STATE OF NEW YORK
DEPARTMENT OF HEALTH

MEMORANDUM

W. B. Dunn
Jack H.

February 7, 1980

WI

To: Dr. K. Rimawi, B.R.H.

From: Mr. I. Czerwinskyj, S.R.O.

Subject: Radium Contamination Investigation - Radium Chemical Plant Property
Mt. Kisco, Westchester County

Because of the recent newspaper publicity regarding the radium contamination in the vicinity of the torn-down radium chemical company plant in Mt. Kisco, and the ensuing commitment by the W.C.H.D. to de-contaminate the area, a survey of the area was performed by this writer and Mr. Bell of the W.C.H.D.

The Radium Chemical Company plant was demolished in November 1966 under the supervision of New York State Labor Department Bureau of Radiation Control. All of the rubbish was disposed off by shipping it to a radioactive waste disposal area. Some contaminated areas were subsequently discovered and again, the soil was dug up and disposed off as radioactive waste. According to Mr. C. Weber of the W.C.H.D., no fill, rubbish or other material from the demolished plant was ever dumped on the area in question.

Recently a reporter from a local paper borrowed a Geiger counter from Nuclear Diagnostic Company in Peekskill and took some readings in a chain-link fence enclosed area belonging to Haggerty Millwork, the readings were what she considered "significant" and she wrote a article about this in the local paper. Westchester County Health Department confirmed some of her readings and, even though the contamination was not significant, in order to placate the local community, they agreed to remove the contamination. The state, in turn, agreed to provide one or two fifty-five gallon drums, and to dispose off the contaminated material.

The area in question is approximately 78 feet by 60 feet, enclosed by a chain -link fence. Old abandoned railroad tracks run through the property. The contaminated area is bounded by a concrete drive and the railroad tracks, and the chain link fence and the old railroad depot.

A survey was conducted using an Eberline E-120 with an end-window probe. The probe was held at approximately 2' - 3" above the ground. The readings on the attached plan are in mR/hr. With an identical geometry and the same meter a 8 microcurie Cs-137 test source measured 0.05 mR/hr. The most signficantly contaminated area lies in a strip 15 ft. by 5 ft., with two separate "hot spots". A surface reading using an alpha probe measured 50 dpm.

An area of several times background reading extends for about 50 feet south of the chain link fence.

Considering only the removal of a strip 15 ft. x 5 ft. x 6 inches we are talking about 37.5 cubic ft. of soil or at least 5 - 55 gal. drums. The cost of such an undertaking would be considerable, and considering the volume limits set by the disposal companies, the volume itself could be excessive for our laboratory allocation. On the other hand removing a smaller volume could be worse than doing nothing, because we would waste money and the contamination would still be there ready to be "discovered" again by a probing reporter.

As soon as the ground thaws, I will take several soil samples in order to establish the actual extent of the soil contamination, and to find out the depth to which it extends. Also, as you indicated during our telephone conversation, if a micro-roentgen meter could be sent down, we could obtain a more valid set of figures than with a hand held survey instrument.

The ultimate question still remains - where did this contamination come from? If, as Mr. Weber maintains, no contaminated soil was dumped on the area, and the area was not discovered to be contaminated in numerous previous surveys, could it be that the ground water is causing the present contamination? If so, where is the ground water picking up the radium from, and should we try to sample the ground water for radium? Those are a few of the questions that will have to be answered before we rush into undertaking any disposal of contaminated material from this area.

IC/jp
Enclosure
cc: Dr. Curran, Westchester County Health Department
Mr. Bell, Westchester County Health Department