

Mr. Pravin Patel
Rolls Royce Allison
P.O. Box 420
Indianapolis, Indiana 46206-0420

Re: Construction permit # CP-099-0311-01
First Amendment 097-11888-00311

Dear Mr. Patel:

Rolls Royce Allison was issued a Construction Permit CP-099-0311-01 on June, 10 1999 to construct and operate five gas turbine engines and a fuel conversion project for the Plant 5 and Plant 8 boilers. On February 10, 2000, Rolls Royce Allison requested an amendment to conditions 7 and 9 of Construction Permit CP-099-0311-01.

Rolls Royce Allison has recently completed NOx emissions testing on emission units 0070-71 and 0070-69 pursuant to the requirements of Condition 7 of Construction Permit CP-099-0311-01. These tests were performed to verify the emission factors used in the permit to generate fuel consumption ratios and to demonstrate compliance with the NSPS Subpart GG emission limitations for NOx. The fuel consumption ratios are used in the permit to demonstrate compliance with an over all fuel usage limit taken to avoid the Prevention of Significant Deterioration Regulation 326 IAC 2-2. The result of these tests showed compliance with NSPS Subpart GG emissions limitations but were higher than the factors used to develop the fuel consumption ratios in the permit. Therefore Rolls Royce Allison has requested that the permit be amended to reflect higher consumption ratios for emission units 0070-71, 0070-69 and 0070-76. The following table shows the stack test results, current permit factors and proposed permit factors:

Emission Unit I.D.#	Emission Factors, Lbs/MMBtu (Condition 7)			Fuel Usage Ratio (Condition 9)		
	Current Permit	Stack Test Results	Proposed Permit	Current Permit	Stack Test Results	Proposed Permit
0070-71	0.39	0.41	0.45	3.9	4.1	4.5
0070-79*	0.39	0.61	0.65	3.9	6.1	6.5

Emission Unit 0070-79 is similar to emission unit 0070-76.

Therefore, Operating Conditions 7 and 9 in Construction Permit CP-099-0311-01 are hereby amended as follows (changes are bold for emphasis):

Performance Testing

7. That pursuant to IAPCB Regulation 2 (Permits) and 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance stack tests shall be performed for emission factors used to determine equivalency on the following equipment within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up.
 - (a) To demonstrate compliance with condition 9 and verify emission factors used to determine equivalency, stack tests shall be performed for NOx on the following:
 - (i) Boilers (Emission Unit ID 0070-62):

0.1 lb/MMBtu when combusting natural gas

- (ii) Boilers (Emission Unit ID 0070-01 and 59):
0.175 lb/MMBtu when combusting #4 oil
Testing pursuant to this section is required within 180 days of initial No. 4 oil use.
- (iii) Boilers (Emission Unit ID 0070-01 and 62):
0.058 when combusting landfill gas
- (iv) Turbines (Emission Unit IDs 0070-71, 76, 79, 80 and 81):
~~0.390 lb/MMBtu when combusting natural gas.~~
0.062 lb/MMBtu when combusting landfill gas.
- (v) **Turbines (Emission Unit IDs 0070-80 and 81):
0.390 lb/MMBtu when combusting natural gas.**
- (vi) **Turbines (Emission Unit IDs 0070-71):
0.450 lb/MMBtu when combusting natural gas.**
- (vii) **Turbines (Emission Unit IDs 0070-76 and 79):
0.650 lb/MMBtu when combusting natural gas.**

Testing pursuant to section (c) of this condition will satisfy this section.

- (b) To demonstrate compliance with condition 9 and verify emission factors used to determine equivalency, stack tests shall be performed for PM10 (filterable and condensable) on the following:
 - (i) Boilers (Emission Unit ID 0070-01 and 62):
0.014 lb/MMBtu when combusting landfill gas
 - (ii) Turbines (Emission Unit IDs 0070-71 and 76):
0.016 lb/MMBtu when combusting landfill gas.
- (c) To demonstrate compliance with condition 14 and verify emission factors used to determine equivalency, stack tests shall be performed for SO2 and NOx on the following:
 - (i) Emission Unit ID 0070-71, 76, 79, 80 and 81 pursuant to 40 CFR 60.335.

These tests shall be performed according to 326 IAC 3-2.1 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Administrator.

- (d) A test protocol shall be submitted to the OAM, Compliance Data Section, and ERMD, Air Quality Management Section, Compliance Data Group, 35 days in advance of the test.
- (e) The OAM, Compliance Data Section, and ERMD, Compliance Data Group, shall be notified of the actual test date at least two (2) weeks prior to the date.
- (f) All tests reports must be received by OAM, Compliance Data Section, and ERMD, Compliance Data Group, within 45 days of completion of the testing.
- (g) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the

test results. These actions shall be implemented immediately unless notified by OAM and ERMD that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.

- (h) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

PSD Minor Source Limit

9. NOx and PM10 emissions are limited based on the following fuel inputs:

- (a) NOx limitation(based on all boilers, Emission Unit ID 0070-01,02,03,04,62, 63, 64 and 65):The input of natural gas and natural gas equivalents to the equipment covered in this permit shall be limited to less than 6205 MMCF natural gas per 12 month consecutive period. This usage limitation is equivalent to a potential to emit of less than 325.74 tons per year. For the purposes of determining compliance every million cubic feet of natural gas shall be equivalent to the following:

Boilers (Emission Unit ID 0070-01,02,03 and 04) are adjusted to:

0.00023	MMCF per gal #4 oil
0.00023	MMCF per gal #2 oil
0.31928	MMCF per MMCF landfill gas

Boilers (Emission Unit ID 0070-58 and 59) are adjusted to:

0.00048	MMCF per gal #6 oil
0.00023	MMCF per gal #4 oil
0.00023	MMCF per gal #2 oil

Boilers (Emission Unit ID 0070-62, 63, 64 and 65)are adjusted to:

0.00060	MMCF per gal #6 oil
0.00023	MMCF per gal #2 oil
0.31928	MMCF per MMCF landfill gas

Turbines(Emission Unit IDs 0070-71, 76, 79, 80 and 81) are adjusted to:

3.90000	MMCF per MMCF natural gas
0.34130	MMCF per MMCF landfill gas

Turbines(Emission Unit IDs 0070-80 and 81) are adjusted to:

3.90000 MMCF per MMCF natural gas

Turbines(Emission Unit IDs 0070-71) is adjusted to:

4.50000 MMCF per MMCF natural gas

Turbines(Emission Unit IDs 0070-76, and 79) are adjusted to:

6.50000 MMCF per MMCF natural gas

and;

Boilers (Emission Unit ID 0070-01,02,03,04,62, 63, 64 and 65) are limited to:

0.1 lb/MMBtu when combusting natural gas

Boilers (Emission Unit ID 0070-01,02,03,04,58,59,62, 63, 64 and 65) are limited to:

0.175 lb/MMBtu when combusting #2 oil
Boilers (Emission Unit ID 0070-01,02,03,04,58 and 59) are limited to:
0.175 lb/MMBtu when combusting #4 oil
Boilers (Emission Unit ID 0070-58 and 59) are limited to:
0.336 lb/MMBtu when combusting #6 oil
Boilers (Emission Unit ID 0070-62, 63, 64 and 65) are limited to:
0.447 lb/MMBtu when combusting #6 oil
Boilers (Emission Unit ID 0070-01,02,03,04,62, 63, 64 and 65) are limited to:
0.058 when combusting landfill gas
Turbines (Emission Unit ID 0070-76, 79, 80 and 81) are limited to:
~~0.390 lb/MMBtu when combusting natural gas.~~
0.062 lb/MMBtu when combusting landfill gas.
Turbine (Emission Unit ID 0070-80 and 81) are limited to:
0.390 lb/MMBtu when combusting natural gas.
Turbine (Emission Unit ID 0070-71) are limited to:
0.450 lb/MMBtu when combusting natural gas.
Turbine (Emission Unit ID 0070-76 and 79) are limited to:
0.650 lb/MMBtu when combusting natural gas.

During the first 12 months of operation, the input of natural gas and natural gas equivalents shall be limited such that the total usage divided by the accumulated months of operation shall not exceed the limit specified.

- (b) PM10 limitation based on boilers (Emission Unit ID 0070-01,02,03,04,58 and 59) The input of No. 4 oil and No. 4 oil equivalents shall be limited to 37,142,800 gallons of No.4 oil per 12 month consecutive period. This usage limitation is equivalent to a potential to emit of 130 tons per year. For the purposes of determining compliance every gallon of No.4 oil shall be equivalent to the following:

Boilers (Emission Unit ID 0070-01,02,03,04,58,59,62, 63, 64 and 65) are adjusted to:
2.60 gal per gal No. 6 oil
0.00088 gal per CF natural gas
0.280 gal per gal # 2 oil
Turbines (Emission Unit IDs 0070-76, 79, 80 and 81) are adjusted to:
0.00132 gal per CF landfill gas
0.00088 gal per CF natural gas
Boilers (Emission Unit ID 0070-01,02,03,04,62, 63, 64 and 65) are adjusted to :
0.00116 gal per CF landfill gas
and;
Boilers (Emission Unit ID 0070-01,02,03,04,62, 63, 64 and 65) are limited to:
0.014 lb/MMBtu when combusting landfill gas
Turbines (Emission Unit IDs 0070-76, 79, 80 and 81) are limited to:
0.016 lb/MMBtu when combusting landfill gas.
and;

Compliance with the PM10 limitations shall include filterable and condensable particulate when demonstrating compliance pursuant to this condition.

During the first 12 months of operation, the input No. 4 oil and No. 4 oil equivalents shall be limited such that the total usage divided by the accumulated months of operation shall not exceed the limit specified.

The above fuel inputs are required to limit the potential to emit of PM10 and NOx emissions to less than 130, and 325.74 tons per 12 consecutive month period respectively. Compliance with these limits makes 326 IAC 2-2(Prevention of Significant Deterioration) and 40 CFR 52.21, are not applicable.

Compliance with this condition does not rely upon the shutdown of Plant 8 boilers, 5 and 6(Emission Unit ID 0070-60 and 61) or the elimination of No. 6 fuel oil. The above ton per year emission limitations are based on a two year average of actual emissions from all existing energy producing facilities prior to this fuel conversion and increases less than the significance levels for NOx and PM10 as defined in 326 IAC 2-2, Prevention of Significant Deterioration. The ton per year limitations contained in this condition are an emissions cap for all energy producing facilities at Plant 5 and 8 such that the requirements of 326 IAC 2-2(Prevention of Significant Deterioration) and 40 CFR 52.21, are not applicable.

All the other conditions of the permit remain unchanged and in effect. Please attach a copy of this amendment with the original permit.

If you have any questions concerning this permit amendment, please contact Mr. Mark Caraher at (317) 327-2234.

Sincerely,

Mona A. Salem
Chief Operating Officer
Department of Public Works
City of Indianapolis

cc: Files
Matt Mosier, ERMD Compliance
Mindy Hahn, IDEM