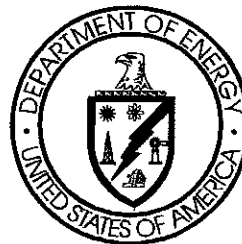

DOE/EA - 1262

FINDING OF NO SIGNIFICANT IMPACT

McKay Bypass Canal Extension

U.S. Department of Energy
Rocky Flats Field Office
Golden, Colorado



September 1998

U. S. DEPARTMENT OF ENERGY

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McKAY BYPASS CANAL EXTENSION AT ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SUMMARY: The Department of Energy (DOE) has prepared an environmental assessment (EA) (DOE/EA-1262) to extend the McKay Bypass Canal on the east side of the Rocky Flats Environmental Technology Site (Site), located north of Golden, Colorado. The McKay Bypass Canal Extension (Extension) is needed to route water from the existing canal around the Walnut Creek drainage, thus preventing potential co-mingling of Broomfield city water (collected from the Coal Creek drainage) with Site runoff water.

The EA describes and analyzes the environmental effects of the Proposed Action (using a buried pipeline for the extension), and the alternatives of taking no action, using an open ditch for the extension, and using an aboveground pipeline for the extension. The EA was the subject of a public comment period from July 22 to August 6, 1998. Written comments regarding the EA were received from the City of Broomfield and the Colorado Department of Public Health and Environment.

PROPOSED ACTION: The Proposed Action is to construct and operate the Extension using a buried pipeline as the conveyance structure. The Extension will consist of a splitter box (located in the existing McKay Bypass Canal upstream of its confluence with Walnut Creek), a 3300 foot buried pipeline (extending from the splitter box to a point north of the existing Walnut Creek/Broomfield Diversion Ditch splitter box), a new pipe under Indiana Street, and a discharge structure at the east end of the pipeline.

Flows through the McKay Bypass Canal, and the Extension, will depend on water rights and on the quantity of water available in Coal Creek. The City of Broomfield estimates that typical flows will be 20 to 40 cubic feet per second (cfs), with peak flows up to 110 cfs.

The Extension piping will be installed in an excavated ditch, and sized to accommodate 110 cfs. Pipe will be buried from 2.5 to 12 feet deep. Surplus fill will be graded to reproduce pre-construction slopes and surface drainage conditions. Underground bentonite dam walls will be installed in the excavation trench to prevent channeled groundwater seepage, and outflow structures will allow collected water to seep to the ground surface. Manholes will be installed to allow access to the pipeline.

Standard construction methods for pipe installation will be used. Construction time is expected to be 8 to 10 weeks, projected for September through December 1998. City of Broomfield employees will operate the Extension, using existing roads. Although changes in future water routing will be dependent on the final cleanup of the Site, the Extension could be operated indefinitely.

ALTERNATIVES CONSIDERED: DOE considered constructing the Extension as an open ditch. The ditch would be similar in design and capacity to the existing reach of the McKay Bypass Canal. It would include a splitter box at the west end of the Extension, and discharge structure at the east end of the Extension. The Extension would be 5 feet wide at the bottom, 20 to 30 feet wide at the top, and 3.5 to 8 feet deep. Drop structures and a transition structure would be installed along the ditch. A pipeline would carry flows under Indiana Street, and would connect to the discharge structure. The ditch would be constructed using standard methods, taking about 10 to 12 weeks. Operation of the ditch would require occasional maintenance, such as mowing weeds and periodic removal of silt or other debris. Most environmental effects would be minimal and similar to the Proposed Action, although a high potential for a weed infestation would exist with this alternative, and additional maintenance (e.g., removal of silt and debris) would be necessary.

DOE considered an aboveground pipeline as an alternative conveyance structure. This pipeline was eliminated from detailed consideration because it would not have cost or design advantages, and would require additional engineering efforts. This alternative would also have environmental concerns not present with other actions, such as significant visual impacts on views from Indiana Street, difficulties in obtaining proper drainage, additional difficulty in operational access, potential pipe freezing in winter months, and potential interference with wildlife movement.

DOE also considered a No Action Alternative. If no action were to be taken, the new water conveyance structures would not be installed. Existing water management and drainage maintenance practices would be followed, and a continued potential for co-mingling of Site discharges and City of Broomfield waters would exist. Other environmental conditions would not change; there would be no impact to air quality, ecological resources, soils, cultural resources, or the noise environment.

ENVIRONMENTAL EFFECTS: Most potential environmental effects will be minimal and short-term.

The Proposed Action will generate minor amounts of criteria pollutants during construction. Colorado regulations that regulate smoke, opacity, and fugitive particulate emissions will apply to the project. The Proposed Action will be exempt from Air Pollutant Emissions Notice and air permitting regulatory requirements in consideration of the following requirements:

- use of all available practical methods that are technologically feasible and economically reasonable to minimize fugitive dust emissions without chemical impacts on the land;
- limit smoke emissions (not to exceed 20 percent opacity) from compressors, pumps or generators; and
- notification of the Site's air quality compliance organization if non-electric compressors, pumps, or generators will be used in conjunction with the project.

DOE will perform another evaluation once project plans are finalized and will continue to consult with regulatory representatives as needed. Projected emissions from the Proposed Action will not

affect conformity with the State Implementation Plan, nor impact Prevention of Significant Deterioration requirements. No hazardous air pollutants or ozone depleting substances will be released.

The Proposed Action will have little effect on water resources, although construction activities could temporarily increase soil erosion and sedimentation of nearby surface waters. Walnut Creek is typically dry during the summer, autumn, and winter months when construction is to occur, but erosive soils and sloped areas exist along the proposed pipeline corridor. These conditions present the greatest potential for erosion. Best management practices (e.g., siltation berms) will be implemented during construction to minimize the potential for soil erosion. The surface will be recontoured to match the existing topography and will be revegetated, minimizing erosion. Downstream water quality in Walnut Creek (east of Indiana Street) will benefit from the isolation of City of Broomfield supply waters from Site waters.

Walnut Creek does not contain aquatic threatened and endangered species or special concern species; potentially increased water flows may be beneficial for downstream aquatic species. Terrestrial animal species in the pipeline vicinity include the threatened Preble's meadow jumping mouse. Measures to minimize potential impact to the Preble's meadow jumping mouse have been incorporated. The pipeline route is generally located more than 100 yards from the mouse's habitat (at the toe of one hill, the line will be 70 yards from Walnut Creek). In addition, the mouse will be hibernating during the projected construction period. The construction and operation of the pipeline, therefore, will not disturb the Preble's meadow jumping mouse. One red-tailed hawk nest site and one great horned owl nest site are located along Walnut Creek, but these nest sites will not be directly impacted, and the birds will not be disturbed during nesting season. No plant species of concern are currently found in the construction area. However, a high potential for a weed infestation exists, given the extended area that will be disturbed and existing weed infestations. The disturbed area will be revegetated as per Site ecologists' recommendations, and weed controls instituted as appropriate. Wetland areas are at sufficient distances from the proposed route to preclude being impacted by the Proposed Action.

Cultural resources will not be affected. The Rocky Flats Plant Historic District (5JF1227) is more than a mile from the pipeline. Site 5JF513, the McKay Ditch, which is adjacent to the western terminus of the Proposed Action, was deemed ineligible for the *National Register of Historic Places*. Construction activities will generally occur within previously disturbed areas and will be unlikely to impact archaeological resources.

No adverse transportation impacts are expected. While the pipeline will cross Indiana Street, the line will be bored under the street and the street will not be closed. Construction vehicles will temporarily use the side of the street for parking and access, and will not block or impede traffic. Minimal pipeline maintenance is anticipated, and existing access roads and entrances will be used. Current procedures will be used, and Broomfield employees will be required to meet Site security measures.

There will be no health or safety impacts to the public during construction, since air emissions will negligibly change at the Site boundary. Impacts will be limited to occupational illness or injury

associated with construction activities. In view of Site construction procedures and safety history, impacts are likely to be less than the overall construction industry experience. Operation of the pipeline is not expected to affect health and safety.

Noise levels will increase slightly during construction operations, but will be evident only in the immediate area of operations. Sensitive human receptors are not found near the construction area, and wildlife will not likely be disturbed. The species of most concern, nesting raptors and the Preble's meadow jumping mouse, will not be nesting or active during the construction period.

Soils will be disturbed along the length of the pipeline. Soil slumping on hillsides and erosion during construction (soils range from moderately to severely erosive) could occur. These potential impacts will be mitigated as a result of the route selection and the use of standard operating procedures (e.g., covering stockpiled soils and revegetating exposed areas). Additional precautions, including bentonite plugs around the pipeline, weep structures, and riprap and a concrete stilling structure at the outfall, will be incorporated. A recent soil contamination survey in the Walnut Creek drainage showed very low levels of radioactive material, and no remediation or special construction techniques are required.

**FOR FURTHER INFORMATION
ABOUT THIS ACTION, CONTACT:**

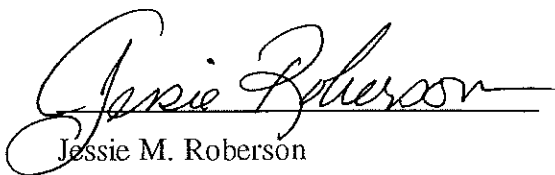
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DETERMINATION: Based on the information and analyses in the EA, DOE has determined that the Proposed Action to extend the McKay Bypass Canal at the Rocky Flats Environmental Technology Site does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969, as amended. Therefore, an environmental impact statement is not required, and DOE is issuing this Finding of No Significant Impact for the Proposed Action.

Signed at Golden, Colorado, this 24 day of September, 1998.



Jessie M. Roberson
Rocky Flats Field Office
U. S. Department of Energy