



GEOTECHNOLOGY INC.
ENGINEERING AND ENVIRONMENTAL SERVICES
SAINT LOUIS • KANSAS CITY • CHICAGO

December 3, 1992

Mr. A. Bert Davis
Regional Administrator
United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Reference: Reply to a Notice of Violation
(NRC Inspection Report No. 030-18640/92001(DRSS))
License No. 24-24459-01

Dear Mr. Davis:

The purpose of this correspondence is to provide the required response to the above referenced Notice of Violation dated November 5, 1992. The notice was issued by the NRC following its review of the circumstances surrounding an accident on October 1, 1992 involving one of Geotechnology's Campbell Pacific MC-3 moisture/density gauges.

We at Geotechnology appreciate the NRC's consideration of the steps taken in our response to accident and of our past record in using licensed material while reviewing this case. The steps taken at the time of the accident and the corrective action taken to help prevent future occurrence of a similar event were described fully in correspondence from Geotechnology dated October 20, 1992. A copy of this correspondence is attached for your reference.

We acknowledge that our employee was in violation of 10 CFR 20.207(b) and 10 CFR 20.3(a) at the time of the accident and agree that the accident occurred as a result of the poor judgement exercised by our employee. We have reviewed the circumstances of the accident with the individual involved and with all other employees who are authorized to operate gauges. We are confident that all of our employees who operate nuclear gauges are duly impressed with the seriousness of the accident and are very concerned about preventing such accidents in the future by following the instructions given in our corrective action plan.

In the time since the accident, we have closely monitored the use of nuclear gauges by our employees. We are confident that we have taken the proper steps to prevent a reoccurrence of the accident and that these steps are being followed by our employees.

Again, we are appreciative of the manner in which this matter has been addressed by the NRC, especially the helpful attitude of the individuals with whom we had numerous conversations following the accident, and the professional manner in which your personnel conducted their business. Please contact us if you have any questions.

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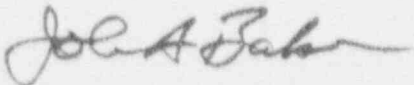


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Very truly yours,

GEOTECHNOLOGY, INC.



John A. Baker, P.E.
Vice President

JAB:jab

Attachment: As Noted

Copy: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555



October 20, 1992

ACCIDENT REPORT

Soil Moisture/Density Gauge

Date of Accident: October 1, 1992
Place of Accident: Weldon Spring Site Remedial Action Project (WSSRAP)
Weldon Spring, Missouri

The purpose of this report is to provide documentation of an accident involving one of Geotechnology's Campbell Pacific moisture/density gauges (SN M37077794). The following is a description of the event in approximate chronological sequence:

| | |
|-----------------------|---|
| 0815hrs | Jim McDonald arrived at site with gauge for the purpose of checking compaction of crushed rock backfill being placed around foundation of the transfer station being constructed at the WSSRAP. |
| 0930hrs | The first compaction test was taken by Mr. McDonald. |
| 0940hrs | The gauge was run over by a highlift working in the area. |
| 0945hrs | The site was secured by stopping the highlift, removing all personnel to a safe distance and roping off the area around the gauge with warning tape. |
| 0950hrs | The Radiation Safety Officer (RSO) for Geotechnology, Mr. John Baker, and radiation contamination specialists for the site contractor were notified of the accident. |
| 0950hrs to 1115hrs | Radiation contamination specialists from the site contractor's staff determined that there was no release of radioactive material and that it was safe to remove the gauge from the site. |
| 1015hrs | RSO from Geotechnology arrived on site. |
| 1115hrs to 1145hrs | Debriefings on the accident were conducted at the site by the site contractor. |
| 1145hrs to 1215hrs | The damaged gauge was transported by Geotechnology's RSO to a local representative of Campbell Pacific, the gauge manufacturer, for shipment to the manufacturer. |

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The following is a list of principal personnel who were either working in the immediate vicinity of the accident or were involved in the response to the accident:

| <u>Name</u> | <u>Affiliation</u> | <u>Position</u> |
|--------------|---|--------------------|
| Jim McDonald | Geotechnology, Inc. | Technician |
| John Baker | Geotechnology, Inc. | V.P., RSO |
| Bob Duncan | Brooks Grading | Superintendent |
| Unknown | Brooks Grading | Highlift Operator |
| Unknown | Vee Jay | Laborer |
| Tom Heuer | Morrison Knudsen Corp. MK-Ferguson Group Coordinator | Emergency Response |

There were numerous other personnel associated with either the companies involved in the accident or with the emergency response team. These people were directly supervised by one of the individuals listed above.

The accident reportedly occurred in a two minute period during which the gauge operator, Jim McDonald, returned to his vehicle to retrieve a data book in which to record the results of the correction test. The vehicle was parked approximately 40 to 50 feet from the gauge. The gauge had been put in the "safe" position and placed at the edge of the work area in line of sight of the operator. Several workers were standing in the vicinity of the gauge when the operator went to his vehicle. While the gauge operator was retrieving his field book from his vehicle, a laborer employed by Vee-Jay Cement Contracting Company, Inc., a subcontractor to Brooks Grading, moved the gauge to an alternate location. It was at this location that the gauge was apparently run over by the highlift. The highlift was being operated in reverse gear, and the operator could not see the gauge. When the gauge operator noticed that the gauge had been run over by the highlift, he immediately secured the area by stopping the highlift, moving all personnel out of the area and placing yellow hazard tape around the vicinity of the damaged gauge.

The gauge case had been broken into several pieces; the electronics unit remained connected to the gauge case by an electric cable; the handle which houses the source rod, and the shield at the bottom of the handle were rotated approximately 45 degrees from the upright, vertical position. It appeared that the gauge was completely destroyed.



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Emergency response personnel from MK-Ferguson assisted Geotechnology in determining that there had been no release of radioactive material and that the gauge was not leaking. This was accomplished using an RSO-5 Ionization Chamber and by performing a Loose Contamination Level Survey (Swipe Test). Trained personnel and leak detection equipment were readily available because of the requirements of WSSRAP, an environmental cleanup project involving removal of radioactive contamination from a deactivated chemical plant.

Geotechnology's gauge operator and RSO were debriefed by MK-Ferguson's emergency response team both at the site of the accident and at the project headquarters. Following the debriefings, Geotechnology's RSO transported the damaged gauge to the local Geostore where a second leak test was performed, and the gauge was prepared for shipment to Campbell Pacific Nuclear (CPN) in Martinez, California pending results of the leak test. It should be noted that both Geostore and CPN are divisions of Brainard-Kilman Corporation. Brainard-Kilman's NRC Materials License is Number 24-24970-01. Results of the leak test (attached) again indicated that the gauge was not leaking, and the gauge was subsequently shipped to CPN.


The NRC was notified of the accident at 0935hrs on Friday, October 2, 1992 by Geotechnology's RSO. At 1010hrs, the NRC Region III Duty Officer, Mr. Ron Gardner, contacted the RSO to get a verbal report on details of the accident. The RSO was again contacted at 1045hrs by Ms. Evelyn Matson of Region III for further details of the accident. Ms. Coleen Casey of Region III contacted the RSO at 1305hrs on October 2 after having read about the accident in the NRC Region III Morning Report. Ms. Casey had inspected Geotechnology the previous year and was calling to inform the RSO that Mr. Mike Weber of Region III would be in St. Louis the following week to discuss the accident and inspect Geotechnology. Ms. Casey also advised the RSO to notify the NRC Operations Center of the accident. The RSO notified the NRC Operations Center of the accident at 1639 (EST) and was assigned Event #24362 by the Duty Officer, Mr. Steve Sandin.

CORRECTIVE ACTION

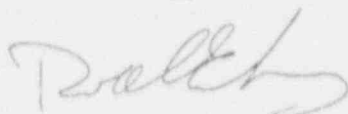
After reviewing the details of the accident, Geotechnology's RSO scheduled a meeting with all gauge operators for 0700hrs on Wednesday, October 7, 1992. At this meeting, procedures for maintaining control of the moisture/density gauges were reviewed. The meeting was also used to further define the requirement of Geotechnology's Materials License in which it is stated that "the user will not leave the gauge unattended". All Geotechnology gauge operators were instructed that they were not to be further than 10 feet away from their gauge unless the gauge was locked in the shipping case and chained in their vehicle. Under no circumstance is a gauge user to allow unauthorized personnel to move their gauge for any reason. These policies were discussed in person by the RSO with those gauge operators who were not in attendance at the meeting and will be part of company orientation procedures for all future gauge operators.

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This report was authored by the Geotechnology, Inc. RSO and reviewed by Geotechnology's St. Louis Branch Manager and Corporation President as indicated by the following signatures:



John A. Baker, P.E.
Vice President, RSO
Geotechnology, Inc.



Ronald M. Eckelkamp, P.E.
Senior Vice President
St. Louis Branch Manager
Geotechnology, Inc.



M. Mike Alizadeh, P.E.
President
Geotechnology, Inc.

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