



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8**

1595 Wynkoop Street  
Denver, CO 80202-1129  
Phone 800-227-8917  
[www.epa.gov/region8](http://www.epa.gov/region8)

Ref: 8SEM-EMR

**ACTION MEMORANDUM**

**SUBJECT:** Action Memorandum for a Removal Action at the Brighton Glyphosate Site pursuant to the On-Scene Coordinator's delegated authority under CERCLA Section 104.

**FROM:** Shun-Ping Chau, OSC  
Response Section

**THRU:** Kerry Guy, Supervisor  
Response Section

Deirdre Rothery, Manager  
Emergency Management Branch

**TO:** Ben Bielenberg, Acting Director  
Superfund and Emergency Management Division

**I. Purpose**

The purpose of this memorandum is to document the decision to initiate emergency response actions described herein for the Brighton Glyphosate Site (Site) located in Brighton, Adams County, Colorado pursuant to the On-Scene Coordinator's delegated authority under CERCLA Section 104. This emergency response involved the excavation, transportation and disposal of impacted soils from the incident location. Conditions existing at the Site presented a threat to public health or welfare or the environment and meet the criteria for initiating a removal action under 40 CFR 300.415(b)(2) of the National Contingency Plan (NCP).

**II. Site Information**

**A. Site Description**

Site Name: Brighton Glyphosate  
Site Spill ID (SSID): B8G7  
NRC Case Number: 1371032  
CERCLIS Number: CON000821222  
Site Location: 168th Avenue & Interstate 76 Frontage Rd, Brighton, CO 80603  
Lat/Long: 40.000500003807474, -104.71281000632457  
Potentially Responsible Party (PRP):

NPL Status: Non-NPL  
Removal Start Date: 06/26/2023

## **B. Site Background**

### **1. Site Evaluation**

On June 23, 2023, the EPA received a report (CDPHE Incident Report Number: 2023-0453) of a release of an unknown liquid fertilizer from a tanker truck. The initial estimate of the quantity released was approximately 40,000 gallons. A subsequent report estimated the released quantity closer to 1,000 to 2,000 gallons.

Representatives from the Colorado State Patrol, Brighton Fire Department and City of Brighton were on-scene to coordinate response and cleanup efforts. An EPA OSC and START contractors arrived at the Site at approximately 1700 on June 23, 2023. Upon closer inspection and analysis with the Thermo Fisher Gemini instrument, the product released was identified as glyphosate, commercially known as the Round-Up brand of herbicide. In addition, approximately 50 gallons of diesel fuel were spilled since the saddle tank of the truck also suffered some damage. There were no waterways at the location of the spill.

Cleanup contractors for the Colorado State Patrol and City of Brighton were on-scene and removed visible liquid and conducted a shallow scrape of contaminated surface soils.

On June 26, 2023, representatives from the City of Brighton, East Cherry Creek Valley Water and Sanitation District, Colorado Department of Public Health and Environment (CDPHE) and the EPA OSC met again at the Site after a weekend of deliberation and consultation with other agencies and government entities. While glyphosate has no acute toxicity, it is considered by the U.S. Centers for Disease Control and Prevention (CDC) as a probable carcinogen. The drinking water aquifer for the area, the Beebe Draw, is quite shallow at 50 feet below ground surface, underlying mostly sandy soils.

The decision made by local and State officials and EPA was to conduct a deeper removal of contaminated soils to prevent downward migration of glyphosate and the risk of drinking water contamination.

### **2. Physical location and Site characteristics**

The Site is near the intersection of East I-76 Frontage Road and East 160<sup>th</sup> Avenue.

The Site consists of mainly sandy soils, with some thin clay layers. A drinking water aquifer that supplies water to the City of Brighton (population: 40,693) is approximately 50 feet below ground surface.

According to EPA's Environmental Justice (EJ) Screening and Mapping Tool, the data does not indicate a potential area of EJ concern at or near the Site.

3. Release or threatened release into the environment of a hazardous substance, pollutant or contaminant.

The main contaminant of concern released during the incident was glyphosate. Glyphosate is not listed as a hazardous substance per 40 CFR 302.4 and is considered a pollutant or contaminant as defined in 42 U.S.C 9601(33).

### **III. Threats to Public Health Welfare or the Environment**

#### **A. Nature of Actual or Threatened Release of Hazardous Substances, Pollutants or Contaminants.**

Glyphosate is considered a probable carcinogen by the CDC.

Results from oral animal studies identify the following targets of glyphosate toxicity, at relatively high dose levels:

- Gastrointestinal effects: Clinical signs and/or pathological evidence of glyphosate-induced irritation were observed in several animal studies; the lowest dose level resulting in gastrointestinal effects was 175 mg/kg/day for diarrhea and few feces in pregnant rabbits administered glyphosate acid by gavage. Gastrointestinal disturbances are signs and/or symptoms following ingestion of large amounts of glyphosate-containing products.
- Developmental effects: Glyphosate treatment-related developmental effects were noted in a few studies at dose levels ( $\geq 1,234$  mg/kg/day) resulting in maternal toxicity as well.
- Body weight effects: Depressed body weight and/or depressed body weight gain resulted from repeated dosing of glyphosate technical at dose levels  $\geq 1,183$  mg/kg/day.
- Hepatic effects: Increases in liver weight and serum ALT activity were observed in one repeated-dose study at a dose level of 1,678 mg/kg/day.
- Ocular effects: Lens abnormalities were observed in one repeated-dose study at a dose level of 940 mg/kg/day.
- Renal effects: Indicators of renal toxicity were noted in rats and mice administered glyphosate technical in the diet for 2 years at high doses (940 and 6,069 mg/kg/day, respectively).
- Other effects: Neurological, hematological, immunological, and reproductive endpoints have been evaluated, but do not appear to be particular targets of glyphosate toxicity.

Upon evaluation of available carcinogenicity studies in laboratory rodents, multiple agencies or organizations have concluded that glyphosate technical does not appear

to be an animal carcinogen. In contrast, IARC considered the animal data to provide “sufficient evidence” of glyphosate carcinogenicity.

The spill caused a highly saturated area of concentrated product in surface soils close to the drinking water aquifer. While glyphosate readily degrades under UV light, it has an affinity to soil, with a half-life ranging from 6 to over 60 days. If contaminated soils were not removed, downward migration of glyphosate could have contaminated the drinking water aquifer. The EPA maximum contaminant level goal (MCLG) in drinking water for glyphosate is 0.7 parts per million (ppm). Health effects from short-term exposure include congestion of the lungs and increased breathing rate. Long-term exposure has the potential to cause kidney damage and reproductive effects.

Based on the toxicological information, the proximity of the spill to the drinking water aquifer, and the concentration of spilled materials, EPA made the determination to conduct removal of the contaminated soils.

**B. Check applicable factors (from 40 CFR 300.415) which were considered in determining the appropriateness of a removal action:** EPA has considered all the factors described in 40 CFR 300.415(b)(2) of the NCP and determined that the following factors apply at the Site.

- X Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants [300.415(b)(2)(i)].
- X Actual or potential contamination of drinking water supplies or sensitive ecosystems [300.415(b)(2)(ii)].
- Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that pose a threat of release [300.415(b)(2)(iii)].
- X High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate [300.415(b)(2)(iv)].
- X Weather conditions that may cause hazardous substances or pollutants to migrate or to be released [300.415(b)(2)(v)].
- Threat of fire or explosion [300.415(b)(2)(vi)].
- X The availability of other appropriate federal or state response mechanisms to respond to the release [300.415(b)(2)(vii)].
- Other situations or factors that may pose threats to the public health or welfare of the United States or the environment [300.415(b)(2)(viii)].

#### **IV. Endangerment Determination under CERCLA Section 104: Pollutant or Contaminants**

Actual or threatened releases of pollutants and contaminants from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may have presented an imminent and substantial danger to public health, or welfare, or the environment.

## **V. Selected Removal Action and Estimated Costs**

### **A. Situation and Removal Activities to Date**

1. Current Situation.

The response action is complete.

2. Removal activities to date:

A) Federal Government/Private Party

The incident scene was secured. Damaged and intact containers of glyphosate and other contaminants were removed from the Site. EPA, with the concurrence of state and local authorities, made the determination to conduct a deeper excavation and removal of impacted soils. Excavated soils were transported off-site for appropriate disposal. Excavated areas were backfilled with clean fill by EPA contractors.

B) State/local

Local officials responded to the spill and hired a cleanup contractor to secure the scene. Once state and local resources were exhausted, EPA assumed responsibility for the additional work remaining.

3. Enforcement

Where the responsible parties are known, an effort initially shall be made, to the extent practicable, to determine whether they can and will perform the necessary removal action promptly and properly.

### **B. Planned Removal Actions**

1.Planned action description

All Site actions have been completed and no further activities are anticipated at this time.

2.Contribution to remedial performance

The proposed actions will, to the extent practicable, contribute to the efficient performance of any long-term remedial action at the site.

3.ARARs

Removal actions conducted under CERCLA are required to attain ARARs to the extent practicable. In determining whether compliance with ARARs is practicable, the OSC may consider appropriate factors, including the urgency of the situation and the scope of the removal action to be conducted. To date, no ARARs have been identified for this Site.

4.Project Schedule

Removal activities on Site were completed by the end of July 2023.

**C. Estimated Costs\***

Contractor costs (ERRS/START staff, travel, equipment)	<b>\$90,000</b>
Other Extramural Costs (Strike Team, other Fed Agencies)	<b>\$2,500</b>
Contingency costs (20% of subtotal)	<b>\$18,500</b>
<b>Total Removal Project Ceiling</b>	<b>\$111,000</b>

\*EPA direct and indirect costs, although cost recoverable, do not count toward the Removal Ceiling for this removal action. Liable parties may be held financially responsible for costs incurred by the EPA as set forth in Section 107 of CERCLA. "

**VI. Expected Change in the Situation Should Action Be Delayed or Not Taken**

A delay in action or no action at this Site would have increased the actual or potential threats to the public health and/or the environment.

**VII. Outstanding Policy Issues**

None.

**VIII. Approvals**

This decision document represents the selected removal action for this Site, developed in accordance with CERCLA as amended, and is not inconsistent with the National Contingency Plan. This decision is based on the administrative record for the Site.

Conditions at the site met the NCP section 300.415(b) criteria for a removal action and through this document, I am approving the proposed removal actions. The total project ceiling is \$111,000, this amount will be funded from the Regional removal allowance.

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Joyce Ackerman for Shun-Ping Chau  
Federal On-Scene Coordinator

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Date