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G-000-1013.68

**MINUTES FROM OCTOBER 8, 1994 TASK FORCE MEETING**

10/08/94

**APPLEGATE      TASK FORCE**  
**8**  
**MINUTES**

# FERNALD CITIZENS TASK FORCE <sup>6260</sup>

A U.S. DEPARTMENT OF ENERGY SITE-SPECIFIC ADVISORY BOARD

Chair:

John S. Applegate

Members:

James Bierer  
Marvin Clawson  
Lisa Crawford  
Pam Dunn  
Dr. Constance Fox  
Guy Guckenberger  
Darryl Huff  
Jerry Monahan  
Tom B. Rentschler  
Robert Tabor  
Warren E. Strunk  
Thomas Wagner  
Dr. Gene Willeke

Alternates:

Russ Beckner  
Jackie Embry

Ex Officio:

J. Phillip Hamric  
Graham Mitchell  
Jim Saric

## Minutes from October 8, 1994 Meeting

Members Present: John Applegate  
Marvin Clawson  
Lisa Crawford  
Pam Dunn  
Constance Fox  
Guy Guckenberger  
Phil Hamric, DOE  
Gene Jablonowski, U.S. EPA  
Graham Mitchell, Ohio EPA  
Jerry Monahan  
Tom Rentschler  
Warren Strunk  
Bob Tabor  
Thomas Wagner  
Gene Willeke

Members Absent: Jim Bierer  
Darryl Huff

Task Force Staff: Doug Sarno, consultant  
Sarah Snyder  
Judy Armstrong

About 20 spectators, including members of the public and representatives from DOE, the Ohio Department of Health, the Agency for Toxic Substances and Disease Registry, FERMCO, and other state and federal agencies.

1. Approval of Minutes:

- The draft minutes of the September 10, 1994, meeting of the Task Force were approved without amendment.

2. Remarks:

Chair John Applegate told members that Doug Sarno has a new

contract for fiscal year 1995, which began October 1, 1994.

He also asked Task Force members if they wanted to move their monthly meetings to the Joint Information Center (JIC) in Fairfield, which is located in the building leased by FERMCO for training. The JIC space would be free, as it already is leased. The Task Force agreed to move its meetings to the JIC, beginning with the November 1994 monthly meeting. Applegate said maps with directions to the JIC would be distributed to members.

Applegate asked members if they had any questions about the memorandum he sent out transmitting DOE's policy on compensating members of its site-specific advisory boards. In general, DOE does not compensate members, although DOE has developed criteria for determining if compensation is warranted. This policy was developed to address issues such as lost wages and child care costs. Fernald Citizens Task Force members, regardless of whether any seek compensation, still are reimbursed for their mileage and other incidental expenses associated with serving on the Task Force.

Applegate also reported on a October 4-5, 1994, meeting of the chairs of DOE's various site-specific advisory boards. He said that Fernald's group is well ahead of other sites' boards, many of which still are organizing and determining what issues to address. He said the Task Force's success is a credit to its members, and he thanked DOE and FERMCO for their support of the Task Force.

The chair also announced that the Defense Nuclear Facilities Safety Board was holding a public meeting on October 12, 1994, at the Meadowbrook Inn in Ross. Lisa Crawford said the purpose of this meeting is for DNFSB members to gather comments for their report to Congress. The board is congressionally mandated, created to provide independent and aggressive oversight of DOE. The DNFSB currently is looking at UNH (uranyl nitrate hexahydrate) concerns at the site and plans to examine issues related to decontamination and decommissioning of the facilities.

3. Status of Action Items and Initiatives:

Applegate said the Task Force is on schedule to deliver its interim future use report in time for Operable Unit 5 managers to make use of the recommendations in developing their draft Feasibility Study and Proposed Plan. Those documents are scheduled to be delivered to the U.S. Environmental Protection Agency and the Ohio Environmental Protection

Agency by November 16, 1994. (Operable Unit 5 addresses the environmental media at the Fernald site.) However, he said the Task Force needs to reach a decision on groundwater and then look at future use alternatives so the Task Force's interim report can be completed in November.

4. Discussion of Fernald's FY 1995 Budget:

Applegate introduced Jack Craig, DOE's acting director at the Fernald site, to give an overview of the budget situation. Craig presented the following information:

BUDGET AUTHORITY	\$291,194,000
Reductions:	
Productivity improvements	\$30,413,000 (10 percent)
Reduction for uncosted carryover funds	\$13,648,000 (5 percent)
TOTAL	\$44,061,000 (15 percent)
New Requirements:	
HQ Holdback	\$7,280,000 (2.5 percent)
Lawsuit settlement	\$10,000,000 (3.4 percent)
Ohio Field Office support	\$7,500,000 (2.6 percent)
3161 restructuring	\$8,000,000 (2.7 percent)
TOTAL	\$32,780,000 (13.2 percent)
Total Reduction	\$76,841,000 (28.2 percent)
Additional funding from EM-40 (restoration)	\$5,000,000
TOTAL FOR CLEANUP	\$219,353,000

Several Task Force members had questions about the \$8 million set aside for 3161 retraining as part of the workforce transition. They said the amount seemed too high, and they asked why salaried employees were included in the plan. One member pointed out that the \$8 million, if divided among the 2,000 workers at the site, came to \$40,000 per employee. Craig said that amount included coverage for unemployment compensation and health benefits, as well as the retraining costs. One member asked, "Whatever happened to: if a guy lost his job, he lost his job and had to find another one?" Phil Hamric said the reasoning behind 3161

is that defense workers did a service to the country and so should be rewarded for helping the United States win the Cold War. Craig encouraged members to attend a public meeting on the workforce transition, which was being planned.

Members also asked about the amount of money being given to the Ohio Field Office; a few suggested that the settlement for the Fernald employees lawsuit be taken from the Defense Programs budget within DOE. Lisa Crawford asked if all the thorium would be removed from the site with this budget. Craig said that all the thorium will be overpacked, but probably not all of it would be gone.

Hamric said he has been spending a lot of time fighting for Fernald's budget. He also said that there was some room for improved efficiency in site activities.

Members asked if the FY 95 budget is enough to meet the mandated activities. Craig said it was sufficient. However, Graham Mitchell said there were serious concerns about the budget because the milestones (reports) are ending and not much attention is being paid to the cleanup beyond. He said that if Fernald's budget did not stay level for the next few years, cleanup will take longer and cost more. Craig agreed, adding that the best Fernald can look for is a flat budget. He told the Task Force that DOE wanted input on priorities. Applegate said the Task Force's charter addresses the question of cleanup priorities, which will be tackled after the interim future use report is completed in November.

5. Review of New Information:

Applegate turned to Doug Sarno, who explained the new information prepared for Task Force members. Sarno said that a new section of the Tool Box on groundwater was added in order to address members' concerns from the September meeting.

6. Discussion of Protection of Groundwater:

Sarno outlined key issues for groundwater remediation. The largest contributor to groundwater contamination is the uranium-contaminated soil in Operable Unit 3, the former production area, once the other sources are removed.

The current impact of Fernald on the Great Miami Aquifer at 20 parts per billion (the maximum contaminant level) is 1.7 billion gallons; at 3 parts per billion (a  $10^{-6}$  risk level) is 5.8 billion gallons.

The projected condition of the groundwater if it is not treated but if the

contaminated soil is removed is:

- In 10 years, 2.1 billion gallons at 20 parts per billion; 6.8 billion gallons at 3 parts per billion
- In 25 years, 2.5 billion gallons at 20 parts per billion; 8.1 billion gallons at 3 parts per billion
- In 50 years, 2.7 billion gallons at 20 parts per billion; 9.9 billion gallons at 3 parts per billion

The projected condition of the groundwater if it is not treated and if the contaminated soil is not removed is:

- In 10 years, 2.1 billion gallons at 20 parts per billion; 6.8 billion gallons at 3 parts per billion
- In 25 years, 2.6 billion gallons at 20 parts per billion; 8.1 billion gallons at 3 parts per billion
- In 50 years, 3.4 billion gallons at 20 parts per billion; 11 billion gallons at 3 parts per billion
- In 1,000 years, 23 billions gallons at 20 parts per billion; 32 billion gallons at 3 parts per billion

The current areal impact of contamination in acres at 3 parts per billion is 1,500. Sarno said that at present 9 residential wells, 8 industrial wells, 19 households and 7 businesses are affected.

The projected maximum areal impact of contamination at 3 parts per billion is 4,200 acres. It is projected that 58 residential wells, 26 industrial wells, 403 households and 25 businesses would be impacted under the maximum projections.

The time to reach cleanup levels if the source soils are removed:

- Full pump and treat, 35 years at 20 parts per billion; 70 years at 3 parts per billion
- South Plume wells, 90 years at 20 parts per billion; 350 years at 3 parts per billion
- No pumping, 160 years at 20 parts per billion; 500 years at 3 parts per billion

Sarno said it would take thousands of years to clean the Great Miami Aquifer if the source soils at the Fernald site are not removed, even though the area impacted by Fernald is a small percentage of the total aquifer. The contamination, untreated, measured at 20 and 3 parts per billion, will reach the Great Miami River in 140 and 40 years,

respectively.

He also said that while one might assume that the plume of uranium-contaminated groundwater would dilute once it reaches the Great Miami River because of the volume of water in the river, computer modeling has indicated that this dilution is not likely to happen. There is a commercial/industrial well field just across the river that draws such a large volume of water from the aquifer that the pumping would pull the contamination through the river.

Even if the uranium-contaminated soil is remediated, waiting to clean up the aquifer increases the cost, Sarno explained. If DOE were to begin now, the cost to clean to 20 parts per billion is estimated to be \$396 million. In 10 years, the cost of cleaning to 20 parts per billion increases to \$485 million; in 25 years, the cost of cleaning to 20 parts per billion increases to \$590 million; in 50 years, the cost of cleaning to 20 parts per billion increases to \$644 million. Cleaning to 3 parts per billion is approximately twice as much. Buying property to restrict use of the contaminated groundwater would cost about \$750 million. Sarno added that DOE recently bought some land at a cost of about \$250,000 an acre.

Gene Willeke said he couldn't see letting the groundwater go without treatment, adding that he couldn't conceive of why anyone would want to do that. But he said it is possible to protect the aquifer without endorsing the  $10^{-6}$  risk level.

Mitchell said Ohio EPA would not fight a  $10^{-5}$  risk level for aquifer protection; Gene Jablonowski said U.S. EPA also would not oppose that risk level. Guy Guckenberger asked whether the Task Force could adopt a  $10^{-6}$  risk level for soil if it decided to endorse a  $10^{-5}$  risk level for groundwater. Sarno said that the Task Force could do that, but that consistency would be easier to justify.

Sarno explained that the risk levels refer to the additional risk of contracting cancer from exposure to the uranium contamination. Depending on which study used, Americans have a 1 in 4 (0.25) chance of contracting cancer in their lifetimes. The additional risks posed by Fernald are:

$10^{-4}$	0.2501
$10^{-5}$	0.25001
$10^{-6}$	0.250001

- Willeke moved that the Task Force endorse a  $10^{-5}$  risk level for

groundwater and protect to MCLs. Guckenberger seconded the motion. The motion passed unanimously.

Peggy Collins, co-president of the Hamilton-Fairfield Chapter of the League of Women Voters, told the Task Force she endorsed its decision about the aquifer.

7. Discussion of Future Use Options:

Sarno then discussed the future use scenarios, explaining that cleanup levels at a  $10^{-4}$  risk level had been calculated for the future use categories under consideration by the Task Force. The cleanup levels for the  $10^{-5}$  and  $10^{-6}$  risk levels also were revised slightly, based on new information.

The categories, the assumptions for each, and the cleanup levels are:

- Resident farmer; assumes full-time life-long resident growing crops for human consumption and grazing livestock; cleanup levels at  $10^{-4}$  risk, 130 ppm; cleanup levels at  $10^{-5}$  risk, 15 ppm; cleanup levels at  $10^{-6}$  risk, 5 ppm
- Industrial; assume maximum exposure to an on-site groundskeeper; cleanup levels at  $10^{-4}$  risk, 1,200 ppm; cleanup levels at  $10^{-5}$  risk, 125 ppm; cleanup levels at  $10^{-6}$  risk, 15 ppm
- Developed park; assume free access recreational facility with developed sports, picnic, and restroom facilities; cleanup levels at  $10^{-4}$  risk, 3,490 ppm; cleanup levels at  $10^{-5}$  risk, 350 ppm; cleanup levels at  $10^{-6}$  risk, 40 ppm
- Green space; assumes unlimited access to nature trails, but with no developed facilities; cleanup levels at  $10^{-4}$  risk, 8,820 ppm; cleanup levels at  $10^{-5}$  risk, 885 ppm; cleanup levels at  $10^{-6}$  risk, 90 ppm
- Protection of aquifer; assumes soil concentrations required to prevent contamination from leaching into aquifer, and the site is divided into two zones according to geology and solubility; cleanup levels at  $10^{-5}$  risk in Zone 1 is 20 ppm and in Zone 2 is 100 ppm; cleanup levels at  $10^{-6}$  risk in Zone 1 is 5 ppm and in Zone 2 is 10 ppm. (The aquifer is not protected in either zone at a  $10^{-4}$  risk level.)

Sarno explained that because of the geology and highly-soluble nature of the uranium in the former production area (designated as Zone I), there

must be more cleanup in Zone I in order to protect the aquifer. Gene Willeke said the Task Force should be consistent and not endorse a  $10^{-6}$  risk level for soil remediation. The areas of difference between the  $10^{-5}$  and  $10^{-6}$  risk level, as discussed by the Task Force, include:

- off-site soil
- soil volume
- disposal cell size
- cost
- implementability (political, sampling/analytical, cost, legal concerns, protection)
- risk levels (on-site versus off-site)
- ecosystem impacts
- uses

The Task Force discussed how establishing  $10^{-6}$  for cleanup will require excavating about 6 inches of soil from an 11-square-mile area off the property, thus increasing the cost of remediation and the size of the disposal cell.

FERMCO's Dennis Carr, who works on Operable Unit 5, said actual sampling results show that most of the soil contamination is about 50 parts per million or less. He said that if a  $10^{-5}$  risk level is used, only 410,000 cubic yards would require excavation beyond the property boundaries.

- Willeke moved that the Task Force eliminate the  $10^{-6}$  risk level from further consideration for soil. Warren Strunk seconded the motion. The motion passed unanimously.
- Willeke also moved that the Task Force adopt a maximum risk level of  $1 \times 10^{-4}$  for land uses only. Several members of the Task Force seconded the motion. The motion passed unanimously.

The Task Force discussed whether it should discuss the future use scenarios and try to narrow the options. Tom Wagner said that most people don't want any residential or agricultural use of the site, even though people want it cleaned to a residential/agricultural level. Willeke suggested eliminating residential use, but leaving industrial, green space and developed park for consideration. Crawford said she could not support industrial use of the site.

- Willeke moved that the Task Force, to be consistent with the groundwater and soil recommendations, eliminate from further consideration all new residential and agricultural uses on DOE's

Fernald Environmental Management Project property. Several members of the Task Force seconded the motion. The motion passed unanimously.

Crawford asked whether the Task Force should consider prohibiting existing agricultural use at the site. Cows and cattle now graze on about 300 acres of the site. The milk from the cows is tested for uranium and there haven't been any problems, according to DOE's annual environmental monitoring report.

The Task Force decided to address this issue at its November meeting, and asked for information about the milk testing and grazing.

There were no additional comments from the public on the future use motions.

8. Opportunity for Public Participation:

There were no additional comments; public input was received during the discussion about protecting the groundwater and the review of the future use alternatives.

9. Materials Distributed at Meeting:

- New Tool Box sections on Future Land Use and Groundwater
- Handout on the status of the Nevada lawsuit involving Fernald waste shipping
- Updated Briefing Book
- Jack Craig's handout on the budget

10. Next Meeting:

The next meeting of the full Task Force is scheduled for 8:30 a.m. to 12:30 p.m. on November 12, 1994, at the Joint Information Center in Fairfield.

The meeting adjourned at 12:49 p.m.

Approved November 12, 1994