

U.S. DEPARTMENT OF ENERGY

FINDING OF NO SIGNIFICANT IMPACT

Remedial Action at High Priority Sites (881 Hillside Area)

Rocky Flats Plant

Golden, Colorado

The Department of Energy (DOE) has prepared an Environmental Assessment (EA) of the proposed remedial action for the 881 Hillside Area at the Rocky Flats Plant (RFP). The Action would consist of installation and operation of facilities to capture the groundwater at the 881 Hillside Area, treat it to remove organic chemicals, and return the water to the alluvial groundwater. Based on the findings of the EA, which is available to the public on request, the Department of Energy has determined that the proposed action does not constitute a major federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act of 1969, 42 U.S.C. 4321 et seq (NEPA). Therefore, no environmental impact statement is required.

As a result of a series of site characterizations at the Rocky Flats Plant, the 881 Hillside Area was identified as a location with environmental contamination which, if not treated, could cause risks to members of the public from organic solvents in the alluvial groundwater. The proposed action includes the installation of an extraction pumping well, a french drain, collection tanks, a treatment facility and a re-injection trench to return the treated water to the alluvium hydrologically downgradient from the french drain and extraction well. The treatment facility would employ a process using ultraviolet light and hydrogen peroxide to destroy volatile organic chemicals in water without prior concentration or extraction from the water.

In addition to the proposed action, a number of alternatives were considered including: (1) continuing environmental monitoring without taking any further action, (2) an action similar to the proposed action but using a well array to collect the groundwater, (3) an action similar to the proposed action but including soil flushing, (4) total encapsulation using a multi-layered cover and soil-bentonite slurry walls, (5) immobilization using a polymer grout, (6) an action similar to the proposed action but omitting the french drain, and (7) an action similar to the proposed action but also including removal of soil from the area of highest groundwater contamination.

During the installation of the facilities required for the proposed action, air quality impacts will be minimized by routine methods to control generation of dusts. During operation of the water treatment facility, airborne releases will include oxygen, carbon dioxide, water vapor, and trace amounts of organic vapors, none of which constitutes a significant impact on air quality. Control of surface water run-off during construction will be used to limit soil erosion and the generation of suspended solids in open waters. Since all water collection and treatment facilities are located hydrologically upgradient from the french drain, there is no off-site water quality impacts from any credible accident. Because less than 5% of the surface area of the 881 Hillside Area is to be involved in excavation work, and those areas disturbed are to be restored to their original topographical conditions, terrestrial impacts will not be significant.

With the exception of the alternative to take no remedial action, none of the alternative actions considered would cause significant environmental impacts. The highest estimates of lifetime risk of cancer to either workers or the general public from construction and operation of the facilities in the proposed action are all less than 6×10^{-8} . The highest lifetime cancer risk from any credible accident was less than 2×10^{-8} . During construction and operation of the facilities, exposure to chemicals which to increase risks of non-carcinogenic illnesses do not exceed 0.4% of the applicable Health Effects Criteria (acceptable chronic intake or equivalent). During accident conditions, that percentage does not exceed 5%. The proposed action does not involve any transportation of materials classified as hazardous. Therefore, the only impacts from transportation are those normally incident to any transportation which are negligible compared to the normal traffic level external to the plant boundary.

Wetlands will not be impacted because none of the cleanup activities occur within the boundaries of identified wetlands. Neither of the two endangered species that might be of interest in the Rocky Flats Plant Area, the bald eagle and the black-footed ferret, will be impacted by the proposed action, nor will any raptors.

Single copies of the EA, Environmental Assessment Report for High Priority Sites (881 Hillside Area) are available from:

For further information on the NEPA process, contact: