



North Boundary Containment System
Enhancements to the Well Field and Treatment Systems
Summary of New Technology
Fact Sheet

Introduction

The purpose of this summary is to inform the public of changes being made in the well field and treatment system at the North Boundary Containment System (NBCS) on Rocky Mountain Arsenal (RMA). The NBCS is part of the remedy stipulated in the On-Post Record of Decision to clean up contaminated groundwater plumes, which the system has been designed to intercept. The NBCS is operated with oversight by appropriate Federal, State and County Regulatory Agencies. The decision to implement a change to this project was based on an EPA-funded innovative technology pilot study of HRC injection that successfully reduced groundwater contaminant concentrations at the study site on RMA.

What Changes Are Being Made?

As part of ongoing operational assessment and improvements, RMA in consultation with the U.S. Environmental Protection Agency, Colorado Department of Health and Environment, and Tri-County Health Department periodically agrees to make changes to improve or maintain the operational efficiency of groundwater treatment systems. These changes can be in response to changing conditions in the groundwater environment,

the actual operating conditions of the systems, identifying new and better ways to construct and operate the systems, or in response to new standards that are promulgated by the Federal Government or State of Colorado.

It has been determined that the following actions will enhance the operational effectiveness and contaminant reduction achieved by the NBCS: 1) adding two groundwater extraction wells upstream of the existing NBCS well field, which will be used with existing wells, to extract contaminated groundwater; 2) injecting Hydrogen Release Compound (HRC) into the groundwater aquifer farther upstream of the existing NBCS well field to enhance resident microbiological activity and natural biological processes that break down organic contaminants in groundwater. The HRC injection site is approximately 4,500 feet upstream of the NBCS well field and near the former Basin F location; and 3) conducting additional monitoring of the groundwater to assess how contaminant concentrations respond to HRC. The locations of the additional extraction wells and HRC injection site are shown on Figure 1.

Why Are Changes Being Made?

The purposes of the additional extraction wells located about 1,000 feet upstream of the NBCS well field, are to accelerate cleanup of the groundwater north of Former Basin F. Additionally, the wells will help prevent the areas of groundwater contamination from shifting toward less contaminated areas (also upstream of the NBCS), help maintain the separation of untreated and treated groundwater at the NBCS (reverse hydraulic gradient) if groundwater levels fall, and provide additional NBCS operational flexibility.

The HRC injection project is an innovative underground (in-situ) technology. The decision to implement this project was based on an EPA-funded innovative technology pilot study of HRC injection that successfully reduced groundwater contaminant concentrations at the study site on RMA. It is also intended to help accelerate the cleanup of groundwater north of the former Basin F, and will help reduce the groundwater contaminant levels that reach the NBCS.

Public Participation

Copies of the detailed study and design documents for these NBCS enhancements are available at the Joint Administrative Records and Design Facility (JARDF) and the Environmental Protection Agency Records Center. These documents are titled:

1. "North Boundary Containment System – South Channel Wells" Work Order Number 4759-060, DCN Number 1, Revision 1, and
2. "North Boundary Containment System Enhancement Design and Implementation

Plan for In Situ Biodegradation" Work Order Number 24759-151, DCN Number 1.

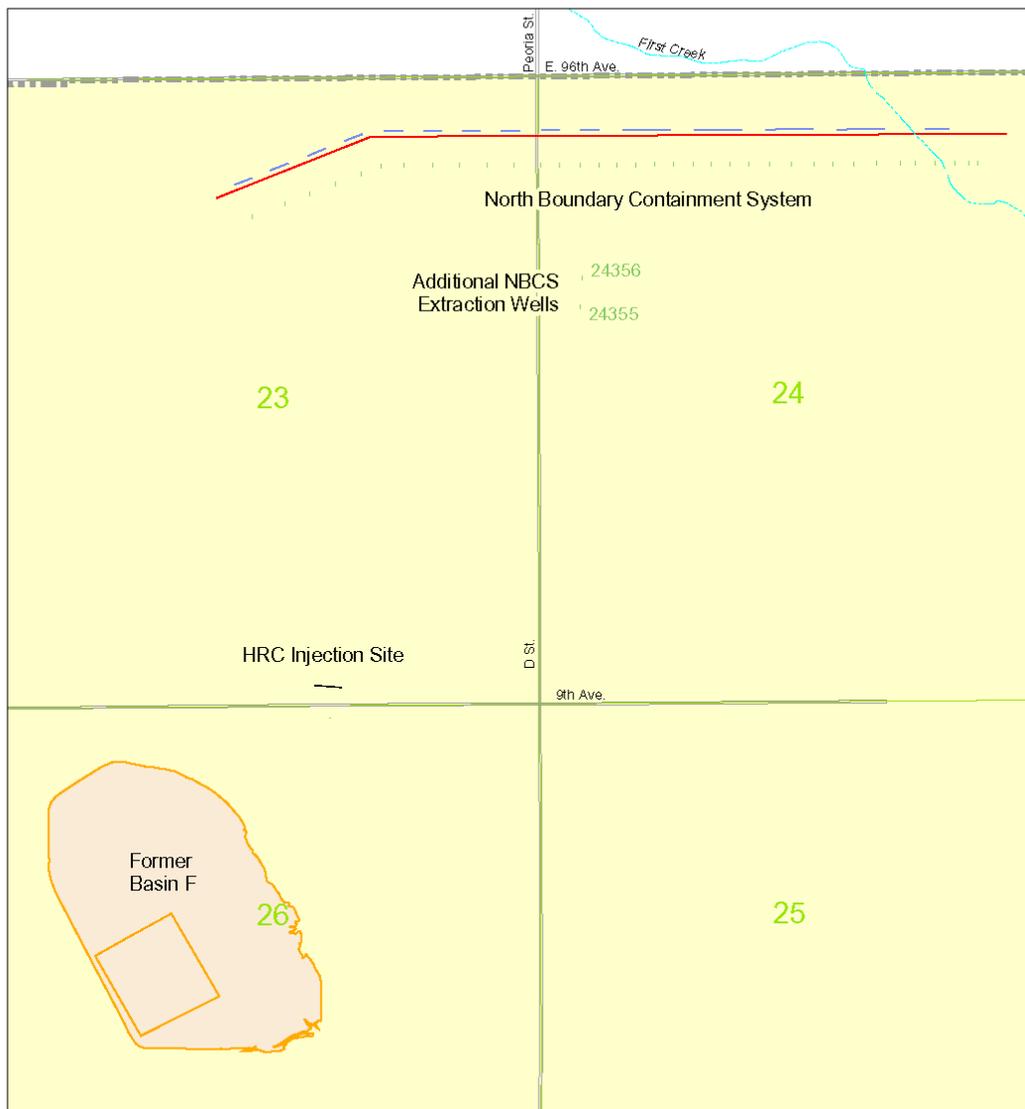
For more information, please contact:

- Remediation Venture Public Relations Office
Rocky Mountain Arsenal
Susan Ulrich
Building 111
Commerce City, Colorado
(303) 289-0136 Community Information Line
Visit the RMA Web site at www.rma.army.mil
- U.S. Environmental Protection Agency
Laura Williams
Remedial Project Manager
(303) 312-6660
- Colorado Department of Public Health & Environment
Ed LaRock
State Project Officer
(303) 692-3324

RMA detailed study and design documents are available at the following locations:

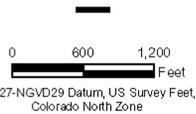
- Joint Administrative Record and Document Facility (JARDF)
Located at Rocky Mountain Arsenal's Building 129, Room 2024
Commerce City, Colorado 80022
Open Monday – Friday
noon – 4:00 p.m. or by appointment
(303) 289-0362
- EPA Superfund Records Center
999 18th Street
Denver, Colorado 80202
(303) 312-7287

Figure 1
North Boundary Containment System Enhancements



Legend

- Extraction Wells
- HRC Injection Site
- Slurry Wall
- Recharge Trenches
- Intermittent Streams
- Paved Roads
- Rocky Mountain Arsenal
- Basins
- Section Lines



Rocky Mountain Arsenal
RVO GIS Department
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Sources: Washington Group, US Army,
USGS, DPRA, Inc.