

13958

JOHN ASHCROFT
Governor

TRACY MEHAN III
Director



STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY
P.O. Box 176
Jefferson City, MO 65102

Division of Energy
Division of Environmental Quality
Division of Geology and Land Survey
Division of Management Services
Division of Parks, Recreation,
and Historic Preservation

January 8, 1992

Mr. Steve McCracken
Project Manager
U.S. Department of Energy
Weldon Spring Site
Remedial Action Project
7295 Highway 94 South
St. Charles, Missouri 63303

Dear Mr. McCracken:

As you requested the Missouri Department of Natural Resources has reviewed your letter of December 16, 1991 and the accompanying report of November 15, 1991 regarding the possibility of a fault at the Weldon Spring Site (WSS).

Attached is a memorandum from Dr. Jim Williams, Director and State Geologist, Division of Geology and Land Survey concurring in your conclusion that there is no evidence of faulting beneath the site. The memorandum also includes some comments for your consideration.

Sincerely yours,

DIVISION OF ENVIRONMENTAL QUALITY

A handwritten signature in cursive script that reads "David E. Bedan".

David E. Bedan
Radioactive Waste Cleanup Coordinator

Attachment

cc: Mr. Ron Kucera, DNR
Mr. Jim Williams, DNR
Mr. David Shorr, DNR
Mr. John Young, DNR
Mr. Nick DiPasquale, DNR
Mr. Dave Friese, DNR
Mr. Dan Wall, U.S. EPA, Region VII
Mr. Dan Bauer, USGS

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JOHN ASHCROFT
Governor

G. TRACY MEHAN III
Director



STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MEMORANDUM

RECEIVED

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DEQ ADMIN

1-8-70
Division of Energy
Division of Environmental Quality
Division of Geology and Land Survey
Division of Management Services
Division of Parks, Recreation,
and Historic Preservation

DATE: January 2, 1992

TO: Dave Bedan, Div. of Environmental Quality

FROM: Jim Williams, Director and State Geologist, Division of Geology and Land Survey

SUBJECT: DGLS Review of Weldon Spring Reported Fault

We have reviewed your memo of Dec. 19, 1991 and attached information concerning the question of a fault lying directly beneath the DOE Weldon Spring Property. The comments prepared by MK-Ferguson Company and Jacobs Engineering Group reflect an accurate understanding of the scope of the geologic structure and isopach maps published in 1981 by the MDNR in conjunction with the USGS. We concur with their interpretation of the mapping intent and regional nature of the work completed by the MDNR geologists. Small-scale maps cannot be used to make detailed site predictions. Such maps serve as a general tool in understanding geologic conditions of the area.

The faults shown on the small scale maps produced by MDNR in conjunction with USGS are ancient structures. No intent or evidence was presented or implied that movement during Holocene time has occurred on any of the faults shown in the vicinity of the Eureka-House Springs Anticline. There is no danger of a landfill cited on the DOE Weldon Spring Property lying within 200 feet of an active fault.

I would, however, like to express a few concerns relative to the PMC generated series of detailed maps relative to the subsurface structure within a 10 mile radius of the Weldon Spring Site.

1) I would not use the top of the Fern Glen Formation as a definitive horizon on which to construct a structure map in this area. The contact between the Burlington/Keokuk Formation and the Fern Glen is gradational and the top of the Fern Glen is an uneven surface. This could confuse the interpretation of a structure map constructed on this horizon. I do believe that the Bushberg and the St. Peter Sandstone are reliable units on which to construct structural contours.

2) My other concern is that there are only a minimum of data points available in the immediate vicinity of the DOE Weldon Spring Site for both St. Peter and Bushberg Sandstones. The maps created appear to be accurate for a 10 mile radius, however, even this larger scale is not appropriate for site-specific information. I agree there is no evidence that leads me to believe that faulting exists beneath the site.

