ATTACHMENT #2

Leeco Diagnostics, Inc.

24475 W. 10 MILE ROAD • SOUTHFIELD, MI 48034
(313) 353-2620 • 1-800-950-2620 • FAX (313) 353-5039

July 3, 1989

Toye L. Simmons
United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Toye:

It was indeed a pleasure having met you during your inspection of our new facility.

Further to your request I have enclosed a copy of the "Radioactive Material Effluent Monitoring" data generated by Jim Tomlinson (Leeco's Health Physicist) on June 29, 1988.

Since the radioactive effluent from the roof exhaust was well below the maximum permissible concentration for unrestricted use the charcoal filters were removed.

I trust this is to your satisfaction.

If you have any further questions please do not hesitate in contacting me.

Respectfully,

Dante J. Capaldi, Ph.D.
Director, Quality Assurance/Regulatory Affairs
Radiation Safety Officer

FILE COPY

LEECO DIAGNOSTICS

Radioactive Material Effluent Monitoring

29 June 1988

Detector Calibration:

Scintillation probe and counter
HV = 5.80, threshold = 4.5, window = 3.00
I-129 source = 220,000 dpm
Count rate = 50,000 cpm
Efficiency = 0.227 cpm/dpm = 22.7 %

Air flow:

2000 fpm (roof blower vent)
Area = 10" x 12" = 0.833 sq.ft.
Volume rate = 2000 fpm (0.833 sq.ft.) = 1667 cfm
= 1667 cfm (2.83 E4 ml/cubic ft)
= 4.72 E7 ml/min

Effluent Data:

Bkg = 50 cpm
Exhaust activity = 100 counts in 1 minute
Net activity = (100-50) cpm = 50 cpm
= 50 cpm/(0.227 cpm/dpm) = 220 dpm
= 220 dpm (1 uCi/2.2 E6 dpm)
= 1.0 E-4 uCi

In one minute, 4.72 E7 ml pass the detector....

Effluent concentration = 1.0 E-4 uCi/4.72 E7 ml
= 2.12 E-12 uCi/ml

For unrestricted areas, the concentration cannot exceed 8 E-11 uCi/ml (in air). The concentration measured was below the limit by a factor of over 35.