COMPLIANCE TEST REPORT

PULVERIZED COAL BOILER
COAL CRUSHER BAGHOUSE B
COAL TRIPPER DECK BAGHOUSE C
DIESEL FIREWATER PUMP

NEWMONT NEVADA ENERGY INVESTMENT LLC
TS POWER PLANT

April 2008
Eureka County, Nevada

Prepared for:

Fluor Power Group
100 Fluor Daniel Drive
Greenville, South Carolina 29607

Prepared by:

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TRC Project No. 157535

COMPLIANCE TEST REPORT

TRC PROJECT NO:	**157535**
TEST DATES:	**April 6-14, 2008**
TYPE OF TEST:	**Emissions Compliance Test**
TEST LOCATIONS:	**Pulverized Coal Boiler Stack** **Baghouse B Stack** **Baghouse C Stack** **Diesel Firewater Pump Engine Stack**
TEST SITE:	**TS Power Plant** **450 TS Power Plant Road** **Beowawe, Nevada 89821**
PREPARED FOR:	**Fluor Power Group** **100 Fluor Daniel Drive** **Greenville, South Carolina 29607**
TESTED BY:	**TRC Environmental** **5540 Centerview Drive, Suite 100** **Raleigh, North Carolina 27606**

REPORT CERTIFICATION

EMISSIONS TEST REPORT

TRC Reference Number 157535

The sampling and analysis performed for this report were carried out under my direction and supervision, and I hereby certify that, to the best of my knowledge, the test report is authentic and accurate.

Date: 5/29/03

Signature: Carl F. Fink

Carl F. Fink, P.E.
Senior Project Manager

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SECTION 1.0
INTRODUCTION

1.1 OVERVIEW

TRC Environmental was retained by Fluor Power Group (Fluor) to conduct the emissions compliance testing at the Newmont Nevada Energy Investment, LLC's TS Power Plant located near Dunphy, Nevada. Testing was performed to demonstrate compliance with the State of Nevada, Division of Environmental Protection, Bureau of Air Pollution Control, Air Quality Operating Permit (No. AP4911-1349). The testing was conducted from April 6 through April 14, 2008.

1.2 TESTING DETAILS

The purpose of the testing for each system is as follows:

System 01 – Pulverized Coal Fired Boiler – S2.001

- Determine the emission rate of particulate matter (PM) and particulate matter equal to or less than an aerodynamic diameter of nominally 10 μm (PM_{10});
- Determine the emission rates of sulfuric acid mist (H_2SO_4); hydrogen chloride (HCl), and hydrogen fluoride (HF);
- Determine the emission rates of mercury (Hg) and lead (Pb);
- Determine the concentrations of O_2 and CO_2;
- Determine the emission rate of nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO_2), and volatile organic compounds (VOC) in regards to limits in the NDEP permit; and
- Determine compliance with visible emission standard limitations of the operating permit.

System 05 – Coal Crushing Operations Baghouse "B" Controlled – S2.006 to S2.009

- Determine the emission rate of particulate matter (PM) and particulate matter equal to or less than an aerodynamic diameter of nominally 10 μm (PM_{10}); and
- Determine compliance with visible emission standard limitations of the operating permit.

System 06 – Coal Tripper Deck, Baghouse "C" Controlled - S2.010 to S2.012

- Determine the emission rate of particulate matter (PM) and particulate matter equal to or less than an aerodynamic diameter of nominally 10 μm (PM_{10}); and
- Determine compliance with visible emission standard limitations of the operating permit.

System 15 – Diesel Firewater Pump – S2.021

- Determine the emission rate of particulate matter (PM) and particulate matter equal to or less than an aerodynamic diameter of nominally 10 μm (PM_{10});
- Determine the concentrations of O_2 and CO_2;
- Determine the emission rate of nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO_2), and volatile organic compounds (VOC) in regards to limits in the NDEP permit; and
- Determine compliance with visible emission standard limitations of the operating permit.

1.3 TEST PROGRAM ORGANIZATION

The project was under the general direction of Ken Loder of TRC's Raleigh, NC office. TRC staff from several field offices wad used in the testing. Michael Martin and Anesha Rumble represented Fluor Enterprises for the test program

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1.4 TEST PARTICIPANTS

Table 1-1 presents a list of the test participants from each organization

TABLE 1-1
TEST PARTICIPANTS

Organization	Participants
Fluor Power Group	Michael Martin
	Anesha Rumble
	Tony Stromack
	Keith Lofton
TRC Environmental Corporation	Ken Loder
	Paul Clark
	Jim McSweeney
	Scott James
	Mark Patrick
	Lou Villaruz
	John Lowe
	Matt Ellis
	Joe Phillips

SECTION 2.0
SUMMARY OF TEST RESULTS

2.1 TEST RESULTS

Tables 2-1 and 2-2 present the results summaries for the compliance testing conducted on the Pulverized Coal Boiler, Coal Crusher Baghouse B, Coal Deck Tripper Baghouse C, and the Diesel Firewater Pump. The table also shows the permitted emission rates for the applicable pollutants being tested.

2.2 RESULTS DISCUSSION

The results for most of the tested parameters were within the permit limits. The Boiler mercury emissions result, calculated on a one-hour basis using EPA Method 29 mercury results and the reported gross MW, exceeded the pounds per gigawatt-hour (lb/GWh) 12-month rolling average permit limit. The Firewater Pump particulate results exceeded the pound per hour and tons per year permit limits.

The sulfur emissions result was calculated as one-half the SO_2 average value, as instructed in the permit, Section V(A.)(4.)(b.)(7.).

The NOx, CO, SO_2, and VOC results for the Boiler were calculated using moisture and volumetric flow rate values from other test methods being conducted in the Boiler Stack at approximately the same time. The runs that were the source of the supporting data are identified in the detailed results summaries in Appendix A.

The oxygen/carbon dioxide bag sample for the Boiler particulate run 1 appeared to have been contaminated with ambient air, and the average of the run 2 and run 3 values was used for the run 1 calculations.

The Method 26A reagent blank was found to have high levels of both chlorides and fluorides. The analytical laboratory reported that there may have been contamination from the reagent storage container. Since the same type containers were used for the sample, the HCl and HF results were calculated with the full reagent blank correction.

TABLE 2-1

SUMMARY OF TEST RESULTS
PULVERIZED COAL BOILER

EMISSION UNIT	POLLUTANT	TEST RESULT	PERMITTED LIMIT
Pulverized Coal Boiler	PM/PM_{10} (EPA Method 5B/202)	30.9 lb/hr 0.014 lb/MMBtu	77.1 lb/hr 0.176 lb/MMBtu
	Sulfur	28.3 lb/hr	1218.0 lb/hr
	SO_2 While combusting coal with sulfur content ≥ 0.45 percent by weight	NA	0.09 lb SO_2/MMBtu 95% min. SO_2 RE 192.9 lb/hr
	SO_2 While combusting coal with sulfur content < 0.45 percent by weight	0.029 lb/MMBtu 94.1% SO_2 RE 56.6 lb/hr	0.065 lb SO_2/MMBtu 91% min. SO_2 RE 192.9 lb/hr
	NO_x	0.066 lb/MMBtu	0.067 lb/MMBtu
	CO	3.7 lb/hr 0.002 lb/MMBtu	304.5 lb/hr 0.15 lb/MMBtu
	VOC	0.06 lb/hr	8.1 lb/hr
	Lead (Pb)	< 0.002 lb/hr	0.05 lb/hr
	Mercury (Hg)	0.039 lb/GWh	0.02 lb/Gigawatt hour
	Hydrogen Fluoride (HF)	0.23 lb/hr	1.17 lb/hr
	Hydrogen Chloride (HCl)	0.74 lb/hr	1.27 lb/hr
	Sulfuric Acid Mist (H_2SO_4)	0.60 lb/hr	2.06 lb/hr
	Opacity	0%	20%

TABLE 2-2
SUMMARY OF TEST RESULTS
BAGHOUSE B, BAGHOUSE C, AND FIREWATER PUMP

EMISSION UNIT	POLLUTANT	TEST RESULT	PERMITTED LIMIT
Baghouse "B" Controlled	PM/PM_{10}	0.09 lb/hr	0.44 lb/hr
	Opacity	0%	20%
Baghouse "C" Controlled	PM/PM_{10}	0.31 lb/hr	1.44 lb/hr
	Opacity	0%	20%
Diesel Firewater Pump	PM/PM_{10}	0.18 lb/hr 0.009 tpy 0.22 g/HP-hr	0.09 lb/hr 0.004 tpy 0.54 g/KW-hr (0.40 g/HP-hr)
	SO_2	0.02 lb/hr 0.001 tpy	0.12 lb/hr 0.006 tpy
	NO_x	1.41 lb/hr 0.07 tpy	3.73 lb/hr 0.19 tpy
	CO	0.29 lb/hr 0.01 tpy 0.36 g/HP-hr	0.52 lb/hr 0.03 tpy 3.5 g/KW-hr (2.6 g/HP-hr)
	VOC	0.04 lb/hr 0.002 tpy	0.19 lb/hr 0.01 tpy
	NMHC+NOx	1.8 g/HP-hr	10.5 g/KW-hr (7.8 g/HP-hr)
	Opacity	14.8%	20%