EARTH EXPLORATION INC

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August 15, 2008

Mr. Patrick Louden
U.S. Nuclear Regulatory Commission, Region III
Materials Licensing Section
801 Warrenville Road
Lisle, IL 60532-4351

Re: Recent Nuclear Regulatory Commission Inspection of Earth Exploration, Inc. and Statement of Commitment

Dear Mr. Louden:

On July 21, 2008, Ms. Deborah Piskura representing the Materials Inspection Branch of your organization performed an inspection of Earth Exploration, Inc., in Indianapolis, Indiana, as related to our radiation safety program. A similar inspection was performed by Ms. Piskura on August 14 and 15, 2008 at our facility in South Bend, Indiana. The following were the preliminary infractions noted of our program and the subsequent corrective action made by Earth Exploration, Inc. to bring the program back into conformance with NRC rules and regulations:

Indianapolis Location

- **Bill of Lading Documents (10CFR177.817)** – The NRC representative noted the primary Emergency Response telephone number (ERTN) on the Bill of Lading (BOL) needs to be a contact number that is maintained 24 hours a day, seven days a week. EEI's primary ERTN was our toll free office number that is not maintained constantly. EEI's corrective action included providing the telephone number of our Radiation Safety Officer (RSO), Mr. Christopher Loyd, that is maintained 24 hours/day. The NRC also noted that our bound transportation documents included a cover that impeded view of the BOL.

  Corrective Action – EEI began correcting the Bill of Lading (BOL) for each gauge on July 22, 2008, and completed the process on July 24, 2008. These were laminated for each gauge for use during transportation. On July 25, 2008, our South Bend, Indiana, office was notified of the changes that were necessary to the BOL and provided with an example of a corrected BOL. In addition, a meeting with the Indianapolis office gauge operators was conducted on July 28, 2008, informing them of the requirement to exhibit the BOL clearly on the dash or on the seat of their respective work vehicles.

- **Transportation DOT Type A Labels (10CFR178.3)** – Several transportation Type A labels had been compromised on the exterior of the transportation boxes.

Corrective Action - On July, 21, 2008, the date of the inspection, EEI ordered replacement Type A labels from InstroTek, Inc. of Raleigh, North Carolina. The labels were received Thursday, July 24, 2008, and affixed to the transportation boxes requiring new labels on July 25, 2008.

- **Security of Gauges in Storage (10CFR30.34-I)** – The NRC representative noted that EEI was providing 2 means of securing the gauges to transportation vehicles in the field, yet noted compliance was not made related to providing two means of securing the lid of the transportation boxes.

  Corrective Action – EEI's corrective action was to purchase additional chains to be secured with padlocks. We understood that one chain was to be more robust than the other when securing the lid to the transportation boxes. On July 21, 2008, four sections of 1/4- and 5/16-in. chain were purchased in order to secure the two gauges EEI anticipated being used in the field the following day. Over the course of the following week, chain sections of similar size as noted above were purchased for all of our gauges. On July 22, 2008, our gauge operators were informed of the duplicate security measure necessary for the lids to the transportation boxes. In addition, a meeting was conducted in our Indianapolis office July 28, 2008, to discuss/confirm this requirement with our gauge operators. On August 5, 2008, correspondence was made to Ms. Deborah Piskura of the NRC providing photo documentation of our gauge storage area at our facility depicting the multiple gauges being provided with the additional security.

- **Annual Audit (10CFR20.1101)** – Although supervision has been made by the company RSO of the day to day operations with the nuclear gauges as related to all issues of the yearly audit, EEI has not maintained documentation of the audits.

  Corrective Action – EEI's corrective action included beginning an in-house audit on July 22, 2008, and completing the audit on August 3, 2008. On August 4, 2008, EEI forwarded the completed audit to Ms. Piskura. Furthermore, EEI will maintain documentation of the audits on a consistent yearly basis from this point forward.

- **License Condition 13A** – Leak testing of the portable nuclear gauges not performed at the required intervals.

  Corrective Action - EEI's corrective action included immediately (July 22nd, 23rd, and 27th, 2008) performing leak testing of the gauges. The tests were mailed to Troxler Electronic Laboratories (TEL) on July 30, 2008. Results were received from TEL on August 6, 2008, and submitted to Ms. Piskura on that date.

Old leak tests previously performed, yet not submitted for testing, were also mailed to TEL, and were received August 11, 2008. These test results were also submitted to Ms. Piskura on August 13, 2008. Corrective action will also include maintaining leak testing of the gauges at six-month intervals as required.

- **License Condition 16** – Although EEI performs physical inventory of our gauges on a daily, weekly and monthly basis, documentation of the physical inventory has not been maintained.

  Corrective Action - EEI's corrective action was to perform a physical inventory of the gauges beginning July 25, 2008. The physical inventory was completed and documented on August 3, 2008, and submitted to Ms. Piskura on August 4, 2008. Corrective action will also include performing the physical inventory every 6 months and maintaining documentation of the inventories in our files.

- **License Condition 21** – Dosimeter usage and submittal of the badges for testing has not been performed on a regular, routine basis.

  Corrective Action - EEI's corrective action included up-dating the dosimeters and submitting delinquent badges for testing to Landauer. This action was completed on August 1, 2008, and the dosimeters were mailed the same date. Results of the dosimetry testing were received from Landauer on August 11, 13, and 14, 2008. These test results were submitted to Ms. Piskura on August 14, 2008. Corrective action will also include making assurances the gauge operators have received up-dated badges, collecting the badges from the operators at the end of the required wear dates, and submitting the dosimeters to Landauer for testing on a timely basis. This action will also include properly maintaining a file of radiation dosimetry reports in an organized manner.

- **Other Discussion/Issues Related to Program**

  1. As our internal Audit began, EEI noted that the Radiation Safety Program (RSP) included with our transportation documents included out-date office contact names and telephone numbers, with some of the contact names being individuals that have terminated their employment with EEI. However, current contact names for the RSP were also listed with their associated telephone numbers. The Radiation Safety Program was up-dated with the current, required information on July 24, 2008.

  2. As part of our RSP, EEI gauge operators are required be in possession of an authorization card from the RSO in order to operate a portable moisture/density gauge. EEI noted that some of the newer employees of

EEI were not in possession of this card. The cards were up-dated on July 23rd and 25th, 2008.

South Bend Location

- **Security of Gauges in Storage (10CFR30.34-I)** – At a field visit conducted by the NRC representative on August 14, 2008, two separate gauges were being utilized. In one case, the gauge was secured in a truck by one cable and the case locked. In the other, the case of the gauge was locked but nothing was provided to secure the case to an off-road vehicle. In addition, five gauge cases were observed in the locked storage room, but no other means was being implemented to secure the gauges from theft. It was also noted that other personnel have access to the room where the gauges are being stored.

  Corrective Action - EEI's corrective action was to purchase additional chains to be secured with padlocks as discussed above. On this date, sections of 1/4- and 5/16-in. chains were purchased in order to secure the gauge lids as a secondary means. Also on this date, our RSO visited several of the gauge operators at their respective projects to discuss all issues related to the RSP regarding transportation and use of gauge in field. The RSO will make verbal contact with the other gauge operators on Monday, August 18, 2008, to discuss these issues. Cables were also purchased on this date to secure the gauges in the trucks and storage room to a steel bar epoxied into the floor. In addition, other personnel in the company besides authorized users have been denied access to the storage room.

- **License Condition 19 (49CFR177.842)** – Based on the observations made on the field visit, no means were available to block or brace the gauge case in the vehicle.

  Corrective Action – Bungee cords were purchased on this date and will be utilized for this purpose at all times.

- **Bill of Lading Documents (10CFR177.817)** – The NRC representative noted the transportation documents were not visible to a potential haz-mat team in the event of an accident.

  Corrective Action – The meeting with the South Bend gauge operators on this date included discussion of the requirement to exhibit the BOL clearly on the dash or the seat of their respective work vehicles.

- **Transportation DOT Type A Labels (10CFR178.3)** – Several transportation Type A labels had been compromised on the exterior of the transportation boxes.

Corrective Action – Type A labels were mailed from our Indianapolis office to the South Bend Office on this date and will be affixed to the transportation boxes on August 18, 2008.

- **Transportation Yellow Radioactive II Labels (49CFR172.403)** – One of the gauges in the field displayed an illegible transportation label.

  Corrective Action – The transportation label was replaced on August 14, 2008.

- **Annual Audit (10CFR20.1101)** – Although supervision has been made by Mr. Jim McAlister of our South Bend office of the day to day operations with the nuclear gauges as related to all issues of the yearly audit, EEI has not maintained documentation of the audits.

  Corrective Action – EEI's corrective action included beginning an in-house audit of the South Bend facility on this date by our RSO, with the assistance of Mr. McAlister. The audit is planned to be completed on August 18, 2008. Furthermore, EEI will maintain documentation of the audits on a consistent yearly basis from this point forward.

- **License Condition 21** – Upon a review of the file on August 14, 2008, it appeared that dosimeter usage and submittal of the badges for testing had not been performed on a regular, routine basis.

  Corrective Action – It appears that some reports from 2006 and 2007 were missing from the file. On this date, we requested copies of the missing reports from Landauer. These will be forwarded to your office immediately upon receipt. This action will also include properly maintaining a file of radiation dosimetry reports in an organized manner in the South Bend office with a copy maintained in the Indianapolis office as well.

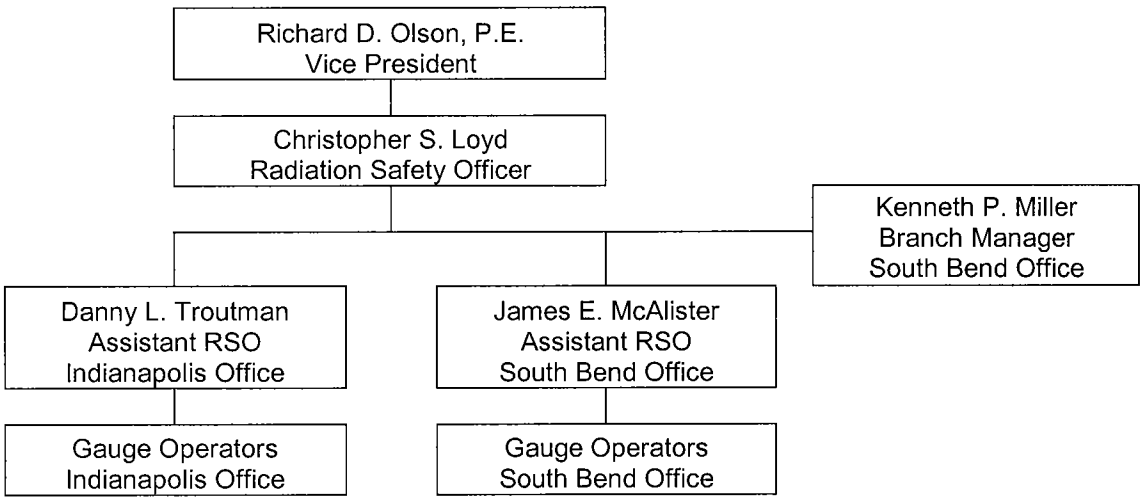
- **License Condition 16** – Although EEI performs physical inventory of our gauges on a daily, weekly and monthly basis, documentation of the physical inventory has not been maintained.

  Corrective Action - EEI's corrective action was to perform a physical inventory of the gauges beginning on this date. The physical inventory will be completed and documented by August 18, 2008. Corrective action will also include performing the physical inventory every 6 months and maintaining documentation of the inventories in our files with a copy in the Indianapolis office as well.

Statement of Commitment

We fully understand your concerns regarding our recent poor performance of maintaining our duties related to our materials license and are escalating our commitment to maintain the program thoroughly. In a relatively small company like ours, many of us perform a number of functions on a daily basis. However, as we have grown at a quicker pace lately, our managers and principals of the firm each need to realize that we can't do it all ourselves and need to rely on others within the organization to assist us with certain tasks. Another fundamental flaw in the system is that in a close knit company like ours that is experiencing growth, we have a tendency not to question those that are responsible for getting things done without confirming. Therefore, we realize that we need to bolster the management oversight by being more diligent about a chain of command as related to the radiation safety program. We see this as a team effort as with other aspects of our business. At each tier, the employee will be checking on the person that they are responsible for as needed. In some cases this will involve checks on a daily basis (e.g., to confirm that the technicians are following the program to the letter) and others on a less frequent basis (e.g., the principal confirming that a written audit is performed on an annual basis). Reminders have been included in our Microsoft Outlook® calendar function to confirm the less frequent activities. In order to make a program like this work, a clearly defined chain of command is critical to confirm that the proper checks and balances are in place. The following flow chart illustrates these responsibilities.

Radiation Safety Program Chain of Command



We realize that the commitments that we have made in this letter are not effective until we put them into action. To that end, we plan to communicate with your office on a routine basis until a time that you feel comfortable as well. In addition, we would welcome a follow-up visit to confirm that you have that assurance. We do understand

the level of commitment that is necessary to make the program work and fully intend to administer the plan diligently. We also understand that this is not a temporary fix for the time being, but a long term commitment to a high-quality safety culture. Should you have any questions or if you are in need of any documentation that has not been provided, please contact us at your convenience.

Sincerely,

EARTH EXPLORATION, INC.

Christopher S. Loyd
Radiation Safety Officer

Richard D. Olson, P.E.
Vice President