Radiation Protection Authority of Zimbabwe

REGULATORY GUIDE

INSPECTIONS CHECKLIST FOR WELL LOGGING

	Radiation Protection Authority of Zimbabwe, **Inspections checklist for well logging**
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Approved by	

INSPECTION FORM FOR
WELL (BOREHOLE) LOGGING

Licence Number	

Facility/Licensee's Name	
Address (location of the site inspected)	
Telephone Number	
Radiation Safety Officer	
Contacted person	
Date of LAST Inspection	_____/_____/_____
Date of THIS Inspection	_____/_____/_____
Type of Inspection Pre-authorization	☐
Routine	☐
Reactive	☐
Termination	☐
Date of NEXT Inspection	_____/_____/_____
Normal	☐
Reduced	☐
Extended	☐
Justify any change from Normal	
Summary of Findings and Actions	
NO items of non-compliance found	☐
Items of non-compliance found	☐
Follow-up on previous non-compliance	☐
Inspector (1) signature	
Date	
Inspector (2) signature	
Date	
Supervisor's signature	

INSPECTION RECORD
WELL (BOREHOLE) LOGGING

This inspection record/checklist is to be used by the inspector to assist with the performance of the inspection. Note that all areas will not necessarily be applicable to each licensed facility. In addition, with supervisory approval, the inspector may choose not to review a particular program area during each inspection. However, for those areas ***not examined*** *or* ***not relevant*** *during the inspection a notation such as "Not Reviewed" or "Not Applicable" should be made in the relevant section and a brief explanation as to why the area was not reviewed should be provided, where applicable.*

All areas investigated during the inspection should be documented in sufficient detail to describe the activities and procedures observed and/or demonstrated. In addition, the types of records that were reviewed and the time periods covered by those records should be noted. If the licensee demonstrates any work practices at the inspector's request, describe those demonstrations. The observations and demonstrations described in this report, along with measurements and the records reviewed, should substantiate your inspection findings. Attach copies of all relevant documents and records required to support item(s) of non-compliance.

INVENTORY

RADIOACTIVE SOURCE/ RADIATION EQUIPMENT	MODEL	SERIAL NUMBER

1. AMENDMENTS AND PROGRAM CHANGES *Prior to the inspection, list for review any licence amendments submitted by the licensee and approved by the regulatory authority since the last inspection*

2. INSPECTION AND ENFORCEMENT HISTORY *Prior to the inspection, list for review any items of non-compliance identified during previous 2-3 inspections*		
DATE	**INSPECTOR**	**VIOLATIONS**

3. FACILITIES AND EQUIPMENT *Facilities as described; uses; control of access; engineering controls; calibration facilities; shielding [BSS Section 2.34]*		
	Yes	**No**
a) Are the facilities as described in the licence application?		
b) Is access to radioactive material adequately controlled?		
c) Are radiation sources secured to prevent unauthorized removal?		
d) Are adequate methods used to prevent unauthorized individuals from entering controlled areas?		
e) RSO reviews results of quality control checks and maintains records of checks?		
Comments:		

4. ORGANIZATION AND SCOPE OF THE PROGRAM *Briefly describe the present scope of activities, including types and quantities of use involving licensed sources, frequency of use, staff size, etc. (Note deviations from the licence)*

5. TRAINING AND INSTRUCTION OF WORKERS *Training and retraining requirements and documentation; interviews and observations of routine work; staff knowledge of all routine activities, and emergency response*		
	Yes	**No**
a) Occupationally exposed personnel are provided with initial safety training in the hazards associated with both sealed and unsealed radiation sources??		
b) Refresher radiation safety training is provided periodically?		
c) Supervision of logging assistants satisfactory?		
d) Are training records maintained for each worker?		
e) Do interviews with workers demonstrate an adequate level of understanding regarding safety and emergency procedures?		
f) Discussion with the RSO demonstrates an appropriate knowledge of the Regulatory Authority, the authorization, the legislation, conditions, safe working procedures, etc?		
g) Does the RSO have appropriate resources (time, personnel) and authority (to take independent action to remedy urgent safety issues) to properly perform the role?		
h) Is staffing appropriate for the radiation workers to discharge assigned duties safely?		
Comments:		

6. INTERNAL AUDITS AND REVIEWS		
	Yes	No
a) Licensee reviews the radiation protection program at appropriate intervals?		
b) Audits of the facilities, source inventory, working rules and emergency procedures performed at appropriate intervals?		
Audits conducted by		
c) Frequency		
d) Records of program reviews and audits maintained?		
Comments		

7. FACILITIES AND EQUIPMENT *Facilities as described; uses; control of access; engineering controls; calibration facilities; shielding [BSS Section 2.34]*		
	Yes	**No**
a) Are the facilities as described in the licence application?		
b) Is access to radioactive material adequately controlled?		
c) Are radiation sources secured to prevent unauthorized removal?		
d) Are adequate methods used to prevent unauthorized individuals from entering controlled areas?		
e) Is there adequate fire protection?		
f) RSO reviews results of quality control checks and maintains records of checks?		
Comments:		

8. RADIATION SOURCES		
	Yes	**No**
a) Nuclides, chemical form, activities and uses as authorized in the licence i.e., inventory confirmed?		
b) Leakage tests performed on sealed sources?		
c) Inventory of sealed sources conducted?		
d) Records of leakage tests and inventory maintained?		
Comments:		

9. RECEIPT AND TRANSFER OF RADIATION SOURCES		
	Yes	**No**
a) Radioactive package opening procedures established and followed?		
b) Incoming radioactive packages surveyed for damage, dose rates and potential radioactive contamination before opening?		
c) Satisfactory procedures are in place for the disposal of radiation sources that are no longer required. e.g., disposal only to authorized persons; notification to the Regulatory Authority, etc.?		
d) Records of packaging surveys, source receipt and transfer maintained?		
Comments		

10. AREA RADIATION SURVEYS AND CONTAMINATION CONTROL *Radiological surveys; leak tests; inventories; handling of radioactive materials; records; contamination control [BSS - Section I.38]*		
	Yes	**No**
a) Licensee possesses appropriate, functioning survey instrument(s)?		
b) Survey meter calibrations are current?		
c) Survey meter calibration is performed by an approved facility?		
Name of facility		
d) Sufficient functional survey meters are available for each field site operation?		
e) Area exposure rate surveys are performed at appropriate intervals?		
f) Surveys for contamination test conducted as required for radioactive material in chemical form?		
g) Is it evident that workers always use a survey meter at the conclusion of every exposure to confirm that the radioactive source has been returned to its container or, for unsealed sources, that contamination is within prescribed limits?		
h) Records of calibrations, contamination surveys, etc. maintained?		
Comments:		

11. PERSONNEL RADIATION MONITORING *Radiation protection program with ALARA provisions; dosimetry; exposure evaluations; dose and survey records and reports; notifications to workers] [BSS – Schedule II]*		
	Yes	**No**

a) Licensee provides personal dosimeters to all radiation workers?		
b) Dosimeters are exchanged at the prescribed period?		
c) Is it evident that personal dosimeters are being worn by workers?		
d) Individual workers are informed of their monitoring results when each monitoring report is received (regardless of the dose measured)?		
e) Does the licensee apply ALARA to occupational exposure?		
f) Potential for exposure of workers to airborne radioactive substances exists?		
g) Monitoring for airborne radioactivity conducted?		
Comments *(include the maximum doses to workers during this review period*)		

12. RADIOACTIVE WASTE MANAGEMENT

Disposal or transfer of sources; packaging, control, and tracking procedures; records [BSS - Section III.8]

	Yes	**No**
a) Decay-in-storage method used?		
b) Source disposal in accordance with regulatory requirements?		
Records maintained?		
Comments:		

13. TRANSPORT OF RADIOACTIVE SOURCES

IAEA Regulations for the Safe Transport of Radioactive Material - Safety Standard Series No. TS-R-1

	Yes	**No**
a) Licensee ships radioactive material?		
b) Authorized packages used?		
c) Packages properly labelled and marked?		
d) Licensee's vehicles, if used for transport, comply with regulations?		
Comments		

NOTIFICATIONS AND REPORTS

Reporting and follow-up of theft; loss; incidents; overexposures; safety-related equipment failures; change in RSO, and radiation dose reports to workers [BSS - Section 3.12]

	Yes	No
a) Have any program changes been implemented that required (but have not received) approval by the Regulatory Authority?		
b) Have any notifiable incidents or accidents occurred since the last inspection?		
If yes, have they been reported to the Regulatory Authority? (*If no, list the incidents or accidents in Comments)*		
c) Have any significant safety related changes been made to the facilities or radiation devices without approval of the Regulatory Authority?		
If yes, was a safety assessment performed by a qualified expert?		

Comments

14. WARNING SIGNS AND LABELING

Proper warning signs in use areas and labelling of containers with radioactive material [BSS - Section I.23]

	Yes	No
a) Controlled areas at field sites have appropriate barriers and warning signs (in English and the local languages (Shona and Ndebele))?		
b) Containers of radioactive material are properly labelled?		
c) Notices to workers are displayed as required (in the local language)?		

Comments

15. INDEPENDENT AND CONFIRMATORY MEASUREMENTS

	Yes	No
a) Inspector made area and other measurements for comparison to licensee's		

Comments: *Describe the types and results of measurements taken. Identify the instruments used by the inspector (make, model, last calibration).*

MEASURED PARAMATERS

16. ITEMS OF NON-COMPLIANCE AND OTHER SAFETY ISSUES *List any breaches noted during the inspection (what, when, where and who).*

17. PERSONNEL CONTACTED *Identify the personnel contacted during the inspection*