



DEPARTMENT OF THE AIR FORCE
36TH MEDICAL OPERATIONS SQUADRON (PACAF)

1 Jul 13

MEMORANDUM FOR Kleinfelder, Inc.

FROM: 36 MDOS/SGOAB

SUBJECT: Radioactive Material Storage Survey – Kleinfelder Conex (Storing Troxler Gauges)

1. On 18 Jun 13, SSgt Kristian Atkinson performed a radioactive material storage survey at the Kleinfelder Conex. The facility is located on a construction site near bldg. 2600 and being used to store one (1) Troxler Gauge under U.S. Nuclear Regulator Commission Radioactive Material Permit No. 04-29431-01. This memorandum summarizes our assessment.
2. The survey was performed in accordance with AFI 48-148, *Ionizing Radiation Protection*. We observed the following:
 - a. Radiation levels in the area are below radiation exposure standards for the general public (2 millirem in any one hour and radiation dose not exceeding 100 millirem in a year). Additional details can be found in Attachment 1, *General Purpose Ionizing Survey Form*.
 - b. All postings met regulatory requirements. Warning signs and markings posted around the storage area include: “Caution Radioactive Material” sign, NRC Form 3, *Notice to Employees*, and NRC Form 3 Supplement that lists the applicable permit number and point of contact to view the listed permit. Also displayed is an emergency contact list displaying names, agencies, phone numbers to contact in the event of a radioactive material emergency
3. We recommend that Kleinfelder Inc. continue to secure and lock the Conex and cabinets at the end of each duty day.
4. Please contact our office at DSN 366-7166 if there are any changes or concerns.

KHAI H. VUONG, Maj, USAF, BSC
Installation Radiation Safety Officer

2 Attachments:

1. General Purpose Ionizing Survey Form
2. Dose Rate Calculation Table

Attachment 1

GENERAL PURPOSE IONIZING SURVEY FORM

WORKPLACE ID: Kleinfelder, Inc. **DATE:** 18 Jun 13

BASE: Andersen AFB **ORGANIZATION:** Kleinfelder, Inc.

WORKPLACE: Kleinfelder, Inc.

BUILDING NUMBER: Conex near bldg. 2600 **ROOM/AREA:** N/A

EQUIPMENT USED

Manufacturer	Model Number	Serial Number	Date Calibrated
Victoreen	451P	000001862	16 Jul 12

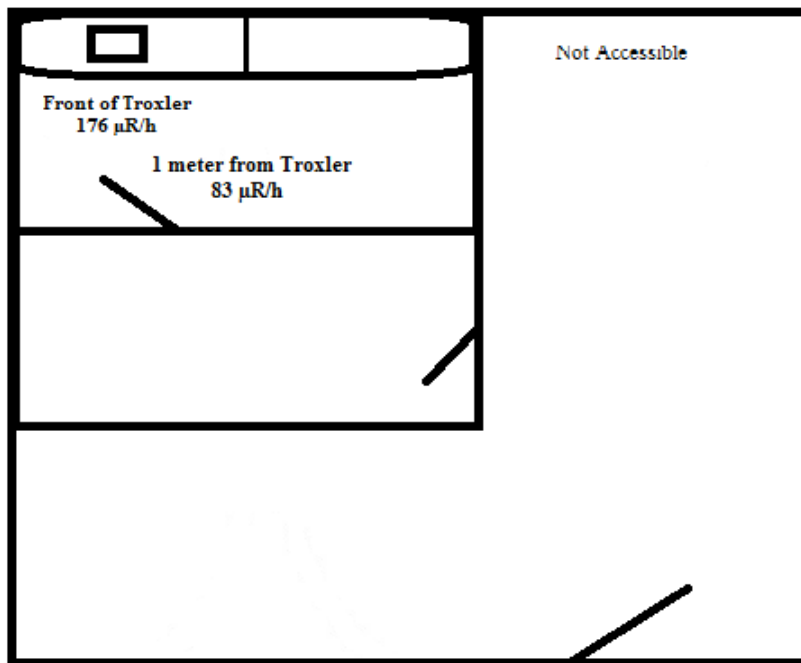
STORAGE AREA SKETCH AND MEASUREMENTS:

Radioactive Material Storage Area, Contractor Conex

Survey Location	Description	Results
1	Front of Troxler Gauges (surface)	176 μ R/h
2	1 meter in front of Troxler	83 μ R/h

Not Accessible

Not Accessible



Not Accessible

Attachment 2

DOSE RATE CALCULATION TABLE		
Radioactive Material (RAM) Storage Location	Maximum Meter Reading Outside RAM Storage Location	Background Radiation Measurement
Front of Troxler Gauges (surface)	176 μ R/hr	6 μ R/hr
1 meter in front of Troxler	83 μ R/hr	6 μ R/hr
<p><i>(Please note the following assumption for calculations below: 1 mrem = 1 mR.)</i></p> <p style="text-align: center;">Dose Rate Formula #1,</p> <p>Hourly Exposure Rate: (Maximum Meter Reading) - (Background Reading) x (Occupancy Factor) 176 uR/hr – 6 uR/hr = 170 x 0.0625= 10.625 uR/hr or an hourly dose of 0.011 mrem/hr 83 uR/hr – 6 uR/hr = 77 x 0.0625= 4.8125 uR/hr or an hourly dose of 0.005 mrem/hr</p> <p style="text-align: center;">Dose Rate Formula #2</p> <p>Weekly Dose Rate Formula: (Hourly Exposure Rate) x (Shift Length in Hours) x (5 Day Work Week) (0.011) x (8) x (5) = a weekly dose of 0.44 mrem/week (0.005) x (8) x (5) = a weekly dose of 0.20 mrem/week</p> <p style="text-align: center;">Dose Rate Formula #3,</p> <p>Annual Dose Rate Formula: (52) x (Weekly Dose Rate) (52 weeks/year) x (0.44 mrem/week) = an annual dose of 22.88 mrem/year (52 weeks/year) x (0.20 mrem/week) = an annual dose of 10.40 mrem/year</p>		
Dose Rate Limit	Highest Calculated Dose Rate	Dose Rate Limit Exceeded?
2 mrem/hr	0.011 mrem/hr	No
100 mrem/year	22.88 mrem/year	No
PREPARED BY		REVIEWED BY
KRISTIAN M. ATKINSON, SSgt, USAF Bioenvironmental Engineering Craftsman		KHAI H. VUONG, Maj, USAF, BSC Installation Radiation Safety Officer