

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

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J. A. Pagliaro, Chief
Environmental and Special Projects Section

RESULTS OF RADIOANALYSIS OF SAMPLES TAKEN FROM WEST CHICAGO
AREA ON JULY 8-14, 1976

The results of the radioanalysis on six soil samples taken on July 8-14, 1976, from the West Chicago area show the presence of thorium 232 and radium 226 decay chain products. Natural uranium 238/235 was also found present to the extent of 2 pCi/g which is at background levels. The analyses were conducted on a 35 cc - GeLi detector by Industrial Hygiene Safety at Argonne National Laboratory. The results are presented below:

<u>Sample Location</u>	²³²	²²⁶
	Th-Decay Chain pCi/g	Ra-Decay Chain pCi/g
Site Tailings Pile Sample #2 (7-8-76)	1.1×10^4	4.4×10^3
Site Tailings Pile Sample #3 (7-8-76)	2.6×10^3	5.9×10^2
Sludge Pit (7-8-76)	4.9×10^3	5.0×10^2
Reed Park Sample #1 (Top 2" Surface)	4.7×10^4	4.7×10^3
Reed Park Sample #1A (2"-6" Depth)	4.0×10^4	3.8×10^3
Reed Park Site #2 (West) (2" Surface)	1.4×10^4	1.7×10^3

M. J. Oestmann

M. J. Oestmann
Radiation Specialist

8507080424 850408
PDR FOIA
RAPKIN85-30 PDR

The actuator is a sensor which detects small light intensity changes, such as that caused by a person entering a scene. The sensor circuitry also accommodates permanent changes in a scene, thus preventing excessive film use.

A unit activated by a radiation sensor also is operative at the Canadian nuclear plant. This sensor, which detects gamma radiation, was developed because recording the movement of radioactive material is also desirable in some safeguards applications.

THE RADIATION SURVEY OF REED-KEPLER PARK IN WEST CHICAGO, ILL. HAS BEEN COMPLETED by state and federal agencies and all recreational areas have been reopened for public use, according to the NRC's Regional office in Glen Ellyn, Ill.

City and park officials closed the park July 13 to facilitate the radiation survey of the entire areas after above normal radiation levels were found in an undeveloped section of the park. NRC radiation specialists identified the radiation levels in a preliminary check after the NRC learned that ore residues containing low levels of radiation may have been dumped there in the 1930s and 1940s.

There was no immediate health hazard resulting from the radiation, the NRC said. Much of the park was reopened to the public later on July 13 after the survey showed no radiation problems.

One additional area--about 200 square feet near the tennis courts--was found to have above normal radiation levels. The tennis area remained closed until the soil containing the radioactivity was removed and replaced with other fill material on July 15 and 16.

The undeveloped section of the park containing the radioactive ore wastes has been fenced and restricted from the public. Plans have not yet been developed for a permanent solution to the radiation problem there. The radiation in the fenced area, however, does not create a hazard in the rest of the park and nearby residential areas.

Several other locations in the West Chicago area were surveyed for possible radiation problems. No abnormal radiation levels were found, except in two small areas (totaling 500 square feet) at the West Chicago Waste Water Treatment Facility where evidence of ore residues was found, similar to that in the undeveloped area of the park.

Participating in the park survey were NRC radiation specialists and the radiological assistance teams from the U.S. Energy Research and Development Administration and the State of Illinois Department of Public Health.

Ore residues found in the undeveloped section of the park contain two naturally occurring radioactivity substances--thorium and radium. The material apparently is processing residue from a thorium and rare earth plant which operated in West Chicago from 1931 to 1973. Since 1947 the ore wastes have been retained on the plant site, which is about one mile from the park.

The current owner of the plant, Kerr-McGee Chemical Co. of Oklahoma City, Okla., is licensed by the NRC and periodic inspections have been conducted by the NRC to assure that its regulatory requirements are being met.

ERDA HAS EXTENDED ITS CONTRACT WITH THE UNIVERSITIES RESEARCH ASSOCIATION (URA) FOR CONTINUED OPERATION OF ITS FERMI ACCELERATOR LABORATORY (FERMILAB), one of the world's leading high energy physics research facilities.

The \$350 million Fermilab complex, located near Chicago, Illinois, includes the highest energy proton accelerator in the world, and a large 15 foot hydrogen