

M-644

Formerly Utilized Sites Remedial Action Program (FUSRAP)

ADMINISTRATIVE RECORD

for the Maywood Site, New Jersey



**US Army Corps
of Engineers®**

M-644

043729

Bechtel National, Inc.

Engineers — Constructors

Jackson Plaza Tower
800 Oak Ridge Turnpike
Oak Ridge, Tennessee 37830

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MAR 1 8 1987



U.S. Department of Energy
Oak Ridge Operations
Post Office Box E
Oak Ridge, Tennessee 37831

Attention: S. W. Ahrends, Director
Technical Services Division

Subject: Bechtel Job No. 14501, FUSRAP Project
DOE Contract No. DE-AC05-81OR20722
Ad-Hoc Survey Conducted at the Residence of
877 Wyoming Avenue, Maywood, New Jersey
Code: 7310/WBS: 138

Dear Mr. Ahrends:

Enclosed is a letter to Ms. JoAnn Fonderosa residing at 877 Wyoming Avenue regarding the results of the ad-hoc survey conducted in November 1986. As explained in the letter, the rare earth analyses of the soil samples taken during this investigation indicate that the material was not from the former Maywood Chemical Works/Stepan Chemical Company facility.

If you have any questions in this matter, please call Chris Leichtweis at 576-4718.

Very truly yours,

G. K. Hovey
Program Manager - FUSRAP

CPL:pj

Enclosure: As stated

CONCURRENCE

CPL	WJ	BB	AK	
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Department of Energy
Oak Ridge Operations
P. O. Box 8
Oak Ridge, Tennessee 37831

Ms. JoAnn Fonderosa
877 Wyoming Avenue
Maywood, New Jersey 07607

Dear Ms. Fonderosa:

RADIOLOGICAL SURVEY CONDUCTED AT THE RESIDENCE OF 877 WYOMING AVENUE

During November 1986, a survey was performed on your property to determine if radiation in excess of normal levels was present. All analyses are now complete.

Three different types of radiation measurements were taken. For surfaces such as ground, floors, and walls, a detector capable of measuring gamma radiation was used. Gamma radiation is emitted from all of the radioactive materials which were handled by Maywood Chemical Works. To detect the presence of these radioactive materials in your yard, the radiation probe was held just above, or in contact with, the surface to be surveyed. The results of these measurements ranged from 7 to 9 microroentgens per hour which is within the normal "background" range of 6 to 11 microroentgens per hour for the New Jersey area. Background radiation is naturally occurring radiation which comes from the trace amounts of radioactive materials present in all soil.

The second measurement consisted of collecting an air sample and analyzing it for radon. The presence of radon in your home would have been an indicator of possible radium-226 contamination around or in your home. Radium-226 is one of the radioactive materials present in the waste from the former Maywood Chemical Works. This measurement was 1.6 picocuries per liter of air which is slightly higher than normal background values of 0.1 to 0.9 picocuries per liter. This level is typical of levels encountered in areas which are not well ventilated such as basements (which is where the sample was collected).

The third method consisted of collecting samples of soil which were analyzed for thorium, radium, and rare earth concentrations. The locations sampled are shown on the attached figure and coincide with those locations where the higher direct radiation readings were obtained. This sampling indicates two isolated areas of extremely low-level radioactive contamination in the southwest portion of your property. The results of these soil samples indicated levels ranging from 8.9 to 13.9 pCi/g of thorium-232 compared to a DOE acceptable level of 5 pCi/g at the ground surface.

Ms. JoAnn Fonderosa

In addition to the analyses for thorium-232, these soil samples have been analyzed by Oak Ridge Associated Universities (an independent DOE subcontractor) for elemental composition with an emphasis on the "rare earths" content. Rare earths are elements which exist in trace quantities in most soils. The basic raw material for the former Maywood Chemical Company/Stepan Chemical Plant was monazite sand which contained high concentrations of the rare earths. By comparing the concentrations of rare earth elements in soil taken from your property with those typical of the Maywood Chemical Works, it is possible to identify whether the isolated areas in your yard originated there. The results of this analysis on the samples from your yard did not indicate elevated levels of rare earth elements; therefore, this indicates that the material in the front yard did not originate from the Maywood site.

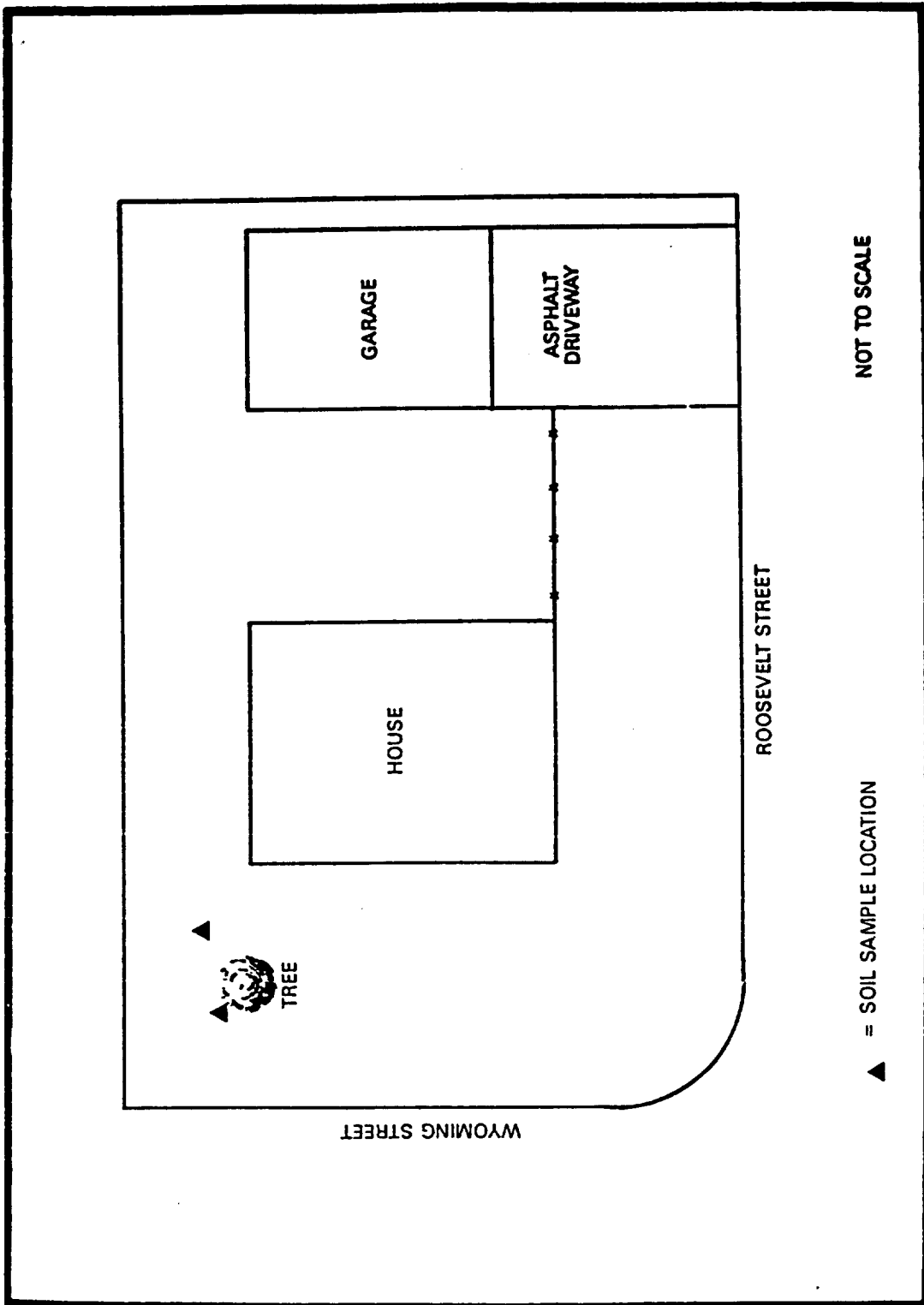
If any additional information is required, please call Mr. Bob Atkin at (615) 576-1826.

Sincerely,

S. W. Ahrends, Director
 Technical Services Division

Attachment:
 As Stated

043729



NOT TO SCALE

▲ = SOIL SAMPLE LOCATION

RADIOLOGICAL SURVEY OF 877 WYOMING, MAYWOOD, N.J.