HIGH PLAINS
U R A N I U M

1718 Capitol Ave.
Cheyenne, WY 82001

August 28, 2006

Mr. Paul Michalak
United States Nuclear Regulatory Commission
Division of Fuel Cycle Safety and Safeguards
Mail Stop: T8F42
Washington, DC 20555-001

RE: Proposed Meteorological Study Plan for the Allemand Ross Project

Dear Mr. Michalak,

During the introductory meeting between High Plains Uranium, Inc. (HPU) and Nuclear Regulatory Commission (NRC) staff members on August 22, 2006, HPU requested guidance on a proposed meteorological study plan for the Allemand Ross Project (ARP) area. The NRC staff requested that HPU provide more detailed information regarding the meteorological monitoring stations proposed for use with the plan. The request was made to ensure that the data collected from the proposed monitoring stations would meet the acceptance criteria as outlined in Section 2.5, Meteorology of NUREG-1569, "Standard Review Plan for In Situ Leach Uranium Extraction License Applications".

Specifically, NUREG-1569 states that the proposed monitoring stations should be set up according to Regulatory Guide 3.63, "Onsite Meteorological Measurement Program for Uranium Recovery Facilities – Data Acquisition and Reporting" (NRC 1988). Regulatory Guide 3.63 details the meteorological data required to perform a site evaluation. HPU has included correspondence dated August 25, 2006 from IML Air Science (author of the plan and operator of the stations) detailing site specific information for the two meteorological monitoring stations proposed for the study plan. Data collected over a three year period will be used from meteorological stations at the Antelope and Glenrock coal mines located within 80-kilometers of the proposed ARP facility in the Powder River Basin. The ARP facility will not include a tailings impoundment, therefore according to Section C of Regulatory Guide 3.63 the required parameters that need to be monitored are wind direction, wind speed, and atmospheric stability for a minimum consecutive 12-month period.

HPU believes that the proposed meteorological stations meet all requirements of Regulatory Guide 3.63, including monitored parameters, instrument locations, system accuracies and maintenance and data recovery. Therefore, these stations should be recognized as acceptable installations to provide appropriate baseline meteorological data for the license application.

If you have any questions, please contact me at (307) 459-4128.

Sincerely,

Leland Huffman
ISL General Manager

encl
cc: Pat Lorello
Dani Wright

IML Air Science
a division of Inter-Mountain Laboratories, Inc.

555 Absaraka, Sheridan, WY 82801

August 25, 2006

Leland Huffman
General Manager
High Plains Uranium
1718 Capitol Ave.
Cheyenne, WY 82001

Re: Meteorological Data Plan

Dear Leland:

In response to your request, we have assembled site information, instrument data, quality assurance procedures and regulatory references to support the validity of meteorological data collected and reported by IML Air Science. As I mentioned on the phone, the data from the Antelope Mine, Glenrock Mine, and all of our monitoring sites meet EPA criteria for quality assurance and for use in atmospheric dispersion modeling. This encompasses tower siting, instrument procurement and acceptance testing, instrument calibration and audits, data validation and data reporting.

We audit all of our met stations every other quarter, as stipulated in the QA guidance. A detailed form and SOP are attached to show the procedure, the parameters audited and the audit tolerances for each parameter. The most recent met audit, typical of all of our sites, was performed for the Belle Ayr Mine (attached). Since the Antelope and Glenrock mine sites have been proposed as surrogates for your project site, I've also attached a tabular description of each of those stations.

All of the meteorological data acquired by IML Air Science are stored in a relational database. Software validation supplemented by operator inspection, assures reasonable values and continuity in the hourly average data. Data are summarized in quarterly reports, which also include data recovery statistics and diagnosis of invalidated records. Reports are read by the client as well as the state regulatory authority. In some states (including Wyoming), the regulatory authority uploads these meteorological data to the national Air Quality System (AQS) database.

We believe the level of rigor associated with collecting and validating our meteorological data is comparable, if not superior to National Weather Service standards.

Please let me know if you need further information.

Sincerely,

Ronn Smith, P.E.

Standard Operating Procedure
For
Meteorological Station Audit
SOP AIR-12

Procedural Section

1.0 Scope and Application

1.1 In 1970 the Clean Air Act (CAA) was signed into law. The CAA and its amendments provide the framework for all pertinent organizations to protect air quality. On July 18, 1997, in Federal Register: Vol. 62, No. 138, the United States Environmental Protection Agency (EPA) revised the particulate matter ambient air standards. Along with the establishment of the standard is the requirement for a national monitoring network utilizing a filter-based method adopted by EPA. The Antelope Mine is obligated to adopt the TSP and PM_{10} standards and establish a PM monitoring network.

1.2 This procedure applies to the following equipment: RM Young wind sensor, Met One 12" tipping bucket precipitation device, Fenwal 107 temperature monitor, Vaisala PTB 101B barometric pressure sensor, and Campbell Scientific CR-10X data logger, which are used in the Antelope Mine PM monitoring network.

1.3 The elements of this SOP are applicable for all sampling frequencies.

1.4 To ensure that the recorded meteorological data for wind speed, wind direction, temperature, barometric pressure, and precipitation match readings provided by known references, within acceptable limits.

2.0 Summary of Method

2.1 The Antelope Mine is responsible for the accuracy audit of their Meteorological station. The actual procedure is performed by Division field personnel or contracted.

2.2 The meteorological audit consists of checking current readings for all parameters against reference values.

3.0 Health and Safety Warnings

3.1 General safety precautions related to electrical hazards must be observed at all times when working with electronic equipment. Electrical receptacles and equipment must be properly grounded. Use caution when servicing or operating electrical equipment in wet conditions.

3.2 General precautions for working with heavy equipment and electro-mechanical equipment should be taken.

4.0 Cautions

4.1 Damage to the instrument may result if caution is not taken to properly install and maintain the device. Follow the manufacturer's instructions for maintenance of all equipment and for safe, secure installation.

5.0 Personnel Qualifications

5.1 Persons performing this SOP must be familiar with the operation of environmental measurement instrumentation.

5.2 Computer skills are necessary for programming the sampler and for troubleshooting.

5.3 Familiarity with electronic and mechanical test equipment is required.

6.0 Equipment

6.1 Quartz-referenced wind speed motor, with adapters

6.2 Starting torque measurement disc and weights

6.3 NIST traceable thermometer

6.4 Two insulated containers (one with ice water and the other with hot water)

6.5 Engineer's transit

6.6 Class B pipette

6.7 Field data sheet

6.8 Miscellaneous tools

7.0 Meteorological Station Audit Procedure

7.1 Record the date, station ID, auditor(s), description of sensors, and note

any visible anomalies in the field log book. Check that the data logger is displaying reasonable current readings.

7.2.1 Check the initial alignment of the wind direction sensor using the transit, being sure to adjust for the local declination of 12° East.

7.3 Locate the reference, aspirated thermometer near the met station's temperature sensor, allow each sensor to reach equilibrium and record both readings.

7.4 Record the "time system off line", just before lowering the tower. Remove the appropriate base mounting bolts, detach the guy wire perpendicular to the base hinge, and ***carefully*** lower the tower.

7.5 Remove the anemometer propeller. Attach the propeller torque disc to the shaft and record the starting torque in the counter-clockwise direction.

7.6 Attach the anemometer drive motor to the shaft and rotate at speeds corresponding to approximately 3 mph, 9 mph, 30 mph, and 90 mph, recording the motor speeds and wind speed readings from the data logger.

7.7 Assess the linearity of the wind direction sensor by physically holding the anemometer at 0°, 90°, 180°, and 270°, recording the corresponding readings from the data logger.

7.8 Immerse the reference thermometer and met station temperature sensor in an ice bath. After the sensors have attained equilibrium, record the measurements from both. Repeat the procedure for a warm water bath (approximately 80°F - 100°F).

7.9 After all measurements on the tower have been taken, inspect the sensors and all cables and mounting hardware. Repair or replace any damaged components if indicated.

7.10 Make sure all cables and mounting hardware are sound and secure. ***Carefully*** raise the tower, secure the base, and equalize the guy wire tensions.

7.11 Using the pipette, admit water slowly into the inlet of the precipitation gauge (*as found, i.e. do not clean)* until the bucket tips 10 times (0.1" precipitation equivalent). Record the amount of water required for the 10 tips, and the amount registered on the data logger. Repeat the procedure two more times. After the readings have been taken, clean the inlet, and perform any indicated adjustments and/or repairs can be performed and noted. Note

the condition of the gauge prior to, and after the audit. If the ambient temperature is cold enough, assess whether the heater is working.

7.12 Record any findings, repairs, replacements and any other anomalies in the field log book. Record the time the station was returned to normal operating condition.

References

1. Quality Assurance Handbook for Air Pollution Measurement Systems: Volume IV. Meteorological Measurements; EPA/600/4-90/003; August 1989; U.S. Environmental Protection Agency

2. Quality Assurance Handbook for Air Pollution Measurement Systems: Volume V. Precipitation Measurement Systems; EPA/600/R-94/038e; April 1994; U.S. Environmental Protection Agency

3. On-Site Meteorological Program Guidance for Regulatory Modeling Applications; EPA-450/4-87-013; June, 1987; U.S. Environmental Protection Agency

4. Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD); EPA-450/4-87-007; May, 1987; U.S. Environmental Protection Agency

iml Air Science
a division of Inter-Mountain Laboratories, Inc. 555 Absaraka, Sheridan, WY 82801

Meteorological Station Audit/Calibration

Network:

Date: Auditors: DAS time off-line:

Notes; system as found:

Sensors

DAS:	Temp/Asp:
Wind Speed:	Wind Direction:
Bar. Pres.:	RH:
Precipitation:	

System Audit

Wind Speed

starting torque gm-cm

reference	DAS	after adj.
0 rpm		
rpm mph		
rpm mph		
rpm mph		
rpm mph		

Wind Direction

starting torque

ccw: cw: gm-cm

initial alignment:

reference	DAS	after adj.
360		
060		
090		
120		
180		
240		
270		
300		

Barometric Pressure

ref.	
DAS	

Relative Humidity

ref. dry bulb	ref. RH
ref. wet bulb	DAS RH

Temperature

Height: _____

reference	DAS	after adj.
aspirated ambient °F °C		
°F °C		
°F °C		

Precipitation (Tipping Bucket)

mls/weight	tips	in. equiv.

Heater working? _____

Inspection _____

Precipitation (Weighing Bucket)

in. equiv.	Chart	Δ Chart
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

DAS Day: _____
DAS Time: _____
DAS Year: _____
DAS Battery: _____
SM Battery OK? _____
Enclosure Humidity OK? _____
WS Channel: _____
WD Channel: _____
Ta Channel: _____
Precip. Channel: _____
RH Channel: _____
Pa Channel: _____
Batt. Channel: _____

Notes: _____

End System Audit

DAS time on-line: _____

Meteorological Station Audit Summary

Met Station: Belle Ayr Mine
Date: 19-Jul-06
Audit Performed By: S.Engel & K.Jahnke--IML Air Science

Sensor	Mfr./Model	Reference Device
Wind Speed (WS):	RM Young WM AQ	quartz referenced drive motor
Wind Direction (WD):	RM Young WM AQ	transit, compass
Temperature (T):	Climatronics #2304, TS-10 motor aspirator	Hg-in-glass thermometer, or t-couple
Precipitation (Ppt.):	Met One 12" tipping bucket	lab grade burette
Barometric Pressure (BP)	CSI CS 105	aneroid barometer
Data acquisition system (DAS):	CSI CR-10x	N/A

Audit Results

		Reference	DAS Value	|Difference|	Specification	
WS (mph)		0.00	0.00	0.00	0.45	(1)
		3.44	3.44	0.00	0.62	(1)
		9.16	9.16	0.00	0.91	(1)
		34.35	34.35	0.00	2.17	(1)
		91.60	91.60	0.00	5.03	(1)
WS start torque (gm-cm)		OK	N/A	N/A	0.50	(3)
WD (degrees)		0.0	0.5	0.5	5.0	(1)
		90.0	90.1	0.1	5.0	(1)
		180.0	180.4	0.4	5.0	(1)
		270.0	270.6	0.6	5.0	(1)
Temperature (°F)	Ice water bath	30.5	30.1	0.44	0.9	(1)
	Warm water bath	66.8	66.3	0.48	0.9	(1)
	Hot water bath	102.9	102.7	0.20	0.9	(1)
Precipitation (0.04" equiv.)		73.1	74.0	0.9	7.4	(1)
		71.8	74.0	2.2	7.4	(1)
		72.4	74.0	1.6	7.4	(1)
Barometric Pressure ("Hg)		25.36	30.21	4.85	0.09	(2)

BOLD difference values exceed performance specifications
(1)= Performance specification listed in facilities' Quality Assurance Project Plan
(2)= Performance specification listed In EPA Quality Assurance Manual for
Air Pollution Measurement Systems, Vol. IV, 1989
(3)= Manufacturer's Specifications

Notes, Recommendations

System taken off-line at 1019 MST -- returned on-line at 1330 MST

New anemometer and temperature cables were installed.

METEOROLOGICAL STATION DETAILS

Antelope	10m tower	CR10X Logger		
Parameter	**Instrument**	**Range**	**Accuracy**	**Threshold**
Wind Speed	RM Young	0-112 mph	±0.4 mph or 1% of reading	0.9 mph
Wind Dir	RM Young	0-360°	±3°	1.0 mph
Temp	CS 107	-35°- 50° C	±0.5° C @ given Range	--
Precip	Met One 12" tip	Temp: -20° - 50° C	±0.5% @ 0.5 in/hr rate	--
Bar Press	Vaisalla	600 -1060 mb	±0.5 mb @ 20°C	--
Glenrock	10m tower	CR10 Logger		
Parameter	**Instrument**	**Range**	**Accuracy**	**Threshold**
Wind Speed	RM Young	0-112 mph	±0.4 mph or 1% of reading	0.9 mph
Wind Dir	RM Young	0-360°	±3°	1.0 mph
Temp	F107	-35°- 50° C	±0.5° C @ given Range	--
Precip	Met One 8" tip	Temp: -20° - 50° C	±0.5% @ 0.5 in/hr rate	--