

-Additional Comments of 9-3-03 Re: DRAFT Proposed Plan for the Final Remediation Action for the Groundwater operable Unit at the Chemical Plant Area of the Weldon Spring Site, Weldon Spring, Missouri March 2003

Sent to DOE Fax # 636-447-0739
From Dr. Michael V. Garvey
208 Pitman Hill Road
St. Charles, MO. 63304



Please add these Comments to my Comments of 8-13-03 (enclosed) and respond to the following regarding the Groundwater Remediation at the Weldon Spring Site.

Comment 1. Please explain to me why the Department of Energy is not required to allow the Department of Natural Resources of Missouri to have a co-signatory role to the revised federal facilities agreement. It is my understanding that any other entity who might pollute in the state would be under the DNR's jurisdiction, please comment on this.

Comment 2. Please add the Department of Health's data on the public wells in the documentation and the DOE web site to realistically assess contaminate plumes. Please include screened intervals and map on a GIS database if possible.

Comment 3. Please do a survey of private domestic wells within a five (5) mile radius of the site that may not be represented in state archival records and include these in sampling to assess realistic contaminate plumes and obvious health ramifications.

Comment 4. Please include the public wells serving the Weldon Springs Height in this new well inventory and sampling.

Comment 5. Please explain how uranium and nitrate contamination exiting the ground water which exits to the surface at Burgermeister Spring is not affecting the water quality at Lake 34. In this regard, please describe the method to which this ground water is antinuated before it enters into the surface water of Lake 34. Does it mix with the surface waters or go back into the groundwater? Does the groundwater flow then later intercept Lake St. Louis or other deep wells in the groundwater flow direction?

Comment 6. Please describe why or if Lake 34, 35 and 36 could be used as a natural method of antinuation of contamination using a wetlands approach or other passive measures.

Comment 7. Please accept my suggestion for Lakes 34, 35, and 36 to be posted as "catch and release" only. Although it is not impacted by the chemical plant, please also add the Upper and Lower Femme Osage Sloughs as "catch and release" only.

Comment 8. Please give much more detail regarding institutional controls and referencethe Longterm Stewardship Plan in the document.

9-3-03 (cont)



Comment 9. Please describe the method by which the map was used to delineate the institutional control area.

Comment 10. Please identify deep wells (both monitoring and public wells) which might be able to characterize vertical contaminate plume flow.

Comment 11. Please use all of the MO Department of Natural Resources and the Dept. of Conservations recommended trigger concentrations as they are more protective of the environment.

Comment 12. Why are the Uranium levels higher at the surface water at Burgermeister Spring than in the groundwater under the chemical plant?

Comment 13 How was the baseline uranium concentration for groundwater and surface water determined?

Comment 14. Please forward all surface water Uranium results taken. Please include a map showing locations of all sampling numbers at all the lakes & springs at both Busch and Weldon Springs WLA's and tributaries of the Dardenne Creek. Please include the Upper and Lower Femme Osage Sloughs.

Comment 15. Although not a part of the Chemical Plant Unit, I would also appreciate all sampling results of all the Public Drinking Wells and the Raw and Finished Water of the St. Charles County Wellfield above the detection limit for Uranium, Barium and Arsenic. Please include all results even the ones which were later attributed to error and later retested to be Non Detect! Is DOE in agreement with Black & Vetch that the Arsenic levels at RMW 2 and RMW 4 show an increasing trend? Does the DOE still feel that the plumes of contamination from the Quarry do not cross the Femme Osage Sloughs into the well field proper in light of the results consistantly seen at RMW #2 and #4? Does the DOE feel that it might be reasonable for the PW District #2 to seek alternate water supplies instead of using the old St. Charles Wellfield?

Written Comment for Public Meeting 8-13-03

Pam Thompson, Site Manager

DOE

Weldon Springs Remedial Action Project

7295 Hwy 94 South

St. Charles, MO. 63304

From: Dr. Michael V. Garvey

208 Pitman Hill Rd.

St. Charles, MO. 63304

RE: PUBLIC COMMENT FOR GROUNDWATER, SPRINGS PROPOSED
REMEDIAL ACTION OF AUG. 2003

8-13-03

Dear Pam. Thompson,

I appreciate all the excellent work of the DOE and it's subcontractors and the MoDNR over the years to greatly improve the local conditions, as they may impact the public health of local residents. The St. Charles residents are grateful, but still concerned with the long term potential for some unexpected loss of integrity of the disposal cell and the contaminated ground water and surface water left after the active remediation. Please keep me in the loop regarding the stewardship of the site and the results of the sampling of the springs, disposal cell and of course the St. Charles County Well Field as long as it is in use for a drinking water supply. Hopefully the St. Charles County Well Field source for drinking water will not be needed in the immediate future as alternate supplies exist now to feed PWD #2.

Below are my formal comments to be used regarding the proposed remediation of the groundwater and springs of the Site. My chief concern is found below in #1.

1. Because it has been fully documented that most of the contaminated shallow groundwater beneath the chemical plant area discharges to the surface in the vicinity of Burgermeister Spring and that according to the DOE no active remediation is reasonable closer to the chemical plant site; and that the surface water uranium concentrations in this spring is greater than the groundwater under the chemical plant: **the DOE should consider the feasibility of long term remediation of the surface water at that location.** Please address this request in writing in your final evaluation and recommendations. This contamination has for too many years been allowed to continue to degrade the St. Charles Counties surface waters and ground waters (ie Dardenne Creek and ponded waters ie. Lake 34 at Busch WLA).

2. As I mentioned too many years ago, long term storage should not have been placed at Weldon Springs, an area with groundwater contamination and a

complex hydrogeology, springs, highly fractured limestone with solution voids, enlarged fractures and karst features with **rapid** groundwater transport. Monitoring the long term integrity of the disposal cell will be more difficult due to the groundwater contamination under the cell in this heterogeneous, highly fractured groundwater medium, with poorly connected voids which may hold contamination. (What is the design and screened intervals of the new Cell Detection Monitoring Wells?)

3. The Institutional Controls Location map on page 14 Figure 4 seems artificially drawn to include only chemical plant and the two springs SP-6303 PR-6301, it is too small an area! (How was it determined that the wells at Twin Island Lakes were not degraded by the the DOE Site? What are the results of the sampling of the other Perennial Springs seen in Figure 3 page 6: Perhaps if the groundwater flow from the plant site is to the north, some of these spring surface water results to the southwest could be used to determine the spring water quality local background levels? Where can one find the Missouri Dept. of Health private drinking water well results?)
Public comment 8-13-03 Dr. Michael V. Garvey cont.

4. Will signage at the springs (6301 & 6303) and the southeast drainages be placed and maintained to warn the public not to drink the water? Should bottom feeding fish be digested from Lake 34 at Busch WLA without some information regarding the potential bioconcentrations? I recommend that at the least a catch and release policy should be in place at Lake 34,35,&36 at Busch WLA and the Upper and Lower Femme Osage Sloughs at the Weldon Springs WLA.

5. What if it takes over 100 years to achieve drinking water standards and if the MCL for Uranium is lowered in the meantime? How was it determined to be 100 years?

Sincerely,
Dr. Michael V. Garvey
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