

State Concerns



On the Rocky Mountain Arsenal Offpost Proposed Plan

Colorado
Department
of Health

April 1993

1. What is the Offpost Proposed Plan?

The plan was created by the U.S. Army to describe risks associated with contamination to the north and northwest of the Rocky Mountain Arsenal, explain the cleanup alternatives that were considered, and identify

the cleanup method selected. Federal Superfund law requires the Army to provide this plan to the public so that you have a chance to give your opinion. You may have recently received a fact sheet from the Army which is a summary of the Proposed Plan. To review

a copy of the entire 12-page Proposed Plan, contact the Army, the Colorado Department of Health, EPA, or local libraries. If you would like your own copy of the plan, please call the Colorado Department of Health (CDH) at 692-3410 and leave a message. We will send you a copy.

2. What area does the Offpost Proposed Plan cover?

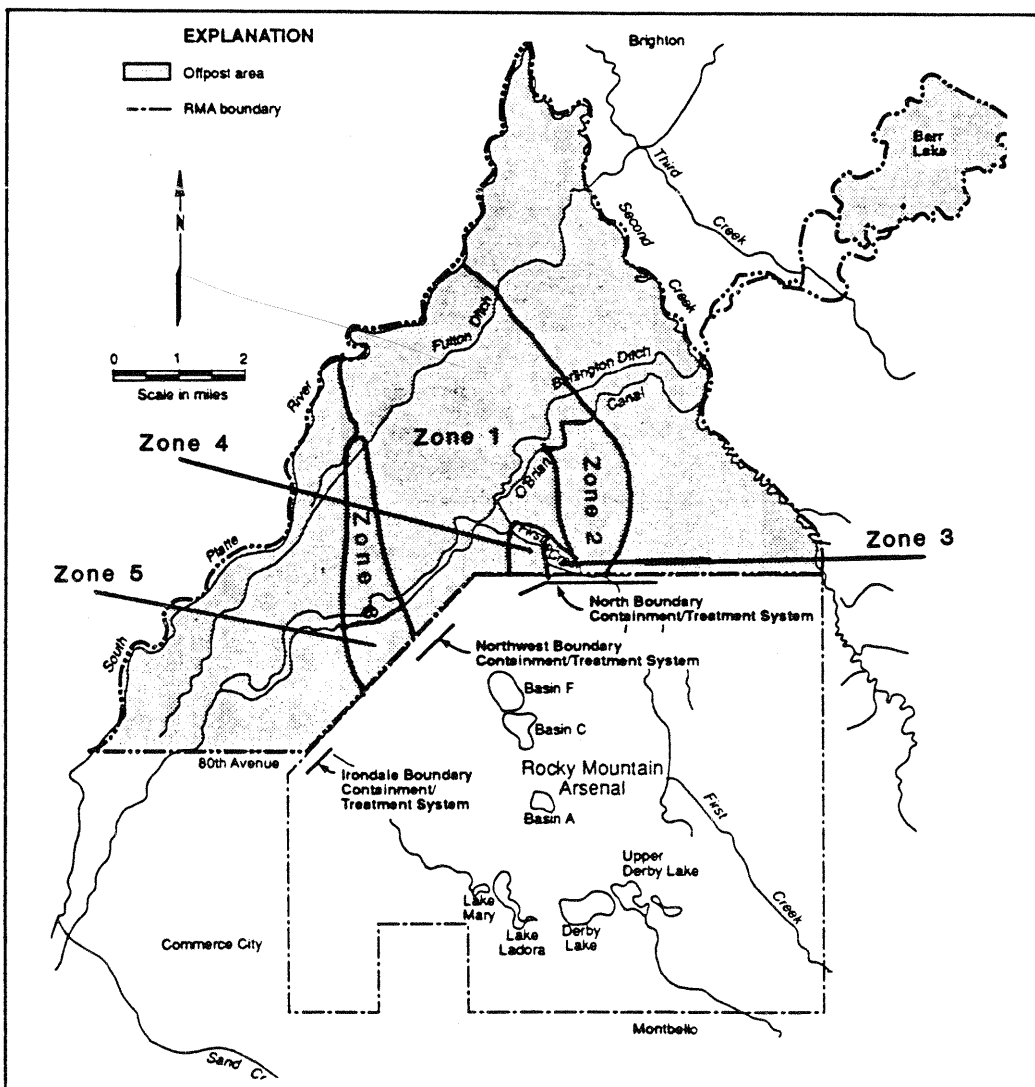
The figure below shows the area covered. This area was defined in 1989 based on known areas of contamination and the predominant ground water and surface water flow patterns. No additional offpost investigation related to the Arsenal is expected.

3. Does the state support the plan? Why or why not?

The state has many concerns. Below are the most significant:

Protectiveness of the Proposed Remedy

According to federal law, appropriate clean-up levels



Rocky Mountain Arsenal and Offpost Study Areas

are based on existing state and federal environmental standards, if they exist. In addition, risk assessments which estimate cancer and non-cancer risks are used to determine clean-up levels when environmental laws either do not exist or are not considered to be protective at a particular site. A risk assessment compares the levels of contamination to EPA-established numbers to determine hazard indices for non-cancer risk. Cancer risk is established through excess cancer risk predictions. An "excess" cancer means a cancer in *addition* to the predicted cancer risk. According to the American Cancer Society, one in three of us will develop a cancer sometime in our lives. The state has concerns with what the Army considers acceptable risk. These concerns are explained below:

Cancer Risk

Zones 2, 3 and 4, as depicted on the illustration, are the most highly contaminated areas of the offpost study area. Contamination has been found in ground water, soil, and surface water. At current concentrations such contamination, according to the Army's studies, could pose excess cancer risks of approximately 3 in 10,000. The Army states that potential risks as high as 1 in 2,000 are acceptable. However, the state believes that federal law requires Superfund cleanups to aim for an excess cancer risk of not more than 1 in 1,000,000, unless that number cannot be achieved.

Non-Cancer Risk

Federal law states that hazard indices reflecting non-cancer risk should not exceed one. The Proposed Plan indicates that the hazard index exceeds one in Zones 2, 3 and 4 and a portion of Zone 1. This means that people exposed to existing contamination in those areas could suffer adverse health effects other than cancer, ranging from short-term effects such as eye and skin irritation to long-term effects such as asthma, liver or kidney damage. The state believes that the risk should be reduced at least to the hazard index of one.

Access and Use

Zones 3 and 4 are owned by Shell Oil Company; Zone 2 is mostly privately owned. The Proposed Plan does not include active cleanup of soil in these three zones. In addition, ground water contamination will likely remain there for decades while it is gradually flushed by water treated at the North Boundary System. The Proposed Plan does not provide any mechanism for preventing people from drinking ground water while it is being cleaned up. Nor is there a commitment to provide access and use controls (like deed and well restrictions) to prevent exposure to water or soils. Therefore, the state would

like the Army to evaluate active remediation of the soil and at the very least initiate measures which would prevent exposures to ground water until it is cleaned up.

DIMP in Ground Water

In 1990 the state requested that the Water Quality Control Commission set a ground water standard for DIMP (diisopropylmethylphosphonate), a byproduct of nerve gas production at Rocky Mountain Arsenal. A current EPA Health Advisory Level of 600 ppb has been used by the Army to determine what areas of ground water should be cleaned up. The Army will consider cleanup only in those areas where DIMP levels are greater than the EPA Advisory Level. The state believes that a more conservative figure should be used.

The Army has asserted that the part of the ground water plume with DIMP concentrations above 600 ppb has not moved past their Offpost Intercept and Treatment System. The most recent testing done by CDH has found 800 ppb DIMP in a private well at least 1/2 mile past the proposed intercept system, indicating that DIMP well above EPA's Health Advisory Level is already in private drinking water supplies. The well owner was already receiving bottled water from the state. The state believes the Army should address the significantly elevated level of DIMP contamination which has moved beyond the offpost intercept and treatment system.

Bottled water has been provided since July 1990 to more than 600 residents with DIMP in their well water. This water has been paid for by the state of Colorado, with costs shared the first year with EPA. Due to the widespread nature of DIMP contamination in the offpost, the state believes that the Army should provide all residents in the study area a permanent, municipal water supply.

Contamination of the Deeper Aquifer

Since 1990, testing by the state has revealed that DIMP is present in the deeper Arapahoe aquifer at depths greater than 100 feet. The levels found range from a trace to 39.7 ppb. The state has identified approximately 20 domestic use wells that should be closed because they may be allowing contamination to move down to the deeper aquifer. The Army has not closed any of these wells, and the Proposed Plan does not address this problem. The Army has argued that contamination of the deep aquifer is a localized occurrence, that it is due to poor private well construction and is therefore not its responsibility. The Army believes that only wells with more than 600 ppb should be closed, while DIMP in lesser, but significant, quantities continues to move into the Arapahoe aquifer. The state would like the Army to close

additional wells to protect the Arapahoe aquifer from further contamination.

Ground Water Cleanup Action

The Proposed Plan states that it will take approximately 15 to 30 years to clean up the ground water in the northern plume. However, the Army's supporting documents state that it is not actually known how long it will take; the time estimates are only for comparing relative timeframes between alternatives. The state believes that the Army has significantly underestimated the actual time that will be required. Also, the Army eliminated a cleanup alternative (Alternative N-5 in their Proposed Plan) that it estimated would reduce the cleanup time to 10 to 20 years, a one-third reduction. This was based on the fact that this alternative would require one more year to put into place. In addition, the Army states it prefers Alternative N-4 because it allows the Army to make improvements to the ground water cleanup system as needed; but according to the Army's Feasibility study, so does Alternative N-5. Alternative N-5 would actually cost less because it would clean up the ground water more quickly. The state believes that the Army should design a more aggressive system that will clean up the ground water faster.

State Ground Water Standards

Under federal law, state environmental standards which meet certain criteria must be used at Superfund sites. The Army does not plan to use state standards in the offpost cleanup, saying there is "inconsistent application and ambiguous language". These standards, however, are enforced at all other Superfund sites in Colorado, and have been used by the Army itself for earlier ground water cleanup at the RMA. The state wants the Army to recognize these standards for cleanup in the offpost.

Surface Water

The surface water in First Creek currently has contamination that exceeds several state surface water standards. The Proposed Plan does not address surface water because the Army maintains that if ground water is cleaned up as it leaves RMA, it will eventually cleanse First Creek. The state agrees that this action will have a beneficial effect on First Creek water quality since ground water seeps into First Creek during part of the year, but there is no clear estimate as to how long this cleansing process will take. In the meantime, the contamination will continue to migrate into O'Brian Canal and ultimately into Barr Lake. The state wants the Army to commit to further water sampling and to attempt to meet state surface water standards.

4. What role does the state have in the Proposed Plan?

The state and the public have a similar role at this stage of the process. The Army must consider state, local government and community comments to the Proposed Plan before the Record of Decision (ROD) is issued. The state has reviewed and commented on all the supporting documents which led up to the Proposed Plan; the Army is therefore very familiar with the state's concerns. To date, however, the Army has not changed the Proposed Plan to address the state's concerns. It is therefore essential for the public to contribute its views during this review.

5. What happens next?

All comments received will be reviewed by the Army and EPA. Responses to all comments will appear in a document called the ROD. The Army plans to release this document October 30, 1993. This ROD announces the selection of the final clean-up alternative. This will be the "final word" on cleanup for the offpost; no public comment period or public meetings are required on that document.

6. How can I voice my opinion?

The public comment period on the Proposed Plan is from March 21, 1993 through May 21, 1993. Please mail your comments to: Offpost Proposed Plan Comments, Program Manager for the Rocky Mountain Arsenal, Attn: AMXRM-PM/ Col. Eugene H. Bishop, Bldg. 111-RMA, Commerce City, CO 80022-2180. The state would appreciate copies of written comments submitted on the Proposed Plan which are submitted to the Army. We urge the public to attend a meeting on the Proposed Plan to be held April 28, 1993, 7 p.m., at the Dupont Elementary School, 7970 Kimberly Street, Commerce City. This comment period is your only opportunity to comment on the Army's proposed plan.

More Information

For a copy of the 12-page Proposed Plan, or to ask additional questions or express concerns related to the Proposed Plan, call the CDH RMA Team at 692-3410 and leave a message, and appropriate team member will respond. Or you can call Marion Galant, Community Relations Manager, at 692-3304.

Mailing List

To be added to the state's mailing list for future information on the Rocky Mountain Arsenal, please fill in the information below and return to Marion Galant, Colorado Department of Health, HMWMD-ADM-B2, 4300 Cherry Creek Drive South, Denver, Colorado, 80222.

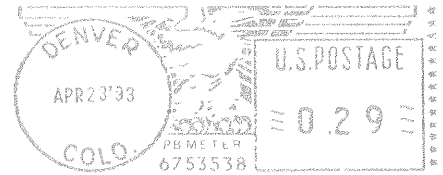
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