

EXHIBIT J

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SCS ENGINEERS

March 15, 2011
File No. 01200266.06

Mr. Pat Mohn
Nevada Division of Environmental Protection
Bureau of Air Pollution Control, Class I Permitting Branch
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701
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**SUBJECT: COMMENTS ON DRAFT CLASS 1 AIR QUALITY OPERATING
PERMIT NO. AP4953-1148.01, LOCKWOOD LANDFILL, STOREY
COUNTY, NEVADA**

Dear Mr. Mohn:

SCS Engineers (SCS), on behalf of Refuse, Inc. (RI), submits this comments document based on our review of the draft Class I Air Quality Operating Permit for the landfill gas (LFG)-to-energy (LFGTE) facility at Lockwood Landfill (Lockwood) in Storey County, Nevada. These comments are submitted in response to the issuance of the permit for public comment. This letter presents a summary of the specific comments we have on the draft permit for Lockwood as detailed below.

RI Comment No. 1

System 09 – Landfill Gas (LFG) Internal Combustion Engines		
S	2.011	2,233 HP Internal Combustion Engine (LFG ENG-01), Caterpillar 2010 Model No. G3520C, SN - TBD
S	2.012	2,233 HP Internal Combustion Engine (LFG ENG-01), Caterpillar 2010 Model No. G3520C, SN - TBD
S	2.013	2,233 HP Internal Combustion Engine (LFG ENG-01), Caterpillar 2010 Model No. G3520C, SN - TBD

The system description under Section VI.I notes the individual engine's make, model and serial number in the LFGTE facility. RI requests the flexibility to perform a "like" engine replacement if necessary. The engine would be the same make and model and would have the same emissions but would not match serial numbers; therefore, RI requests the serial number not be included in the equipment description. This will allow the flexibility to replace an engine with a like engine for maintenance or performance purposes to maintain operation of the LFGTE facility without having to modify the permit. The system description proposed is as follows:

System 09 – Landfill Gas (LFG) Internal Combustion Engines		
S	2.011	2,233 HP Internal Combustion Engine (LFG ENG-01), Caterpillar 2010 Model No. G3520C
S	2.012	2,233 HP Internal Combustion Engine (LFG ENG-01), Caterpillar 2010 Model No. G3520C
S	2.013	2,233 HP Internal Combustion Engine (LFG ENG-01), Caterpillar 2010 Model No. G3520C,

RI Comment No. 2

d. NAC 445B.22047 Federally Enforceable SIP Requirement - The discharge of sulfur to the atmosphere from the stacks of S2.011 – S2.013 will not exceed 12.47 pounds per 12 month rolling period, each.

Section VI.I.2.d limits the discharge of sulfur to the atmosphere of 12.47 pounds (lb) per 12 month rolling average period. RI requests clarification as to what sulfur level the Nevada Department of Environmental Protection (NDEP) is referring to in this condition. The LFGTE facility will combust the inlet sulfur found in LFG (permitted at 500 parts per million by volume (ppmv) based on the submitted application) and produce sulfur dioxides (SO₂) that are limited in Section VI.I.2.e to 12.49 tons per year. RI requests that NDEP clarify the lb/12 month sulfur limit (and its basis) and correct 12.47 lb/12 month rolling average to 12.27 tons per year as RI believes the pounds limit is a typo.

RI Comment No. 3

g. NAC 445B.305 Part 70 Program - The discharge of CO (carbon monoxide) to the atmosphere from the stacks of S2.011 – S2.013 not exceed 19.20 pounds per hour.

Section VI.I.2.g limits the CO emissions to 19.2 lb/hour (lb/hr). This language does not indicate if this limit is per engine or total. The submitted application estimates CO emissions as 19.2 lb/hr *per engine*. RI requests that the limit reference that the limit is per engine, and not total for the facility as follows:

g. NAC 445B.305 Part 70 Program - The discharge of CO (carbon monoxide) to the atmosphere from the stacks of S2.011 – S2.013 not exceed 19.20 pounds per hour per engine.

RI Comment No. 4

a. Operate properly-calibrated gas flow measuring devices that will measure the volume (in SCF) of landfill gas combusted in S2.011 – S2.013, each.

Section VI.I.4.a requires individual flow meters on each engine. RI requests that the LFGTE facility be allowed to operate a single flow meter for the total flow to the LFGTE facility. RI would provide an alternative method to calculate individual flow to each engine using the total flow value as described below.

Mr. Pat Mohn
March 15, 2011
Page 3

An orifice-plate type flow meter system will be permanently installed at the facility. The flow meter includes continuous input of the fuel gas temperature, the static pressure, and the differential pressure across the orifice plate. These data are input into a flow computer that continuously records and totalizes the temperature and pressure corrected fuel flow to the engines. Based on generator power output of each generator and the total gross power output from the facility (which are both measured and recorded with a high degree of accuracy), the fuel flow consumed by each individual engine can be determined by the formula

$$\frac{(\text{Volumetric Flow Rate})_N}{(\text{Power Output})_{\text{TOTAL}}} = (\text{Volumetric Flow Rate})_{\text{TOTAL}} \times (\text{Power Output})_N$$

This method has been applied at other LFGTE facilities and the calculation is integrated to the system so continuous flow records are maintained for each engine. The proposed language for Section VI.I.4.a is as follows:

a. Operate a properly-calibrated gas flow measuring device that will measure the volume (in SCF) of landfill gas combusted in S2.011 – S2.013.

RI Comment No. 5

d. Sample the landfill gas combusted in S2.011 – S2.013 on a monthly basis and determine the lower heating value (LHV) of the sampled landfill gas using the methods set forth in VI.H.3.d.(3) of this operating permit.

Section VI.I.4.d requires that the equation listed in VI.H.3.d.3 of the permit be used for determining the lower heating value (LHV). RI requests that the language allow some flexibility for the facility to determine the LHV by using the cited equation and/or on-site gas chromatograph (GC). RI proposes the following language for Section VI.I.4.d:

d. Sample the landfill gas combusted in S2.011 – S2.013 on a monthly basis and determine the lower heating value (LHV) of the sampled landfill gas using the methods set forth in VI.H.3.d.(3) of this operating permit and/or using an on-site gas chromatograph.

RI Comment No. 6

f. Conduct and record a Method 9 visible emissions test on each stack discharge for S2.011 – S2.013, while each engine is operating, on a monthly basis. The Method 9 visible emissions test must be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A, Method 9.

Section VI.I.4.f requires Environmental Protection Agency (EPA) Method 9 testing monthly. RI requests to perform monthly Method 22 visible emissions testing that do not require a certified observer. RI will perform annual Method 9 testing with a certified observer during source

testing. Please note that because the engines are gaseous combustion devices, it is rare for there to be visible emissions greater than 20% opacity nor to even have visible emissions at all. As such, monthly visible emissions testing with a certified observer is an overly stringent requirement. RI proposes the following monitoring and frequency:

f. Conduct and record a Method 22 visible emissions test on each stack discharge for S2.011 – S2.013, while each engine is operating, on a monthly basis. Conduct and record a Method 9 visible emissions test on each stack discharge for S2.011 – S2.012, while each engine is operating, on an annual basis during source testing. The Method 9 visible emissions test must be conducted by a certified visible emissions reader in accordance with 40 CFR Part 60, Appendix A, Method 9.

RI Comment No. 7

h. To demonstrate initial and continued compliance with the hourly emission rate limits set forth in 2.b., 2.c., 2.e., 2.f., 2.g., and 2.h. of this section, and on an annual basis thereafter, the following initial and subsequent performance tests must be conducted and recorded on the exhaust stack of each of the engines S2.011 – S2.013:

(3) An EPA Method 6 emission test for SO₂.

Section VI.I.4.h.3 requires EPA Method 6 for emission testing of SO₂, which tests exhaust emissions. RI requests that sulfur testing be conducted using the raw LFG to assess emissions. Inlet sulfur testing is the preferred method for determining SO₂ emissions, as set forth in EPA's Compilation of Air Pollutant Emission Factors (AP-42) document Section 2.4, since the emissions would not be dependent on exhaust flow but on the inlet concentration and flow rate of sulfur. The proposed language for Section VI.I.4.h.3 is as follows:

h. To demonstrate initial and continued compliance with the hourly emission rate limits set forth in 2.b., 2.c., 2.e., 2.f., 2.g., and 2.h. of this section, and on an annual basis thereafter, the following initial and subsequent performance tests must be conducted and recorded on the exhaust stack of each of the engines S2.011 – S2.013:

(3) Total sulfur as H₂S (inlet only)

RI Comment No. 8

h. To demonstrate initial and continued compliance with the hourly emission rate limits set forth in 2.b., 2.c., 2.e., 2.f., 2.g., and 2.h. of this section, and on an annual basis thereafter, the following initial and subsequent performance tests must be conducted and recorded on the exhaust stack of each of the engines S2.011 – S2.013:

(6) An EPA Method 25 emission test for VOC, measured as total gaseous non-methane organics (NMOC) and reported as carbon.

Section VI.I.4.h.6 requires EPA Method 25 for testing of volatile organic compounds (VOCs), measured as Non-Methane Organic Compounds (NMOCs). RI requests the allowance to use Method 25C, 25A, 18, South Coast Air Quality Management District (SCAQMD) Method 25.1, and/or 25.3 as options for testing.

h. To demonstrate initial and continued compliance with the hourly emission rate limits set forth in 2.b., 2.c., 2.e., 2.f., 2.g., and 2.h. of this section, and on an annual basis thereafter, the following initial and subsequent performance tests must be conducted and recorded on the exhaust stack of each of the engines S2.011 – S2.013:

(6) An EPA Method 25, Method 25C, Method 25A, Method 18, SCAQMD Method 25.1, or SCAQMD Method 25.3 emission test for VOC, measured as total gaseous non-methane organics (NMOC) and reported as carbon.

RI Comment No. 9

Section VI.I.4.k through VI.I.4.o describes the requirement for a continuous emissions monitoring system (CEMS). The CEMS requirement is considered an overly burdensome monitoring, recordkeeping, and reporting requirement and extremely cost-prohibitive for a small-scale, renewable energy facility such as the three-engine facility at Lockwood. A CEMS for the facility will represent up to \$500,000 in capital costs and approximately \$40,000 in annual operating costs. Requiring a CEMS for small facilities such as Lockwood could very well prevent the development of other similar projects which are already struggling due to economic viability. In addition, there is no jurisdiction or regulatory precedent that requires CEMS except for those that have specific rules requiring CEMS, which NDEP does not. In fact, out of the hundreds of LFGTE facilities throughout the United States that are operational, there is only one known jurisdiction, the SCAQMD, that requires CEMS, and it is specifically required in one of their rules. There is one known example of a CEMS in the Bay Area Air Quality Management District (BAAQMD) that is not associated with a specific rule; however, this was agreed upon as part of an experimental project for testing possible emission controls. The following is a brief list of landfills with LFGTE facilities in the western region that have been permitted and were not required to install and operate a CEMS:

Arizona

- Tri-Cities Landfill
- Skunk Creek Landfill

California

- Keller Canyon Landfill
- Crazy Horse Landfill
- Ostrom Road Landfill
- Newby Island Landfill
- Guadalupe Landfill
- Mountain View Landfill
- City of Sunnyvale Landfill

Mr. Pat Mohn
March 15, 2011
Page 6

- Otay Landfill
- Sycamore Landfill
- San Marcos Landfill
- Sonoma Central Landfill
- Marina Landfill
- Buena Vista Landfill
- Johnson Canyon Landfill
- Visalia Landfill
- Woodville Landfill
- Western Regional Landfill
- Yolo Central Landfill
- Miramar Landfill
- Simi Valley Landfill
- Altamont Landfill

Colorado

- Denver Arapahoe Disposal Site (DADS)

Idaho

- Fighting Creek Landfill

Oregon

- Riverbend Landfill
- Columbia Ridge Landfill and Recycling Center

This represents over 14 different jurisdictions, whether the state, local air district or Environmental Protection Agency (EPA) that permitted a LFGTE facility without requiring CEMS.

As there is no control equipment to malfunction, a CEMS is not warranted and emissions change slowly over time; therefore, RI believes that the data gathered by a CEMS will not provide any additional compliance information that wouldn't be captured during annual source tests and will be more than sufficient to detect any issues. Also, there are known operational issues attributable to the CEMS when trying to configure it to LFG-fired equipment as opposed to a clean fuel, for which it was designed. The exhaust stream of LFG consists of acid vapors, SO₂, and siloxanes, which often cause extremely sensitive pieces of equipment like the CEMS to shutdown and/or malfunction. RI requests that the CEMS and associated requirements be removed from the permit. RI can provide monitoring, recordkeeping, and reporting requirements that are commonly used for LFGTE facilities such as the proposed engine facility for NDEP upon request.

In general, the vast majority of all LFGTE installations require annual stack testing to determine emissions compliance and continuous monitoring/recording of operating hours, power output and flow. From these data, we can calculate running totals of all emission parameters. Annual

Mr. Pat Mohn
March 15, 2011
Page 7

stack testing is also required by the IC engine NSPS rule (40 CFR Part 60, Subpart JJJJ), and thus has been deemed sufficient for compliance purposes by U.S. EPA.

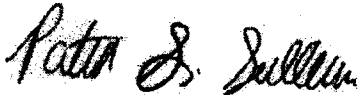
CLOSING

Should you have any questions regarding this submittal, please do not hesitate to contact Patrick Sullivan of SCS at (916) 361-1297 or Bill Carr of RI at (775) 342-0401. We had hoped that permitting issues like these could have been worked out with NDEP prior to the formal public comment period. Since that did not occur, we have provided these comments and respectfully request a meeting with NDEP to work them out.

Sincerely,



Gabrielle N. Fourie
Senior Project Scientist



Patrick S. Sullivan, R.E.A., C.P.P.
Senior Vice President
SCS ENGINEERS

cc: Bill Car; Refuse, Inc.
Christian Colline; Waste Management
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