

Mattingly, Jacqueline MVS

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Mattingly, Jacqueline
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Extended oral comments on North county FS/PP



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July 14, 2003 (2305 hrs)

Dear Ms. Mattingly,

Please accept my additional written comments (attached Word 6 document) that extends my oral remarks made at the May 29, 2003 meeting at Hazelwood Civic Center. I hope these remarks, which I offer in a constructive spirit, may be useful in making final versions of the North County (SLAPS) FS/PP. Please let me know if you have any problems with the file.

Sincerely,

Daniel W. McKeel, Jr., M.D.

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Comments to the Army Corps of Engineers
for the Feasibility Study and Proposed Plan
for the North County Site

- by -

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(Oral remarks made 5/29/03 extended in writing 7/14/03
to reflect public comments made at the meeting)

- Thank you for again for allowing the public, and I, to comment on the North County Feasibility Study and Proposed Plan. These written remarks extend those of my oral presentation at the May 29, 2003 public hearing at Hazelwood Civic Center.

General remarks and Introduction. I am Daniel McKeel, an MD doctor of medicine licensed to practice in Missouri, and I am a human pathologist on the faculty of Washington University School of Medicine (WUSM) based in the Department of Pathology and Immunology. I live in the city of St. Louis, zip code 63112, at 5587-C Waterman Blvd. I direct the Alzheimer's Disease Research Center Neuropathology laboratory at WUSM and perform and teach about general autopsies as well. In recent years I have been actively engaged in citizen oversight of the Weldon Spring Site in St. Charles county and currently serve on the DOE-appointed Historical marker working group. I have extensive knowledge about the Mallinckrodt Chemical Works Uranium Division operations. I am also actively supporting the efforts of former MCW workers and their survivors to gain just and long overdue compensation under the federal EEOICPA 2000 law by helping them achieve Special Exposure Cohort (SEC) status.

While I appreciate the opportunity to be heard on the issues that were the focus of the 5/29/03 meeting, I do not understand or agree with the rationale whereby the remediation and regulatory oversight team (USACE, EPA, MDNR) did not allow themselves to respond to questions put to them from the public. This is a different policy than was used at the three recent U.S. Department of Energy (DOE) public workshops on the Long-Term Stewardship August 9, 2002 plan. Those meetings were held at the Weldon Spring Superfund site referable to the Mallinckrodt Uranium Division's uranium production activities during 1942-1966. Yet, both cleanup efforts, SDLS and SLAPs for the downtown site and vicinity properties in St. Louis and North county St. Louis, and Weldon Spring Uranium Feed materials plant/raffinate pits/quarry and vicinity property remediation in St. Charles county (WSSRAP) and the ARMY'S former Weldon Spring Ordnance Works (WSOW), are all governed by CERCLA (Superfund) and related statutes, albeit under different programs (USACE FUSRAP, DOE WSSRAP). Why, then, are different policies adhered to at public hearings? Compared to the DOE program, the North County hearing held 5/29/03 provided less accountability to the public in being one meeting rather than three, and in not allowing governmental agency responses to questions from the public. In addition, the original deadline for submitting public comments was to be May 30, 2003, only one day following the meeting. This short response time was extended to July 14, 2003, partly ameliorating the original inadequate period of time allocated to the public to make final comments on the North County FS/PP.

- I want to reiterate that I strongly favor alternative 6 of the Proposed Plan to accomplish as complete remediation as possible as soon as possible. Complete remediation of Coldwater Creek and The Westlake Landfill should be part of the remedy. I also believe groundwater must be monitored unless it can be proven this is unnecessary, which is impossible. I support Jim Werner's (MDNR) idea that the PP. ALTERNATIVE 5 mentions removing contamination that is "accessible." This term is so vague as to be meaningless, whereas AIT is clear, remove it all, "regardless of accessibility."

The arguments advanced at the 5/29 meeting that: (a) groundwater was not currently impacted due to the nature of the underlying clay aquifer, and (b) that the public had no feasible exposure route to highly polluted Coldwater Creek, entirely misses the point that Coldwater Creek urgently needs to be remediated. If, during the cleanup process, taxpayer dollars also clean up nonradioactive materials *some of which* originated from private industry, then I applaud that. The public will pay eventually, one way or the other, either through this Superfund cleanup or another, so why not now? While the resources are assembled, I vote to press ahead and do the remediation now as thoroughly as possible. This approach minimizes the time of harmful exposures to the public (which is already decades long), neutralizes future upheavals that might redistribute the radioactively and chemically contaminated roads (which inevitably will be changed and rerouted), soils and groundwater, and (c) uses current costs which will surely escalate dramatically as time passes due to inflation alone.

- I reiterate my comment and two related brief questions made orally at the 5/29/03 hearing. On page 18 of the PLAN is the following statement that has what I believe to be several major factual errors. Since a major point of the proposed remedy 5 is to protect the public health and the environment, I feel these very serious scientific-medical errors in the document must be addressed and the statements modified.

• The particular passage at issue reads as follows: (quote) "At the North county site, eleven non-radionuclides are identified as COCs (contaminants of concern) for soils: **antimony, arsenic, barium, cadmium, chromium, molybdenum, nickel, selenium, thallium, uranium, and vanadium**. These noncarcinogens have different effects on systems or organs in the body..." (end quote)

- My first related comment is that uranium-238 is definitely a radionuclide with a half life of 4.47 billion years, in addition to its toxicity as a metal. Calling uranium a non-radionuclide must therefore be corrected.

• My second comment is that the listing of 11 COCs for soil as noncarcinogens is substantially incorrect. In fact, perusal of carcinogen listings for the named substances

by EPA, ATSDR, National Toxicology registry and International Agency for Research in Cancer (IARC) reveals, rather, that 6 substances are established human carcinogens: **ARSENIC, CADMIUM, NICKEL, HEXAVALENT CHROMIUM, URANIUM AND SELENIUM SULFIDE**. The Plan does not state which forms of chromium and selenium are being referred to on page 18.

Listed as NOT CLASSIFIED because of insufficient human data with respect to carcinogenesis are **antimony, barium, molybdenum, and thallium**. However, ATSDR notes that antimony has produced lung cancer in rats. NOT CLASSIFIED is different from being classified as NOT CARCINOGENIC, since it means insufficient evidence exists to decide conclusively one way or the other.

The single compound that all agencies characterize as not being a human carcinogen is **vanadium**. Even so, EPA and IARC note this compound can cause irritation of the eyes, skin, nose, and throat. Vanadium can also cause respiratory distress and labored breathing, as well as allergic skin rashes.

RELATED QUESTION #1 - What sources did AIC use to classify uranium as *not being* a radionuclide and the six known carcinogens to be identified as *non-carcinogens*?

RELATED QUESTION #2 - On the following paragraph of page 18 of the Plan is this statement: (quote) "Toxicologists evaluated the primary effects of 11 metals in the soils at North county..." (end quote)

My questions: **First**, who were the toxicologists by name, degree, agency or institutional affiliation, and job title? **Second**, what does "primary effects" mean since all of the known biologic effects of the eleven compounds may be operating to harm human health and safety by imposing *cumulative risk* for many diseases that are too numerous to go into detail here tonight?

- I do plan to submit more extensive written comments on the North County Feasibility Study and Proposed Plan under consideration at tonight's meeting. Once again, thank you for allowing me to speak.

COMMENT ON THE FOREGOING QUESTIONS - At the May 29 meeting I discussed the "noncarcinogen" question with an Army staff health physicist. He advanced an argument I do not accept and believe is spurious. That is, that risk assessments and remedies should be based on the more serious toxic potential of a biphasic radioactive and chemically toxic compound such as uranium. Everyone in the scientific community agrees that uranium (and arsenic, cadmium, nickel and hexavalent chromium) are

human carcinogens. That uranium metal causes nephritis and other forms of renal damage in humans is also widely accepted by the scientific community. Both effects are extremely dangerous to human health.

I asked the Health Physicist I was referred to (Mr. Garland) whether any physicians had input into either FS/PP document and he said no, although the Army employed 65 Health Physicists. I then asked Mr. Garland if he had a business card, so I could call him after the meeting and we could finish our discussion; he said he did not have one to give me. I was told at the 5/29 meeting the modifying data was in another portion of the FS/PP documents, but I found the explanations totally unconvincing.

Health Physicists are very valuable in assessing radiation doses, however they are not legally able to make medical diagnoses or render any medical treatment as they have no formal medical training. To me this is ludicrously skewed when human health and safety concerns are pre-eminent, as they should be here as stated in the Objectives in the Powerpoint handout (rather than cost to the agency or government which are both funded from taxes paid by the public). I believe medical practitioners and experts should be an integral part of the FS/PP teams whether this be an Army or a DOE remediation program. One possibility would be to re-engage ATSDR in this process. They are the lead agency empowered under CERCLA statutes to conduct health assessments at U.S. Superfund sites.

ADDITIONAL CONCERNS RAISED AT THE 5/29/03 MEETING

1. The RARS that support the 6 remedies should be listed in the FS/PP documents.
2. The outline (main objectives) of a Long Term Stewardship plan for both SLDS and SLAPS needs to be included.
3. I agree with several comments made that sites such as Latty Avenue and Coldwater Creek need to be fenced off and warning signs posted that warn the public of specific contaminants. To do less, as appears to now be the case, is gross negligence on the part of responsible parties in providing the public their absolute Right to Know. This is a problem at Weldon Spring, Rocky Flats and other DOE nuclear weapons sites that needs to be urgently rectified in a vigorous proactive manner.
4. One Objective of the program is to "Minimize adverse effects on area business operations." I believe that this is a low priority goal that should not be given undue weight. The Poplar Street On ramp have been closed by MODOT for emergency repairs, to protect the public safety, even though this action will negatively impact

tourism and businesses (late workers) in the short-term. The longer term benefit, safer roads and travel safety thereon, is the prevailing meritorious consideration.

NEW CONCERNS ADDRESSED IN THE EXTENDED COMMENTS

The serious scientific errors made about classification of heavy metals as noncarcinogens in the FS/PP to me raises doubts about the entire scientific validity of the health studies reported in Section 2.5.1 on pages 2-68 Section on pages 2-82 "Results Of The Supplemental Human Health Risk Evaluations." These pages contain many scientifically and medically challengeable "facts." I have attempted to address a few of them, but frankly there is insufficient time and I have run out of energy to do so in more detail.

While this may seem to be an overly harsh judgment, it is the reaction I have as an expert pathologist and knowledgeable physician to the whole approach used for analysis of risk, the Hazards Index (HI) concept that was heavily relied upon, and the scientific bases for acceptance or rejection of various COCs. The reasons for the latter were not science-based but, rather, appear to be motivated by expediency or to promote cost-containment (to the detriment of protecting the public health and safety).

Below are a few specific objections and concerns I have to the analysis in the FS/PP:

(a) The assumption underlying HI is the start point is zero, and only site-specific COCs contribute to the HI. Of course this is ludicrous. Many studies have shown that all of us already harbor major burdens of multiple toxic substances including some radionuclides, chemicals and pesticides. If one's HI is already 0.6, then only 0.4-0.5 hazard units are required for site contaminants to reach and then exceed 1.0, the cutoff point. Of course, people's baseline bodily hazards burden is probably not ever zero. How would one determine an actual baseline HI for an individual or a particular potential COC? This would require chemical or bioassays of human fluids such as blood or urine. True, this is expensive, but it is possible and is being employed increasingly at certain DOE sites (more than 4,500 worker medical exams have been performed on Paducah, KY Gaseous Diffusion Plant workers, for example).

(b) On page 2-75 is a reference to manganese contained in "ores." Question: Which ores? Does this refer to pitchblende, for example, which contains 60% uranium versus about 1% for usual uranium ores. Is there a listing of the composition of uranium ores used at SLDS and transported to SLAPS? This information, defining the exposure sources precisely, should be part of the FS/PP documents.

(c) Also on page 2-75 appears a reference that reads, in part: "... a complete pathway to receptors [aka people] does not exist ... potential yield is very low for shallow groundwater ..." This basically unsupported reasoning is used over and over in both Army and DOE risk assessments. In order for this reasoning to be accepted as valid by medical scientists in general, you would have to provide field data. Have you performed a tracking study that documents actual usage of Coldwater Creek by nearby residents? If so, this study or studies should be cited in the FS/PP.

(d) An example of an unimproved purely speculative statement on page 2-70 that arsenic in sediment is industry related but not a COC? How do you know that?

(e) On page 2-77 there is the statement that "Movement away from 10[-6th] would not be achievable and/or is based on factors such as technical limitations and uncertainties." Three questions arise concerning this too vague statement:

Q1-e) Why (what factors would make this) is this level of remediation not achievable? Please be specific as possible in your answer to this crucial concern.

Q2-e) What are the "technical factors" alluded to, specifically?

Q3-e) What are the "uncertainties" alluded to, specifically?

(d) On page 2-81 is the statement that "pesticides ... do not represent a human health risk." This sentence is so irresponsible and false that I am flabbergasted to see it in print. This statement reflects badly on FS/PP personnel who wrote these documents. Certain pesticides cause Parkinson's disease (rotenone), neuromuscular paralysis, and many other human disorders that could fill a small book. I am happy to supply a bibliography of these references.

I am also concerned that I do not see any reference to the presence of recycled uranium (and its content of plutonium and other obligatory transuranics), even though DOE documents state that 74,000 metric tons of RU were shipped to Mallinckrodt sites. This issue needs to be addressed of whether plutonium is a COC or a potential COC, and if not, what evidence do you have where it went?

Respectfully Submitted,

Daniel W. McKeel Jr., M.D.

July 14, 2003

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