MODEL CEB 350, OR EQUIVALENT, DESIGNED FOR 0.6 SECONDS RESIDENCE TIME AT 1400 DEGREES FAHRENHEIT, DIGESTER GAS FIRED, WITH DIGESTER AND NATURAL GAS PILOTS, ELECTRONIC IGNITION SYSTEM, MODULATING AIR DAMPERS, TEMPERATURE CONTROLLER, ULTRAVIOLET FLAME DETECTOR, AUTOMATIC FLARE SHUT DOWN SYSTEM, FLARE FAILURE ALARM, AUTOMATIC RESTART.

#### **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. APPLICANT SHALL AT LEAST 60 DAYS PRIOR TO THE PLANNED START OF CONSTRUCTION SUBMIT FINAL DESIGN SPECIFICATIONS AND PLANS SHALL BE OBTAINED FROM SCAQMD PRIOR TO STARTING CONSTRUCTION.

FLARE MAKE MODEL NO., DIAMETER, HEIGHT, FLOW RATE, VELOCITY, RESIDENCE TIME AT 1400 DEGREE F., COMBUSTION AIR AND TEMPERATURE CONTROL SYSTEM, AUTOMATIC NOTIFICATION SYSTEM, GUARANTEED EMISSION RATES, AND GUARANTEED DESTRUCTION RATES OF NMHC AND TOXICS.  
[RULE 204]

4. PRIOR TO BURNING DIGESTER GAS IN THIS EQUIPMENT, THE DIGESTER GAS SHALL FIRST BE TREATED THROUGH A PERMITTED KNOCKOUT VESSEL/GAS-LIQUID SEPARATOR WITH A DEMISTER OR EQUIVALENT RATED AT 98% (MIN) PM10 REMOVAL.  
[RULE 1303]

5. THIS EQUIPMENT SHALL BE OPERATED AND MAINTAINED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.  
[RULE 204]

6. AT LEAST TWO (2) SAMPLING PORTS SHALL BE PROVIDED IN THE FLARE STACK AT LEAST ONE-HALF DUCT DIAMETER UPSTREAM OF THE FLARE OUTLET, 90 DEGREES APART. EACH

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SAMPLING PORT SHALL CONSIST OF A FOUR-INCH COUPLING WITH PLUG. ALL PORTS SHALL BE PROPERLY CENTERED. AN EQUIVALENT METHOD OF EMISSION SAMPLING MAY BE USED UPON APPROVAL BY THE EXECUTIVE OFFICER. ADEQUATE AND SAFE ACCESS TO ALL SOURCE TEST PORTS SHALL BE PROVIDED WITHIN 48 HOURS NOTICE BY SCAQMD.  
[RULE 217]

7. A SAMPLING PROT SHALL BE INSTALLED AT THE INLET GAS LINE TO THE FLARE TO ALLOW THE COLLECTION OF A DIGESTER GAS SAMPLE.  
[RULE 217]
8. THE FLARE SHALL BE EQUIPPED WITH AT LEAST ONE TEMPERATURE INDICATOR AND A RECORDING DEVICE WHICH MEASURES AND RECORDS THE GAS TEMPERATURE IN THE FLARE STACK. THE TEMPERATURE INDICATOR AND RECORDING DEVICE SHALL OPERATE WHENEVER THE FLARE IS IN OPERATION. THE TEMPERATURE SHALL BE MEASURED AT A LOCATION ABOVE THE FLAME ZONE, AT LEAST 0.6 SECOND DOWNSTREAM OF THE BURNER AND NOT LESS THAN FIVE (5) FEET FROM THE TOP OF THE STACK.  
[RULE 1303]
9. WHENEVER THE FLARE IS IN OPERATION, A TEMPERATURE OF NOT LESS THAN 1400 DEGREES FAHRENHEIT AS MEASURED BY AN APPROVED TEMPERATURE INDICATOR SHALL BE MAINTAINED IN THE FLARE STACK.  
[RULE 1303]
10. THE FLARE SHALL BE EQUIPPED WITH AN AUTOMATIC SHUT-DOWN SYSTEM WITH A FAILURE ALARM, WHICH HAS BEEN APPROVED BY THE SCAQMD, TO AUTOMATICALLY ISOLATE THE FLARE FROM THE DIGESTER GAS SUPPLY LINE, SHUT OFF THE BLOWER AND IMMEDIATELY NOTIFY A RESPONSIBLE PARTY OF THE SHUT-DOWN  
[RULE 204]
11. THE AUTOMATIC SHUT-DOWN SAFETY SYSTEM SHALL BE TESTED MONTHLY FOR PROPER OPERATION AND THE RESULTS RECORDED.  
[RULE 204]
12. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE DIGESTER GAS SUPPLY LINE TO THE FLARE TO MEASURE AND RECORD THE QUANTITY OF DIGESTER GAS (IN SCFM) BEING BURNED IN THE FLARE.  
[RULE 431.1]
13. THE TOTAL VOLUME OF DIGESTER GAS BURNED IN THE FLARE SHALL NOT EXCEED 259 STANDARD CUBIC FEET PER MINUTE.  
[RULE 1303]
14. THE HEAT INPUT THROUGH THE FLARE SHALL NOT EXCEED 9.32 MILLION BTU'S PER HOUR.  
[RULE 1303]

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15. WEEKLY READINGS OF BTU CONTENT OF THE GAS AT THE INLET TO THE FLARE SHALL BE TAKEN USING AN INSTRUMENT APPROVED BY THE SCAQMD. ALL RESULTS SHALL BE RECORDED.  
[RULE 1303]
16. ALL DIGESTER GAS COLLETED SHALL BE DIRECTED ETHER TO THE FLARE FOR COMBUSTION OR TO A TREATMENT FACILITY WHICH HAS A VALID PERMIT TO CONSTRUCT OR OPERATE, AS APPLICABLE FROM THE SCAQMD.  
[RULE 204]
17. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO THE TIME OF DAY.  
[RULE 204]
18. THE FLARE SHALL BE EQUIPPED WITH A SUFFICIENT NUMBER OF VIEW PORTS TO ALLOW VISUAL INSPECTION OF THE FLAME HEIGHT WITHIN THE FLARE AT ALL TIMES. THE VIEW PORTS SHALL BE LOCATED AT THE ELEVATION OF THE TEMPERATURE SENOR LOCATIONS. SAGE AND ADEQUATE ACCESS SHALL BE PROVIDED FOR ALL VIEW PORTS UPON REQUEST BY SCAQMD PERSONNEL.  
[RULE 217]
19. THE FLARE SHALL BE DESIGNED AND OPERATED SO THAT THE FLAME IN THE FLARE REMAINS BELOW THE HEIGHT OF THE FLARES OPERATING THERMOCOUPLE AT ALL TIMES  
[RULE 204]
20. THE MAXIMUM FLARE SKIN TEMPERATURE AT ANY LOCATION SHALL NOT EXCEED 250 DEGREES FAHRENHEIT.  
[RULE 217]
21. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE RELEASE OF ANY RAW DIGESTER GAS INTO THE ATMOSPHERE. ANY BREAKDOWN OR MALFUNCTION WHICH RESULTS IN EMISSION OF RAW DIGESTER GAS SHALL BE REPORTED TO THE SCAQMD COMPLIANCE MANAGER FOR WASTE MANAGEMENT FACILITIES WITHIN ONE HOUR AFTER OCCURRENCE AND IMMEDIATE REMEDIAL MEASURE SHALL BE UNDER TAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.  
[RULE 402, RULE 1303]
22. WITHIN 180 DAYS OF INITIAL START-UP, AND ANNUALLY THEREAFTER, UNLESS OTHERWISE APPROVED BY THE EXECUTIVE OFFICER, THE APPLICANT SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH SCAQMD APPROVED TEST PROCEDURES AND FURNISH THE SCAQMD WRITTEN RESULTS OF SUCH PERFORMANCE TESTS WITHIN THIRTY (30) DAYS AFTER TESTING. WRITTEN NOTICE OF THE TEST SHALL BE PROVIDED TO THE SCAQMD TEN (10) DAYS PRIOR TO THE TESTING SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE SCAQMD FOR APPROVAL AT LEAST SIXTY (60) DAYS PRIOR TO START OF TEST.

THE TEST SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, A TEST OF THE INLET GAS TO THE FLARE AND THE FLARE EXHAUST FOR:

- A. METHANE.
- B. TOTAL NON-METHANE ORGANICS.

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- C. OXIDES OF NITROGEN (EXHAUST ONLY)
  - D. CARON MONOXIDE (EXHAUST ONLY)
  - E. TOTAL (PM10) PARTICULATES (EXHAUST ONLY)
  - F. HYDROGEN SULFIDE (INLET ONLY)
  - G. C1 THROUGH C3 SULFUR COMPOUNDS (SPECIATED)(INLET ONLY)
  - H. CARBON DIOXIDE
  - I. TOXIC AIR CONTAMINANTS INCLUDING, BUT NOT LIMITED TO, ACROLEIN, ACETYLENE, BENZENE, CHLOROBENZENE, CHLOROFORM, DICHLOROBENZENE, 1,2-DICHLOROETHANE, FORMALDEHYDE, TETRACHLOROETHYLENE, TOLUENE, 1,1,1-TRICHLOROETHANE, TRICHLOROETHLENE, VINYL CHLORIDE, AND XYLENE ISOMERS (EXHAUST ONLY)
  - J. OXYGEN
  - K. NITROGEN
  - L. MOISTURE CONTENT
  - M. TEMPERATURE
  - O. BTU VALUE.  
[RULE 1303]
23. APPLICANT SHALL PERFORM A FULL RISK ASSESSMENT ON THE EMISSIONS FROM THE FLARE WITH NINETY (90) DAYS AFTER REQUEST FROM THE SCAQMD IF THE SOURCE TEST RESULTS SHOW THE EMISSION ARE GREATER THAN THAT CALCULATED UNDER THE PERMIT TO CONSTRUCT EVALUATION.  
[RULE 1401]
24. THE EMISSIONS FORM THE FLARE SHALL NOT EXCEED THE FOLLOWING:
- | POLLUTANT | LB/HOUR |
|-----------|---------|
| NOX       | 0.56    |
| CO        | 1.86    |
| PM10      | 0.01    |
| VOC       | 0.01    |
| SOX       | 0.21    |
- [RULE 1303]
25. OXIDES OF NITROGEN EMISSIONS SHALL NOT EXCEED 0.06 POUNDS PER MILLION BTU'S  
[RULE 1303]
26. EMISSIONS OF TOTAL SULFUR COMPOUNDS FROM COMBUSTION OF DIGESTER GAS AT THIS FACILITY SHALL NOT EXCEED 5 LBS/DAY MEASURED AS H2S, OR DIGESTER GAS SHALL BE TREATED PRIOR TO COMBUSTION SUCH THAT THE CONCENTRATION OF TOTAL REDUCED SULFUR COMPOUNDS IN THE DIGESTER GAS IS 40 PPMV (AS H2S) OR LESS.  
[RULE 431.1]
27. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST TWO (2) YEARS AND SHALL BE MADE AVAILABLE TO SCAQMD PERSONNEL UPON REQUEST.  
[RULE 204]

## FACILITY PERMIT TO CONSTRUCT EASTERN MUNICIPAL WATER DISTRICT

### PERMIT TO CONSTRUCT

**GRANTED AS OF: January 1, 2010**  
**A/N 496805**

#### **Equipment Description:**

INTERNAL COMBUSTION ENGINE, WAUKESHA, MODEL P9390GSI, NATURAL GAS FIRED, TURBOCHARGED AND AFTERCOOLED, SIXTEEN CYLINDERS, FOUR CYCLE, 2117 BHP, WITH A CATALYTIC CONVERTER, MIRATECH, MODEL IQ, AND AN AIR TO FUEL RATIO CONTROLLER, DRIVING AN EMERGENCY ELECTRICAL GENERATOR.

#### **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. AN OPERATIONAL, NON-RESETTABLE TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.  
[RULE 1110.2, 40CFR-Subpart JJJJ]
4. THE OPERATING TIME OF THIS ENGINE SHALL NOT EXCEED 200 HOURS IN ANY ONE YEAR.  
[RULE 1110.2, 1304(a)(1)-BACT]
5. THIS ENGINE SHALL NOT OPERATE MORE THAN 50 HOURS IN ANY ONE YEAR FOR MAINTENANCE AND TESTING PURPOSES.  
[RULE 1303(a)(1)-BACT]
6. IN ADDITION TO MAINTENANCE AND TESTING OF THIS ENGINE, THIS ENGINE SHALL ONLY OPERATE DURING EMERGENCIES RESULTING FROM AN INTERRUPTION OF SERVICE OF THE PRIMARY POWER SUPPLY OR DURING STAGE II OR III ELECTRICAL EMERGENCY DECLARED BY THE ELECTRIC GRID OPERATOR.  
[RULE 1303(a)(1)-BACT]
7. AN ENGINE OPERATING LOG LISTING THE DATE OF OPERATION, THE ELAPSED TIME IN HOURS AND THE REASON FOR OPERATION SHALL BE KEPT, MAINTAINED ON FILE FOR A MINIMUM OF FIVE YEARS AN MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST  
[RULE 204]
8. ONCE EACH YEAR PRIOR TO JANUARY 15TH, THE OPERATOR SHALL RECORD THE TOTAL HOURS OF OPERATION FOR THIS PREVIOUS CALENDAR YEAR.  
[RULE 1110.2, 1304(a)]

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9. THE AIR-TO-FUEL RATIO CONTROLLER SHALL BE MAINTAINED ON THIS ENGINE AND SET TO MAINTAIN THE AIR TO FUEL RATIO WITHIN TOLERANCE LIMITS AS SPECIFIED BY THE CATALYTIC CONVERTER SUPPLIER OR AS DEMONSTRATED BY A SOURCE TEST TO MAINTAIN THE SUPPLIER GUARANTEED EMISSION REDUCTION EFFICIENCIES OR LIMITS.  
[RULE 204]
10. THE OPERATOR SHALL MAINTAIN RECORDS OF CATALYST CLEANING PERIODS AND REPLACEMENT FREQUENCY.  
[RULE 1303(a)(1)-BACT]
11. THIS ENGINE SHALL BE EQUIPPED WITH AN OXYGEN SENSOR AT THE EXHAUST OF THE ENGINE.  
[RULE 1303(a)(1)-BACT]
12. A MANOMETER OR PRESSURE GAUGE SHALL BE MAINTAINED TO MEASURE THE PRESSURE DIFFERENCE ACROSS THE CATALYST BED. THE PRESSURE DROP SHALL NOT EXCEED 4 INCHES OF WATER COLUMN.  
[RULE 1303(a)(1)-BACT]
13. THE OPERATOR SHALL INSTALL AND MAINTAIN A TEMPERATURE GAUGE AND RECORDING SYSTEM TO ACCURATELY INDICATE THE TEMPERATURE AT THE INLET AND OUTLET OF THE CATALYST.  
[RULE 1303(a)(1)-BACT]
14. THE TEMPERATURE OF THE EXHAUST GAS ENTERING THE CATALYST SHALL BE MAINTAINED BETWEEN 750 DEGREES F AND 1250 DEGREES F, EXCEPT DURING START-UP OF THE ENGINE WHICH SHALL NOT EXCEED A PERIOD OF 30 MINUTES.  
[RULE 204, RULE 1303(a)(1)-BACT]
15. THE TEMPERATURE OF THE EXHAUST GAS AT THE CATALYST OUTLET SHALL NOT EXCEED 1350 DEGREES F.  
[RULE 204, RULE 1303(a)(1)-BACT]
16. PRIOR TO INSTALLATION OF THIS ENGINE, THE OPERATOR SHALL PROVIDE THE FINAL SPECIFICATIONS FOR THE AIR-TO-FUEL RATIO CONTROLLER TO THE SCAQMD. THE INFORMATION SHALL INCLUDE BUT NOT BE LIMITED TO THE MANUFACTURER, MODEL NUMBER, RECOMMENDED MAINTENANCE, AND OPERATING PARAMETERS FOR THE AIR TO FUEL RATIO CONTROLLER.

### **Emissions and Requirements:**

17. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:  
  
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS  
NOx: 1.5 gram/BHP-Hr, RULE 1303-BACT  
NOx: 2.0 gram/BHP-Hr, 40 CFR Subpart JJJJ  
VOC: 1.5 gram/BHP-Hr, RULE 1303-BACT  
VOC: 1.0 gram/BHP-Hr, 40 CFR Subpart JJJJ  
CO: 2.0 gram/BHP-Hr, RULE 1303-BACT  
CO: 4.0 gram/BHP-Hr, 40 CFR Subpart JJJJ

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