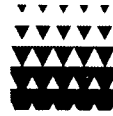


GRAYMONT WESTERN US INC.
3950 South 700 East, Suite 301
Salt Lake City, UT 84107



GRAYMONT

Phone: 801 264 6868
Fax: 801 264 6874

April 29, 2008

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

RE: REPLY TO A NOTICE OF VIOLATION
Docket No. 030-31618
License No. 25-27027-01

The Nuclear Regulatory Commission conducted an inspection of the Radiation Safety Program at Graymont Western US Inc's (Graymont) Indian Creek Facility in Townsend, MT on February 19, 2008. This inspection resulted in three notices of violation. Pursuant to the provisions of 10CFR2.201, Graymont is hereby submitting this written statement detailing the corrective actions that have been or will be taken to mitigate the violations, the steps that will be taken to prevent a recurrence and the date compliance will be achieved.

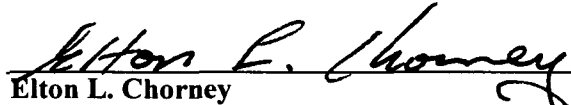
Reason For Violation	Corrective Actions	Steps to Prevent Recurrence	Date Compliance will be achieved
"The licensee failed to periodically review its radiation protection program content and implementation at least annually."	An annual review of the radiation protection program will be conducted by Mr. Jason Ellis, CIH, CSP, CHMM. Mr. Ellis is the Manager of Environmental Health and Safety with Graymont Western US and has extensive knowledge and experience within the fields of Industrial Hygiene and Health Physics.	A work order will be developed within the Graymont Environmental Work Order database. This database will send an email to both the Radiation Safety Officer and the Corporate EH&S Office one month before the annual review is due to be completed.	May 15, 2008.
"The licensee failed to demonstrate compliance by measurement or calculation that the total dose equivalent to the individual likely to receive the highest dose from the licensee's operation did not exceed the annual dose limit.	An exposure determination has been conducted for members of the general public and for Graymont employees. The results of this exposure determination indicate that none of aforementioned individuals will have exposures that exceed the limits set forth in 10CFR20.	This document has been filed within Indian Creek's Radiation Safety files and will be available for review by the NRC in subsequent inspections. A copy of this exposure determination is attached to this letter.	April 25, 2008.
"The licensee did not supply and require the use of an individual monitoring device by the plant manager and assistant plant manager who performed routine maintenance and leak testing of the licensee's fixed gauges, nor was a prospective evaluation performed to show that unmonitored individuals would receive less than 10 percent of the limit.	An exposure determination has been conducted for employees authorized to perform routine maintenance and leak tests. The results of this exposure determination indicate that the authorized employees will not have exposures that exceed the limits set forth in 10CFR20.	This document has been filed within Indian Creek's Radiation Safety files and will be available for review by the NRC in subsequent inspections. A copy of this exposure determination is attached to this letter.	April 25, 2008

▼ INDIAN CREEK PLANT
TOWNSEND, MT

IE07
RBNTV

Should you have any questions regarding these corrective actions, please contact either Jason Ellis with our Corporate Environmental Health and Safety Department (801-264-6868), or myself (406-266-5221).

Sincerely,


Elton L. Chorney
Plant Manager & Radiation Safety Officer, Indian Creek
Graymont Western US, Inc.

ELC/jpe

Enclosures -Indian Creek Exposure Determination
-Ronan Field Installation Radiation Survey

Cc: Nuclear Regulatory Commission, Region IV - Arlington, TX
Jason Ellis, CIH, CSP, CHMM, - Graymont Western US Corporate Office
Indian Creek Radiation Safety File

GRAYMONT WESTERN US INC.

Environmental Health and Safety
3950 South 700 East, Suite 301
Salt Lake City, UT 84107
TEL: 801-264-6868
FAX: 801-264-6874

**GRAYMONT**

Memorandum

To: Elton Chorney, Plant Manager – Indian Creek
Cc: Byron Berglind, Assistant Plant Manager – Indian Creek
From: Jason P. Ellis, CIH, CSP, CHMM – Manager, EH&S
Date: April 23, 2008
Re: Radiation Exposure Determination

The Nuclear Regulatory Commission requires that an exposure determination be conducted for both Graymont employees and members of the general public. Graymont's Corporate Environmental Health and Safety Department has derived these exposures from the initial exposure measurements that were recorded by Ronan's Nuclear Measurements Division upon initial installation of the nuclear devices.

Additionally, employees authorized to perform routine maintenance and leak test must either use dosimetry or conduct an exposure determination to demonstrate that annualized exposures are less than 10% of the allowed 5 REM/year.

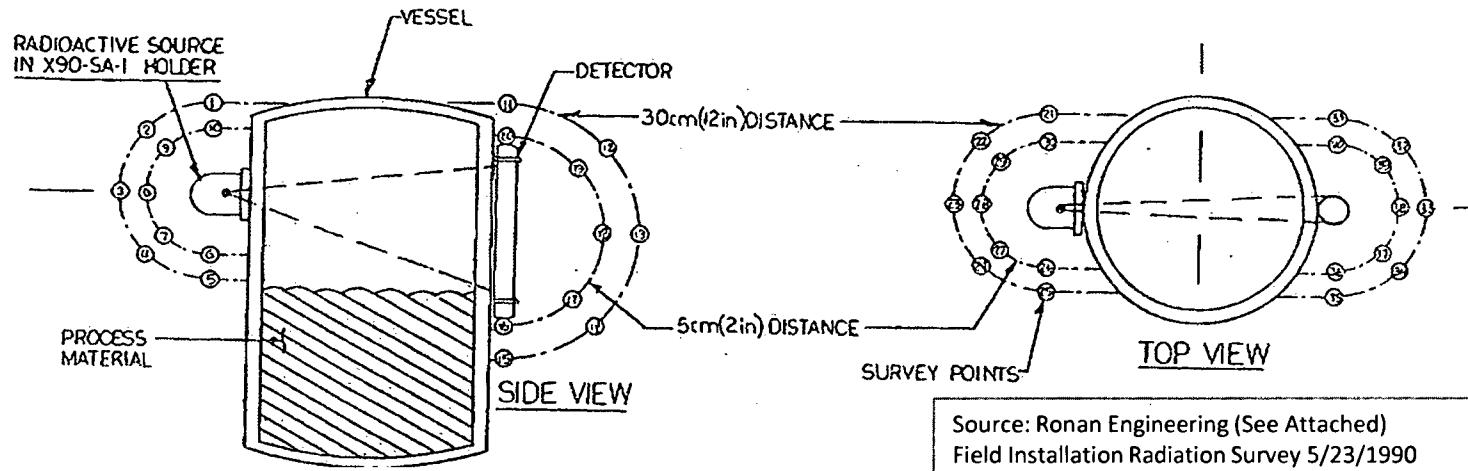
A summary of the calculated exposure levels is listed below. Please see the attached documents for details concerning the exposure measurements and calculations.

Regulation	Exposure Limit (mREM/year)	Calculated Exposure (mREM/year)	Group Exposed
10.CFR 20.1301 (a) 1	100	Indistinguishable from Background	Members of the General Public
10 CFR 20.1302 (b) 1	500	<<87	Graymont Employees
10 CFR 20.1302 (a)	5000	90	Employees authorized to perform routine maintenance and leak tests.

Should you have any questions regarding this exposure determination, please contact me.

Sincerely,

Jason P. Ellis, CIH, CSP, CHMM
Manager, Environmental Health & Safety
Phone – 801-264-6868
Mobile – 801-557-3423
Email – jellis@graymont.com



All Distances = 12 inches (1 foot) from the point of exposure

Point	mR/hr	Point	mR/hr	Point	mR/hr	Point	mR/hr
1	2	11	1	21	0.5	31	1
2	1	12	1	22	1	32	1
3	0.6	13	1	23	0.6	33	1
4	1	14	0.5	24	2	34	1
5	1.5	15	0.2	25	1.5	35	1

Average Exposure Rate (ER) 1.02 mR/hr

Average Source Side ER 1.17 mR/hr

Average Detector Side ER 0.87 mR/hr

Exposure to point sources of radiation follows the inverse square law:

Where: E = Exposure Rate at the given distance from the source
D = Distance from the source

$$E_2 = \frac{E_1(D_1)^2}{(D_2)^2}$$

Exposure Determination for Graymont Employees and members of the General Public:

It is necessary to periodically conduct leak tests and open and close the shutter on the Nuclear Measurement Device. During this time, Graymont uses the ALARA principles of Time, Distance, and Shielding to minimize the exposure of employees to the radiation source. For the purpose of this exposure determination, Graymont assumes a distance of ~ 2 feet from the source and a maximum annualized exposure of 10 hours (which is an overestimation of the time spent within a 2 feet proximity to the source.)

	mR/hr	mREM/mR	hrs/year		mREM/year
Exposure rate 2 feet from the source (on the source Side) (mR/hr) = ($1.02/2^2 = 0.255$ mR/hr)	0.2925	0.97	10	=	2.84

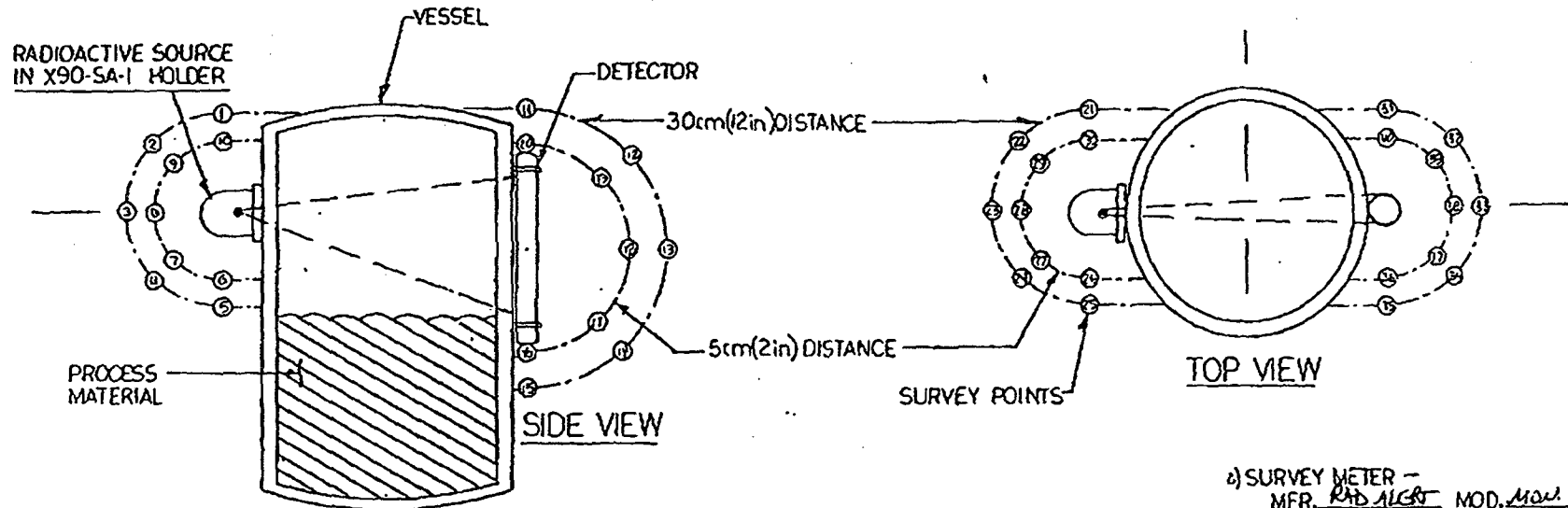
Unless a Graymont employee is collecting a sample for a leaktest or opening or closing the shutter (as previously calculated), there should be no reason to be within 10 feet of the source for any significant length of time. In this case, the employee could be exposed for 24 hours/day, 365 days/year and only receive 2% of the allowed annual dose of 5 REM. With these ALARA controls in place, it is therefore unnecessary to conduct dose monitoring for Graymont personnel. Furthermore, radiation exposures at this level are indistinguishable from background levels. Therefore, it is inconceivable that members of the general public would receive exposure from Graymont's radiation sources. Additionally, access to the Graymont Facilities is restricted and the cooler pits are located within an enclosed structure which further attenuates exposures.

	mR/hr	mREM/mR	hrs/year		mREM/year
Exposure rate 10 feet from the source (mR/hr) = ($1.02/10^2 = 0.0102$ mR/hr)	0.0102	0.97	8760	=	86.67

Calculation Assumptions

Graymont has two nuclear level gauges of identical make, model, activity and installation; one on each of the cooler pits. However, due to the fact that the sources are separated by more than 10 feet and exposure levels fall to background levels within 10 feet, the exposures are considered to be discrete but identical. Therefore only one set of exposure calculations was used, however the time spent in exposing proximity to the two sources was summed in the calculations.

Cesium-137 is a radioactive isotope of Cesium which is formed mainly by nuclear fission. It has a half-life of 30.23 years, and decays by pure beta decay to a metastable nuclear isomer of barium-137 (Ba-137m). Barium-137m has a half-life of 2.55 minutes and is responsible for all gamma ray emission. Radiation exposures resulting from CS-137 in this application result from the gamma radiation of Ba-137m. The conversion of mR to mRAD for gamma radiation is 1 mR to 0.97 mRAD for soft tissue. Additionally 1 mRAD = 1 mREM for gamma radiation.



POINT	mR/hr	POINT	mR/hr	POINT	mR/hr	POINT	mR/hr
1	2.0	11	1.0	21	.5	31	1.0
2	1.0	12	1.0	22	1.0	32	1.0
3	0.6	13	1.0	23	1.0	33	1.0
4	1.0	14	.5	24	2.0	34	1.0
5	1.5	15	.2	25	1.5	35	1.0
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

SHUTTER POSITION DURING SURVEY OPEN
 VESSEL CONDITIONS DURING SURVEY EMPTY
 VESSEL OUTSIDE DIAMETER _____
 VESSEL WALL THICKNESS 2"

a) SURVEY METER -
 MFR. RAD ALGO MOD. MOD 4
 S/N 22346 CAL. DATE 4-6-90

b) SOURCE -
 TYPE CS-137 SIZE 3,000 mCi
 MFR. 3M S/N M5122
 COLLIMATOR F37

c) SURVEYED BY ARNOLD KEACE
 DATE 23 May 1990

DISTRIBUTION:

- (1) COPY TO RONAN ENGINEERING.
- (1) COPY ON FILE WITH USER AT GAGE SITE.

RONAN		NUCLEAR MEASUREMENTS DIV. P.O. BOX 17326 COVINGTON, KENTUCKY 41017	
SCALE: <u>1/4"</u>	APPROVED BY:	DRAWN BY <u>JN</u>	
DATE: <u>10-12-81</u>		REVISED	
FIELD INSTALLATION RADIATION SURVEY X92 CONTINUOUS LEVEL MONITOR			
			DRAWING NUMBER B-1066K