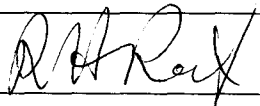


**GEOTEK Multi Sensor Core Logger
Cs-137
User Authorization**

Authorized User: Gary Dwyer	Authorization Number: GD 123009
Institution/Organization and Department: Duke University, Earth and Ocean Sciences	Date Approved: 12/30/09
Research Vessel/Field Location: R/V Knorr	Authorization Dates: 02/18/10- 03/11/10
Authorized Radiation Workers: None	
Conditions of Authorization: <ul style="list-style-type: none">• A copy of this Authorization shall be posted in the work area.• A copy of the Radiation Safety Manual must be available in the work area.• All applicable requirements of the Radiation Safety Manual must be followed.• Operators must be made aware of the declared pregnant women program.• Operators must be made aware of authorization requirements for At Sea/field use (RSM Appendix D).• Door must be posted with the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIALS".• All operators must receive annual radiation safety training which includes identification of external radiation hazards, external exposure controls (ALARA), normal & emergency operating procedures, declared pregnant women program, reports to RSO (lost source), applicable RSM sections (Protocol 10, DPF, Appendix D).• The Cs-137 source must be adequately secured when in storage or use.• Leak tests of the Cs-137 source must be conducted by the RSO every 6 months.• The Core Logger or source containment must be properly labeled with the radioactive symbol and the words "CAUTION, RADIOACTIVE MATERIALS".• A copy of the operating procedures (e.g., owner's manual) and the emergency protocol must be available to all operators.• ALARA requirements (e.g., time, distance, shielding) must be followed to minimize operator dose.• A calibrated, portable dose rate monitoring instrument must be available to all operators using the Cs-137 source. This instrument will be provided and maintained by the RSO.	
Approved: 	Date: 12/30/09
RSO/Radiation Safety Committee	