



**Department of Energy  
Office of Legacy Management**

October 27, 2008

Mr. Paul Frohardt, Administrator  
Colorado Water Quality Control Commission  
OED-OEP-A5  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530

Subject: U.S. Department of Energy's (DOE's) Responsive Pre-Hearing Statement for Proposed Revisions to Current Temporary Modifications set to expire before February 28, 2011

Dear Mr. Frohardt:

This is to transmit the enclosed original and 13 copies of the subject Responsive Pre-Hearing Statement.

If you have any questions or require additional information, please call me at (720) 377-9682 or Rick DiSalvo, Assistant Project Manager for DOE's Rocky Flats Legacy Management Contractor. Rick may be reached at (303) 819-7150.

Sincerely,

Scott R. Surovchak  
LM Site Manager

cc:  
Carl Spreng, CDPHE  
Post Closure AR  
rc-rocky.flats (RFS 425.02)

COLORADO WATER QUALITY CONTROL COMMISSION  
STATE OF COLORADO

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RESPONSIVE PRE-HEARING STATEMENT OF THE U.S. DEPARTMENT OF  
ENERGY (DOE)

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REVISIONS TO CURRENT TEMPORARY MODIFICATIONS (TMs) OF WATER  
QUALITY STANDARDS FOR MULTIPLE SEGMENTS IN REGULATION NOS. 32  
& 38

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The Water Quality Control Division's Proponent's Pre-Hearing Statement provides a succinct history of the establishment of the current TMs applicable to segment 5, which were established during the cleanup and closure of the Rocky Flats Site. The TMs for six organic and nitrate/nitrite parameters for Big Dry Creek segment 5 are set to expire December 12, 2009.

The Division's Proponent's Pre-Hearing Statement proposes that these TMs be retained and that the Water Quality Control Commission revisit the underlying standards during the triennial review to be completed in June 2009. DOE agrees with this proposal.

Background – Rocky Flats was listed on the Comprehensive Environmental Response, Compensation, and Liability Act National Priorities List in 1989. The final remedy was selected in the September 29, 2006, Corrective Action Decision/Record of Decision (CAD/ROD) after completion of cleanup and closure by DOE under the *Rocky Flats Cleanup Agreement*. The final remedy is being implemented in accordance with the March 14, 2007, *Rocky Flats Legacy Management Agreement* (RFLMA) entered into by DOE, the U.S. Environmental Protection Agency, and the Colorado Department of Public Health and Environment. Segment 5 is located within the boundary of the Central Operable Unit (OU) at Rocky Flats. RFLMA establishes the requirements for implementing the CAD/ROD to ensure that the remedial action remains adequately protective of human health and the environment.

By the end of 2005 all Rocky Flats buildings (except for two former vehicle inspection sheds) and impervious surfaces had been removed and water was no longer imported site use and discharged from sewage treatment. Under these post-closure conditions Rocky Flats is returning to a natural groundwater base flow condition.

Information Regarding DOE's Position – Pursuant to 5 CCR 1002-21, Rule 31.7 (3)(c),

...In making a decision as to whether a temporary modification should be removed or extended, the Commission will consider the existence of an implementation plan for eliminating the need for the temporary modification, the progress being made in trying to implement such a plan, the impact of the temporary modification on the uses of the stream in the area of the temporary modification and upstream and downstream of that area, and all other relevant factors.

The following information related to these factors supports the proposal to retain the current TMs.

1. Implementation Plan – The TMs are necessary because contaminated groundwater reaches surface water as base flow in portions of Big Dry Creek segment 5 in the Central OU. The remedial action includes three groundwater treatment systems to remove

contaminant loading in groundwater that may become base flow to surface water in segment 5. These systems employ groundwater flow collection barriers and passive flow-through treatment cells to remove contamination, and are designated as follows:

- Mound Site Plume Treatment System – organic contaminant treatment
- East Trenches Plume Treatment System – organic contaminant treatment
- Solar Ponds Plume Treatment System – nitrate and uranium contaminant treatment

Monitoring of the treated effluent groundwater and continued operation and maintenance of these systems are required and implemented in accordance with RFLMA. In addition, over time, the growth of vegetation is expected to promote phyto-remediation as an enhancement to remove contaminant loading in base flow. Surface water monitoring downgradient of these systems, and at other surface water locations, is also specified under RFLMA.

2. Progress – Post-closure monitoring data indicate that the groundwater treatment systems are generally effective in reducing the intercepted groundwater contaminant levels to achieve the underlying standards for the treated groundwater. However, knowledge of the treatment media's capacity, their dynamics, how they and system components will be affected by groundwater chemistry, and the systems' ability to consistently treat groundwater so that base flow contaminants will not negatively impact surface water quality is still being gained.

In addition, leading edges of contaminant plumes were not captured by the intercept barriers, and portions of plumes may not be completely captured. This is especially noticeable for the nitrate contaminant plume, as the downstream surface water performance monitoring location results show nitrite/nitrate levels (as N) below the TM but at several times the underlying standard. Downstream of this performance monitoring location, at Terminal Pond A-4, surface water meets the underlying standard.

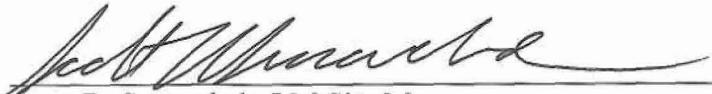
An upgrade to the Solar Ponds Plume Treatment System to collect more groundwater that may be contributing to nitrate levels in surface water was completed in October 2008. Monitoring to evaluate the performance of the upgrade has begun. Consideration of alternatives that may improve the reduction of nitrate loading is also ongoing. Additional monitoring results will be available for the triennial review.

The water monitoring results for the groundwater treatment systems, and surface water monitoring results, are published in RFLMA-required quarterly and annual Surveillance and Maintenance Reports and are available on the Rocky Flats website at [http://www.lm.doe.gov/land/sites/co/rocky\\_flats/reports.htm](http://www.lm.doe.gov/land/sites/co/rocky_flats/reports.htm).

3. Impact of TMs on Uses – There is no actual use of surface water or groundwater in the Central OU, and surface water flowing from segment 5 into segment 4 has met, and currently meets, the underlying surface water standards. The allowable contaminant levels under the current TMs are also adequately protective of human health and the environment. Thus, there is no impact by retaining the current TMs for revisiting in the 2009 triennial review.

U.S. Department of Energy's Responsive Pre-Hearing Statement  
for Proposed Revisions to Current Temporary Modifications

Respectfully submitted this 27<sup>th</sup> day of October 2008.



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U.S. Department of Energy's Responsive Pre-Hearing Statement  
for Proposed Revisions to Current Temporary Modifications

CERTIFICATE OF SERVICE

I do hereby certify that a true and exact copy of the U.S. Department of Energy's Responsive Pre-Hearing Statement for Proposed Revisions to Current Temporary Modifications of Water Quality Standards for Multiple Segments in Regulations Nos. 32 & 38, dated October 27, 2008, was e-mailed to the following on the 27<sup>th</sup> day of October 2008.

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