

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

Facility Equipment and Requirements (Section H)

This section consists of a table listing all permitted equipment at the facility, facility wide requirements, 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 WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

PERMITTED EQUIPMENT LIST

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

Application number	Equipment description	Page
510975	ICE (>500 HP) LANDFILL GAS	3
510976	ICE (>500 HP) LANDFILL GAS	6
510977	ICE (>500 HP) LANDFILL GAS	9
510978	ICE (>500 HP) LANDFILL GAS	12
510979	ICE (>500 HP) LANDFILL GAS	15

NOTE: 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 WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

PERMIT TO CONSTRUCT

**Granted as of
A/N 510975**

Equipment Description:

RESOURCE RECOVERY SYSTEM NO. 1 CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE NO. 1, DEUTZ, MODEL TBG620V16K, SIXTEEN CYLINDER, 1877 BHP, LEAN BURN, LANDFILL GAS FIRED, TURBOCHARGED AND INTERCOOLED, DRIVING A 1.3 MW ELECTRICAL GENERATOR.
2. COMPRESSOR, 2500 CFM, 275 HP (COMMON TO A/N 510975, 510976, 510977, 510978 AND 510979)
3. COMPRESSOR, STANDBY, 600 SCFM
4. RADIATOR WITH FANS
5. ANCILLARY SKID WITH A MUFFLER, HEAT EXCHANGER, FILTER, INTERCOOLER AND EXHAUST STACK.
6. AIR/FUEL RATIO CONTROLLER, DEUTZ/MWM. MODEL-EVOLUTION.

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. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE.
[RULE 1150.1]
4. A SAMPLING PORT SHALL BE INSTALLED IN THE LANDFILL GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A GAS SAMPLE.
[RULE 217, 431.1, 1150.1]
5. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE.
[RULE 1110.2, 1303(b)(2)-OFFSET]

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

6. THIS EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF RULE 1110.2.
[RULE 1110.2]
7. THE HEATING VALUE OF LANDFILL GAS TO THE ENGINE SHALL NOT EXCEED 16.8 MM BTU PER HOUR. A HOURLY LOG OF THE LANDFILL GAS HEATING VALUE, BASED ON THE RECORDED FLOW RATE (SCFM), SHALL BE KEPT FOR AT LEAST TWO YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1303(b)(2)-OFFSET]
8. READINGS OF THE HEATING VALUE (BTU/HR) OF THE LANDFILL GAS AT THE INLET TO THE ENGINE SHALL BE TAKEN HOURLY WITH AN AQMD APPROVED INSTRUMENT AND THE RESULTS RECORDED.
[RULE 1303(b)(2)-OFFSET]
9. THE ENGINE SHALL ONLY USE LANDFILL GAS AS A FUEL.
[RULE 204]
10. TWO SAMPLING PORTS SHALL BE PROVIDED IN THE ENGINE EXHAUST DUCT, 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AND SHALL CONSIST OF TWO 4 INCH WELD NIPPLES WITH PLUGS, 90 DEGREES APART. AN EQUIVALENT METHOD FOR EMISSION SAMPLING MAY BE USED UPON APPROVAL OF THE AQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE SUPPLIED BY THE APPLICANT.
[RULE 217]
11. THE EMISSIONS FROM THE ENGINE SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	LBS/HR
NON-METHANE HYDROCARBONS	1.65
NITROGEN OXIDE	2.48
SULFUR DIOXIDE	0.82
CARBON MONOXIDE	9.92
PARTICULATES	0.21

[RULE 1303(b)(2)-OFFSET]
12. A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) SHALL BE INSTALLED AND OPERATED TO MEASURE THE ENGINE EXHAUST CONCENTRATION FOR NOX AND O2 ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NOX CONCENTRATION TO A CORRECTED NOX CONCENTRATION AT 15% O2. THIS MONITORING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF AQMD RULE 218. PRIOR TO INSTALLATION, THIS MONITORING SYSTEM SHALL BE APPROVED IN WRITING BY THE AQMD. AN ALTERNATIVE OR PREDICTIVE MONITORING SYSTEM (PEMS), IF USED, SHALL BE SUBMITTED CONCURRENTLY WITH THE AFOREMENTIONED CEMS.
[RULE 218]

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

13. ALL RECORDS, SUCH AS FUEL USAGE, MAINTENANCE RECORDS AND PERFORMANCE TEST RESULTS, SHALL BE MAINTAINED FOR FIVE YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1150.1, 1303(b)(2)-OFFSET]
14. THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO UNREASONABLY INTERFERE WITH THE OWNER'S/OPERATOR'S ABILITY TO COMPLY WITH AQMD RULE 1150.1 OR ANY OTHER AQMD RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]
15. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF 40CFR PART 63, SUBPART ZZZZ – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES.
16. THE EXHAUST GAS SHALL BE SOURCE TESTED FOR NMOC (REPORTED AS HEXANE) CONCENTRATIONS IN PPM BY VOLUME, CORRECTED TO 3% OXYGEN ON DRY BASIS AND FOR NMOC REDUCTION EFFICIENCY (BY WEIGHT) AT LEAST ONCE EVERY YEAR.
[RULE 1150.1].
17. THE EXHAUST GAS SHALL BE SOURCE TESTED FOR NO_x, VOC (REPORTED AS METHANE) AND CO CONCENTRATIONS (CONCENTRATIONS IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS) AT LEAST ONCE EVERY TWO YEARS, OR 8760 OPERATING HRS, WHICHEVER OCCURS FIRST.
[RULE 1110.2 (f)(1)(D)].

Emissions and Requirements:

18. NMOC: 20 PPMV AS HEXANE @3% O₂ OR 98 WEIGHT PERCENT REDUCTION, RULE 1150.1,
40 CFR 63 SUBPART AAAA
NMOC: 0.8 GR/BHP-HR, RULE 1303(a)(1)-BACT
NMOC: 40 PPM AS METHANE @15% O₂, RULE 1110.2
CO: 2000 PPMV, RULE 1110.2
CO: 2.5 GR/BHP-HR, RULE 1303(a)(1)-BACT
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
NO_x: 36 PPMV @ 15%O₂, RULE 1110.2
NO_x: 0.6 GR/BHP-HR, RULE 1303(a)(1)-BACT

Periodic Monitoring:

NONE

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

PERMIT TO CONSTRUCT

**Granted as of
A/N 510976**

Equipment Description:

RESOURCE RECOVERY SYSTEM NO. 2 CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE NO. 2, DEUTZ, MODEL TBG620V16K, SIXTEEN CYLINDER, 1877 BHP, LEAN BURN, LANDFILL GAS FIRED, TURBOCHARGED AND INTERCOOLED, DRIVING A 1.3 MW ELECTRICAL GENERATOR.
2. COMPRESSOR, 2500 CFM, 275 HP (COMMON TO A/N 510975, 510976, 510977, 510978 AND 510979)
3. COMPRESSOR, STANDBY, 600 SCFM
4. RADIATOR WITH FANS
5. ANCILLARY SKID WITH A MUFFLER, HEAT EXCHANGER, FILTER, INTERCOOLER AND EXHAUST STACK.
6. AIR/FUEL RATIO CONTROLLER, DEUTZ/MWM. MODEL-EVOLUTION.

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. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE.
[RULE 1150.1]
4. A SAMPLING PORT SHALL BE INSTALLED IN THE LANDFILL GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A GAS SAMPLE.
[RULE 217, 431.1, 1150.1]
5. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE.
[RULE 1110.2, 1303(b)(2)-OFFSET]

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

6. THIS EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF RULE 1110.2.
[RULE 1110.2]
7. THE HEATING VALUE OF LANDFILL GAS TO THE ENGINE SHALL NOT EXCEED 16.7 MM BTU PER HOUR. A HOURLY LOG OF THE LANDFILL GAS HEATING VALUE, BASED ON THE RECORDED FLOW RATE (SCFM), SHALL BE KEPT FOR AT LEAST TWO YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1303(b)(2)-OFFSET]
8. READINGS OF THE HEATING VALUE (BTU/HR) OF THE LANDFILL GAS AT THE INLET TO THE ENGINE SHALL BE TAKEN HOURLY WITH AN AQMD APPROVED INSTRUMENT AND THE RESULTS RECORDED.
[RULE 1303(b)(2)-OFFSET]
9. THE ENGINE SHALL ONLY USE LANDFILL GAS AS A FUEL.
[RULE 204]
10. TWO SAMPLING PORTS SHALL BE PROVIDED IN THE ENGINE EXHAUST DUCT, 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AND SHALL CONSIST OF TWO 4 INCH WELD NIPPLES WITH PLUGS, 90 DEGREES APART. AN EQUIVALENT METHOD FOR EMISSION SAMPLING MAY BE USED UPON APPROVAL OF THE AQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE SUPPLIED BY THE APPLICANT.
[RULE 217]
11. THE EMISSIONS FROM THE ENGINE SHALL NOT EXCEED THE FOLLOWING:
- | AIR CONTAMINANT | LBS/HR |
|--------------------------|--------|
| NON-METHANE HYDROCARBONS | 1.65 |
| NITROGEN OXIDE | 2.48 |
| SULFUR DIOXIDE | 0.82 |
| CARBON MONOXIDE | 9.92 |
| PARTICULATES | 0.21 |
- [RULE 1303(b)(2)-OFFSET]
12. A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) SHALL BE INSTALLED AND OPERATED TO MEASURE THE ENGINE EXHAUST CONCENTRATION FOR NOX AND O2 ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NOX CONCENTRATION TO A CORRECTED NOX CONCENTRATION AT 15% O2. THIS MONITORING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF AQMD RULE 218. PRIOR TO INSTALLATION, THIS MONITORING SYSTEM SHALL BE APPROVED IN WRITING BY THE AQMD. AN ALTERNATIVE OR PREDICTIVE MONITORING SYSTEM (PEMS), IF USED, SHALL BE SUBMITTED CONCURRENTLY WITH THE AFOREMENTIONED CEMS.
[RULE 218]

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

13. ALL RECORDS, SUCH AS FUEL USAGE, MAINTENANCE RECORDS AND PERFORMANCE TEST RESULTS, SHALL BE MAINTAINED FOR FIVE YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1150.1, 1303(b)(2)-OFFSET]
14. THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO UNREASONABLY INTERFERE WITH THE OWNER'S/OPERATOR'S ABILITY TO COMPLY WITH AQMD RULE 1150.1 OR ANY OTHER AQMD RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]
15. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF 40CFR PART 63, SUBPART ZZZZ – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES.
16. THE EXHAUST GAS SHALL BE SOURCE TESTED FOR NMOC (REPORTED AS HEXANE) CONCENTRATIONS IN PPM BY VOLUME, CORRECTED TO 3% OXYGEN ON DRY BASIS AND FOR NMOC REDUCTION EFFICIENCY (BY WEIGHT) AT LEAST ONCE EVERY YEAR.
[RULE 1150.1].
17. THE EXHAUST GAS SHALL BE SOURCE TESTED FOR NO_x, VOC (REPORTED AS METHANE) AND CO CONCENTRATIONS (CONCENTRATIONS IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS) AT LEAST ONCE EVERY TWO YEARS, OR 8760 OPERATING HOURS, WHICHEVER OCCURS FIRST..
[RULE 1110.2 (f)(1)(D)].

Emissions and Requirements:

18. NMOC: 20 PPMV AS HEXANE @3% O₂ OR 98 WEIGHT PERCENT REDUCTION, RULE 1150.1,
40 CFR 63 SUBPART AAAA
NMOC: 0.8 GR/BHP-HR, RULE 1303(a)(1)-BACT
NMOC: 40 PPM AS METHANE @15% O₂, RULE 1110.2
CO: 2000 PPMV, RULE 1110.2
CO: 2.5 GR/BHP-HR, RULE 1303(a)(1)-BACT
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
NO_x: 36 PPMV @ 15%O₂, RULE 1110.2
NO_x: 0.6 GR/BHP-HR, RULE 1303(a)(1)-BACT

Periodic Monitoring:

NONE

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

PERMIT TO CONSTRUCT

**Granted as of
A/N 510977**

Equipment Description:

RESOURCE RECOVERY SYSTEM NO. 3 CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE NO. 3, DEUTZ, MODEL TBG620V16K, SIXTEEN CYLINDER, 1877 BHP, LEAN BURN, LANDFILL GAS FIRED, TURBOCHARGED AND INTERCOOLED, DRIVING A 1.3 MW ELECTRICAL GENERATOR.
2. COMPRESSOR, 2500 CFM, 275 HP (COMMON TO A/N 510975, 510976, 510977, 510978 AND 510979)
3. COMPRESSOR, STANDBY, 600 SCFM
4. RADIATOR WITH FANS
5. ANCILLARY SKID WITH A MUFFLER, HEAT EXCHANGER, FILTER, INTERCOOLER AND EXHAUST STACK.
6. AIR/FUEL RATIO CONTROLLER, DEUTZ/MWM. MODEL-EVOLUTION.

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. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE.
[RULE 1150.1]
4. A SAMPLING PORT SHALL BE INSTALLED IN THE LANDFILL GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A GAS SAMPLE.
[RULE 217, 431.11150.1]
5. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE.
[RULE 1110.2, 1303(b)(2)-OFFSET]

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

6. THIS EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF RULE 1110.2.
[RULE 1110.2]
7. THE HEATING VALUE OF LANDFILL GAS TO THE ENGINE SHALL NOT EXCEED 16.8 MM BTU PER HOUR. A HOURLY LOG OF THE LANDFILL GAS HEATING VALUE, BASED ON THE RECORDED FLOW RATE (SCFM), SHALL BE KEPT FOR AT LEAST TWO YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1303(b)(2)-OFFSET]
8. READINGS OF THE HEATING VALUE (BTU/HR) OF THE LANDFILL GAS AT THE INLET TO THE ENGINE SHALL BE TAKEN HOURLY WITH AN AQMD APPROVED INSTRUMENT AND THE RESULTS RECORDED.
[RULE 1303(b)(2)-OFFSET]
9. THE ENGINE SHALL ONLY USE LANDFILL GAS AS A FUEL.
[RULE 204]
10. TWO SAMPLING PORTS SHALL BE PROVIDED IN THE ENGINE EXHAUST DUCT, 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AND SHALL CONSIST OF TWO 4 INCH WELD NIPPLES WITH PLUGS, 90 DEGREES APART. AN EQUIVALENT METHOD FOR EMISSION SAMPLING MAY BE USED UPON APPROVAL OF THE AQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE SUPPLIED BY THE APPLICANT.
[RULE 217]
11. THE EMISSIONS FROM THE ENGINE SHALL NOT EXCEED THE FOLLOWING:
- | AIR CONTAMINANT | LBS/HR |
|--------------------------|--------|
| NON-METHANE HYDROCARBONS | 1.65 |
| NITROGEN OXIDE | 2.48 |
| SULFUR DIOXIDE | 0.82 |
| CARBON MONOXIDE | 9.92 |
| PARTICULATES | 0.21 |
- [RULE 1303(b)(2)-OFFSET]
12. A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) SHALL BE INSTALLED AND OPERATED TO MEASURE THE ENGINE EXHAUST CONCENTRATION FOR NOX AND O2 ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NOX CONCENTRATION TO A CORRECTED NOX CONCENTRATION AT 15% O2. THIS MONITORING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF AQMD RULE 218. PRIOR TO INSTALLATION, THIS MONITORING SYSTEM SHALL BE APPROVED IN WRITING BY THE AQMD. AN ALTERNATIVE OR PREDICTIVE MONITORING SYSTEM (PEMS), IF USED, SHALL BE SUBMITTED CONCURRENTLY WITH THE AFOREMENTIONED CEMS.
[RULE 218]

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

13. ALL RECORDS, SUCH AS FUEL USAGE, MAINTENANCE RECORDS AND PERFORMANCE TEST RESULTS, SHALL BE MAINTAINED FOR FIVE YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1150.1, 1303(b)(2)-OFFSET]
14. THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO UNREASONABLY INTERFERE WITH THE OWNER'S/OPERATOR'S ABILITY TO COMPLY WITH AQMD RULE 1150.1 OR ANY OTHER AQMD RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]
15. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF 40CFR PART 63, SUBPART ZZZZ – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES.
16. THE EXHAUST GAS SHALL BE SOURCE TESTED FOR NMOC (REPORTED AS HEXANE) CONCENTRATIONS IN PPM BY VOLUME, CORRECTED TO 3% OXYGEN ON DRY BASIS AND FOR NMOC REDUCTION EFFICIENCY (BY WEIGHT) AT LEAST ONCE EVERY YEAR.
[RULE 1150.1].
17. THE EXHAUST GAS SHALL BE SOURCE TESTED FOR NO_x, VOC (REPORTED AS METHANE) AND CO CONCENTRATIONS (CONCENTRATIONS IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS) AT LEAST ONCE EVERY TWO YEARS, OR 8760 OPERATING HOURS, WHICHEVER OCCURS FIRST.
[RULE 1110.2 (f)(1)(D)].

Emissions and Requirements:

18. NMOC: 20 PPMV AS HEXANE @3% O₂ OR 98 WEIGHT PERCENT REDUCTION, RULE 1150.1,
40 CFR 63 SUBPART AAAA
NMOC: 0.8 GR/BHP-HR, RULE 1303(a)(1)-BACT
NMOC: 40 PPM AS METHANE @15% O₂, RULE 1110.2
CO: 2000 PPMV, RULE 1110.2
CO: 2.5 GR/BHP-HR, RULE 1303(a)(1)-BACT
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
NO_x: 36 PPMV @ 15%O₂, RULE 1110.2
NO_x: 0.6 GR/BHP-HR, RULE 1303(a)(1)-BACT

Periodic Monitoring:

NONE

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

PERMIT TO CONSTRUCT

**Granted as of
A/N 510978**

Equipment Description:

RESOURCE RECOVERY SYSTEM NO. 4 CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE NO. 4, DEUTZ, MODEL TBG620V16K, SIXTEEN CYLINDER, 1877 BHP, LEAN BURN, LANDFILL GAS FIRED, TURBOCHARGED AND INTERCOOLED, DRIVING A 1.3 MW ELECTRICAL GENERATOR.
2. COMPRESSOR, 2500 CFM, 275 HP (COMMON TO A/N 510975, 510976, 510977, 510978 AND 510979)
3. COMPRESSOR, STANDBY, 600 SCFM
4. RADIATOR WITH FANS
5. ANCILLARY SKID WITH A MUFFLER, HEAT EXCHANGER, FILTER, INTERCOOLER AND EXHAUST STACK.
6. AIR/FUEL RATIO CONTROLLER, DEUTZ/MWM. MODEL-EVOLUTION.

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. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE.
[RULE 1150.1]
4. A SAMPLING PORT SHALL BE INSTALLED IN THE LANDFILL GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A GAS SAMPLE.
[RULE 217, 431.1, 1150.1]
5. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE.
[RULE 1110.2, 1303(b)(2)-OFFSET]

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

6. THIS EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF RULE 1110.2.
[RULE 1110.2]
7. THE HEATING VALUE OF LANDFILL GAS TO THE ENGINE SHALL NOT EXCEED 16.8 MM BTU PER HOUR. A HOURLY LOG OF THE LANDFILL GAS HEATING VALUE, BASED ON THE RECORDED FLOW RATE (SCFM), SHALL BE KEPT FOR AT LEAST TWO YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1303(b)(2)-OFFSET]
8. READINGS OF THE HEATING VALUE (BTU/HR) OF THE LANDFILL GAS AT THE INLET TO THE ENGINE SHALL BE TAKEN HOURLY WITH AN AQMD APPROVED INSTRUMENT AND THE RESULTS RECORDED.
[RULE 1303(b)(2)-OFFSET]
9. THE ENGINE SHALL ONLY USE LANDFILL GAS AS A FUEL.
[RULE 204]
10. TWO SAMPLING PORTS SHALL BE PROVIDED IN THE ENGINE EXHAUST DUCT, 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AND SHALL CONSIST OF TWO 4 INCH WELD NIPPLES WITH PLUGS, 90 DEGREES APART. AN EQUIVALENT METHOD FOR EMISSION SAMPLING MAY BE USED UPON APPROVAL OF THE AQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE SUPPLIED BY THE APPLICANT.
[RULE 217]
11. THE EMISSIONS FROM THE ENGINE SHALL NOT EXCEED THE FOLLOWING:
- | AIR CONTAMINANT | LBS/HR |
|--------------------------|--------|
| NON-METHANE HYDROCARBONS | 1.65 |
| NITROGEN OXIDE | 2.48 |
| SULFUR DIOXIDE | 0.82 |
| CARBON MONOXIDE | 9.92 |
| PARTICULATES | 0.21 |
- [RULE 1303(b)(2)-OFFSET]
12. A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) SHALL BE INSTALLED AND OPERATED TO MEASURE THE ENGINE EXHAUST CONCENTRATION FOR NOX AND O2 ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NOX CONCENTRATION TO A CORRECTED NOX CONCENTRATION AT 15% O2. THIS MONITORING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF AQMD RULE 218. PRIOR TO INSTALLATION, THIS MONITORING SYSTEM SHALL BE APPROVED IN WRITING BY THE AQMD. AN ALTERNATIVE OR PREDICTIVE MONITORING SYSTEM (PEMS), IF USED, SHALL BE SUBMITTED CONCURRENTLY WITH THE AFOREMENTIONED CEMS.
[RULE 218]

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

13. ALL RECORDS, SUCH AS FUEL USAGE, MAINTENANCE RECORDS AND PERFORMANCE TEST RESULTS, SHALL BE MAINTAINED FOR FIVE YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1150.1, 1303(b)(2)-OFFSET]
14. THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO UNREASONABLY INTERFERE WITH THE OWNER'S/OPERATOR'S ABILITY TO COMPLY WITH AQMD RULE 1150.1 OR ANY OTHER AQMD RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]
15. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF 40CFR PART 63, SUBPART ZZZZ – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES.
16. THE EXHAUST GAS SHALL BE SOURCE TESTED FOR NMOC (REPORTED AS HEXANE) CONCENTRATIONS IN PPM BY VOLUME, CORRECTED TO 3% OXYGEN ON DRY BASIS AND FOR NMOC REDUCTION EFFICIENCY (BY WEIGHT) AT LEAST ONCE EVERY YEAR.
[RULE 1150.1].
17. THE EXHAUST GAS SHALL BE SOURCE TESTED FOR NO_x, VOC (REPORTED AS METHANE) AND CO CONCENTRATIONS (CONCENTRATIONS IN PPM BY VOLUME, CORRECTED TO 15% OXYGEN ON DRY BASIS) AT LEAST ONCE EVERY TWO YEARS, OR 8760 OPERATING HOURS, WHICHEVER OCCURS FIRST.
[RULE 1110.2 (f)(1)(D)].

Emissions and Requirements:

18. NMOC: 20 PPMV AS HEXANE @3% O₂ OR 98 WEIGHT PERCENT REDUCTION, RULE 1150.1,
40 CFR 63 SUBPART AAAA
NMOC: 0.8 GR/BHP-HR, RULE 1303(a)(1)-BACT
NMOC: 40 PPM AS METHANE @15% O₂, RULE 1110.2
CO: 2000 PPMV, RULE 1110.2
CO: 2.5 GR/BHP-HR, RULE 1303(a)(1)-BACT
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
NO_x: 36 PPMV @ 15%O₂, RULE 1110.2
NO_x: 0.6 GR/BHP-HR, RULE 1303(a)(1)-BACT

Periodic Monitoring:

NONE

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

PERMIT TO CONSTRUCT

**Granted as of
A/N 510979**

Equipment Description:

RESOURCE RECOVERY SYSTEM NO. 5 CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE NO. 5, DEUTZ, MODEL TBG620V16K, SIXTEEN CYLINDER, 1877 BHP, LEAN BURN, LANDFILL GAS FIRED, TURBOCHARGED AND INTERCOOLED, DRIVING A 1.3 MW ELECTRICAL GENERATOR.
2. COMPRESSOR, 2500 CFM, 275 HP (COMMON TO A/N 510975, 510976, 510977, 510978 AND 510979)
3. COMPRESSOR, STANDBY, 600 SCFM
4. RADIATOR WITH FANS
5. ANCILLARY SKID WITH A MUFFLER, HEAT EXCHANGER, FILTER, INTERCOOLER AND EXHAUST STACK.
6. AIR/FUEL RATIO CONTROLLER, DEUTZ/MWM. MODEL-EVOLUTION.

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. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE.
[RULE 1150.1]
4. A SAMPLING PORT SHALL BE INSTALLED IN THE LANDFILL GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A GAS SAMPLE.
[RULE 217, 431.1, 1150.1]
5. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE.
[RULE 1110.2, 1303(b)(2)-OFFSET]

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

6. THIS EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF RULE 1110.2.
[RULE 1110.2]
7. THE HEATING VALUE OF LANDFILL GAS TO THE ENGINE SHALL NOT EXCEED 16.8 MM BTU PER HOUR. A HOURLY LOG OF THE LANDFILL GAS HEATING VALUE, BASED ON THE RECORDED FLOW RATE (SCFM), SHALL BE KEPT FOR AT LEAST TWO YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1303(b)(2)-OFFSET]
8. READINGS OF THE HEATING VALUE (BTU/HR) OF THE LANDFILL GAS AT THE INLET TO THE ENGINE SHALL BE TAKEN HOURLY WITH AN AQMD APPROVED INSTRUMENT AND THE RESULTS RECORDED.
[RULE 1303(b)(2)-OFFSET]
9. THE ENGINE SHALL ONLY USE LANDFILL GAS AS A FUEL.
[RULE 204]
10. TWO SAMPLING PORTS SHALL BE PROVIDED IN THE ENGINE EXHAUST DUCT, 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AND SHALL CONSIST OF TWO 4 INCH WELD NIPPLES WITH PLUGS, 90 DEGREES APART. AN EQUIVALENT METHOD FOR EMISSION SAMPLING MAY BE USED UPON APPROVAL OF THE AQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE SUPPLIED BY THE APPLICANT.
[RULE 217]
11. THE EMISSIONS FROM THE ENGINE SHALL NOT EXCEED THE FOLLOWING:
- | AIR CONTAMINANT | LBS/HR |
|--------------------------|--------|
| NON-METHANE HYDROCARBONS | 1.65 |
| NITROGEN OXIDE | 2.48 |
| SULFUR DIOXIDE | 0.82 |
| CARBON MONOXIDE | 9.92 |
| PARTICULATES | 0.21 |
- [RULE 1303(b)(2)-OFFSET]
12. A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) SHALL BE INSTALLED AND OPERATED TO MEASURE THE ENGINE EXHAUST CONCENTRATION FOR NOX AND O2 ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NOX CONCENTRATION TO A CORRECTED NOX CONCENTRATION AT 15% O2. THIS MONITORING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF AQMD RULE 218. PRIOR TO INSTALLATION, THIS MONITORING SYSTEM SHALL BE APPROVED IN WRITING BY THE AQMD. AN ALTERNATIVE OR PREDICTIVE MONITORING SYSTEM (PEMS), IF USED, SHALL BE SUBMITTED CONCURRENTLY WITH THE AFOREMENTIONED CEMS.
[RULE 218]

FACILITY PERMIT TO OPERATE WASTE MGMT DISP & RECY SERVS INC (BRADLEY)

13. ALL RECORDS, SUCH AS FUEL USAGE, MAINTENANCE RECORDS AND PERFORMANCE TEST RESULTS, SHALL BE MAINTAINED FOR FIVE YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1150.1, 1303(b)(2)-OFFSET]
14. THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO UNREASONABLY INTERFERE WITH THE OWNER'S/OPERATOR'S ABILITY TO COMPLY WITH AQMD RULE 1150.1 OR ANY OTHER AQMD RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]
15. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF 40CFR PART 63, SUBPART ZZZZ – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES.
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[RULE 1150.1].
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Emissions and Requirements:

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PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS
NO_x: 36 PPMV @ 15%O₂, RULE 1110.2
NO_x: 0.6 GR/BHP-HR, RULE 1303(a)(1)-BACT

Periodic Monitoring:

NONE