

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
2015 Gold King Mine Release SITREP



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 8



Subject: Situation Report #7
Gold King Mine Release
San Juan County, CO
Latitude: 37.8945 Longitude: -107.6384

From: Durango Unified Command (Situation Unit)

Date: 08/15/2015

Reporting Period: 08/14/2015 through 08/14/2015

Website: <http://www2.epa.gov/goldkingmine>

New information included in the SITREP is in bold text.

Executive Summary

On August 5, while investigating the Gold King Mine in Colorado, an EPA cleanup team triggered a release of mine wastewater into Cement Creek. The EPA is working closely with responders and local, state and tribal officials to monitor water contaminated by the release. The release's path flows through three of the EPA's regions - Region 8 (Colorado, Utah, Southern Ute Indian Tribe lands, and Ute Mountain Ute Tribe lands); Region 6 (New Mexico), and Region 9 (Navajo Nation). The EPA has activated its Emergency Operations System to ensure coordination among its regions, laboratories and national program offices in Washington, D.C. A Unified Command has been established in Durango CO, which includes the EPA, State of Colorado Office of Emergency Management (OEM), Southern Ute Indian Tribe, La Plata County, and San Juan Basin Health Department. **The Ute Mountain Ute Tribe is an Administrative Agency in the UC. The EPA has established an Area Command in Durango CO, and that covers the Incident Command Post (ICP) Colorado (Colorado Unified Command), ICP New Mexico (New Mexico Unified Command), and the ICP South West (South West Unified Command).**

1. Introduction

1.1 Background

Site Number: A8K9RV		Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	EPA	Incident Category:	
NPL Status: not listed		Operable Unit:	
Mobilization Date:	08/05/2015	Start Date:	08/05/15
Demob Date: TBD		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	08/05/15

The La Plata County Sheriff issued an order closing the Animas River to all watercraft from the north County line (San Juan County, Colorado) to the south County line (at the Colorado/New Mexico State line) until further notice.

The La Plata County Sheriff reopened the Animas River to recreational use at 12:00 pm on Friday August 14, 2015. The decision was made in conjunction with the San Juan Basin Public Health Department, the Colorado Department of Public Health and Environment (CDPHE) and the EPA. The Sheriff's order reopening the river was accompanied by a Health Advisory from San Juan Basin Health Department and CDPHE, which provides additional information to recreational users of the river. The public health advisory is attached to this SITREP.

1.1.1.1 Incident Category

1.1.2 Site Description

The Gold King Mine near Silverton, Colorado is a historic gold mine at approximately 11,300' elevation. The mine has a continuous discharge of acidic mine drainage that is a significant contributor of manganese, zinc, copper, and cadmium into the Cement Creek drainage of the

Animas River watershed. The Gold King Mine has not had maintenance of the mine workings since 1991, and the workings have been inaccessible since 1995 when the mine portal collapsed.

The EPA Region 8 has been investigating the conditions to assess the on-going releases and incremental de-watering and removal of blockages to prevent blowouts.

At 2 pm on Friday, August 14 2015, the City of Durango resumed pumping water from the Animas River for further treatment. This decision was made in conjunction with the CDPHE. The City will continue to analyze water quality samples, based on pre-established protocols. The City has also lifted the outdoor irrigation restrictions, and encourages responsible outdoor irrigation.

1.1.2.1 Location - San Juan County, Colorado, La Plata County, Colorado, Southern Ute Indian Reservation and Ute Mountain Ute Tribe reservation.

1.1.2.2 Description of Threat

Mine waste water was released into Cement Creek and the Animas River. The volume of the release based on US Geological Survey (USGS) Cement Creek gaging station is estimated at three million gallons. The initial environmental concern was the pulse of contaminated water containing sediment and metals discharged in Cement Creek which flows into the Animas River through Durango, Colorado, and into New Mexico where it joins the San Juan River before flowing into Utah. The City of Durango relies on the Animas River as one of its main water sources - the Animas source is off-line. The river is also used for recreational purposes, including fishing and rafting, and is an important cultural resource for the Navajo Nation.

The leading edge of the release passed through Durango, Colorado, on Friday, August 7, 2015, and on August 8, 2015, it crossed the border into New Mexico where it eventually discharged into the San Juan River.

1.1.3 Site Inspection Results

Aerial and ground reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream and there is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell.

The EPA is collecting and assessing water quality from Cement Creek and the Animas daily. Water sampling is occurring, and pH levels and dissolved concentrations of metals are being monitored.

1.2 Incident Objectives

- **Continue private water well call tracking, follow up actions and owner communications.**
- **Continue sampling plan and develop strategy to evaluate and mitigate risks due to sediment in the river.**
- **Continue river assessment through sediment and water sampling.**
- **Continue management of adit discharge and develop call down verification (CDPHE).**
- **Effectively communicate with public and stakeholders utilizing a multi-faceted communication strategy to disseminate results.**
- **Ensure health and safety of the public and response management personnel.**
- **Develop a means to assess the economic impact upon affected communities**
- **Coordinate with the Colorado Division of Water and Natural Resources and other stakeholders to assess and flush ditches.**
- **Provide water of appropriate quality for specified use.**
- **Continued coordination with the Department of Agriculture (including state and local veterinarians) and the Colorado Extension.**
- **Maintain stability of mine road to ensure access.**
- **Prepare for mine dump stabilization.**
- **Amend field sampling plan to include assessment of remote areas of the canyon, execute when ready.**
- **Develop a medium term groundwater assessment monitoring transition plan.**
- **Develop medium term river monitoring plan to provide notification, warning and understanding to the public on longer term basis.**
- **Begin demobilization communications.**

1.3 Critical Resource Needs

All resources are being tracked by the Resources Unit. Resources for the response continue to be ordered as needed to fill critical resource needs.

1.4 Strategic Considerations

United group of specialist to advise policy makers.

2. Current Activities

2.1 Operations Section

2.1.1 Response Actions to Date

A Colorado Unified Command (UC) post in Durango was established. The UC includes EPA, State of Colorado Office of Emergency Management (OEM), Southern Ute Indian Tribe, La Plata County, and San Juan Basin Health Department. The Ute Mountain Ute Tribe and San Juan County CO are also in regular communication with Unified Command. The EPA Regions 6 and 9 have established incident command posts in Farmington, New Mexico that cover New Mexico

and the Navajo Nation response areas. A JIC was established and is providing support for both the UC and the AC.

Daily residential well sampling and Animas River water quality continues at seven locations. Sediment samples on 8/14/2015 were taken from the intake of Animas-La Plata Nighthorse Reservoir. The count of samples by media for 8/14/2-14 is listed in the following table:

Matrix	Sample Date	Number of Samples
Potable Water	14-Aug-15	19
Sediment	14-Aug-15	3
Surface Water	14-Aug-15	6

Out of 62 groundwater well results, there were four wells that exceeded drinking water standards MCL’s for lead and arsenic. However, these samples were taken from the well head prior to going through the home treatment systems. Sampling of tap water from these residents is being scheduled as of this report. . There is no indication that the release had impacted these wells.

Call center totals are provided in the following table:

	8/14	To Date Total
Well Water Test Scheduling	18	332
Water Concerns	9	99
Health Concerns	3	31
Recreation	0	20
Ecological Concerns	1	17
Livestock/Irrigation	1	17
Tourism/Media	1	52
Volunteer Offers	1	21
General Concerns	6	119
Daily Totals:	40	708

Bottle water shipments from local suppliers have been occurring daily and distributed as requested.

The Animas Consolidated Irrigation Ditch and Reid Irrigation Ditch fully open and being used for irrigation. **On 8/14/2015 other irrigation ditches, excluding the Animas Valley ditch, were open and are being used for irrigation. Ditch and property assessments (such as ponds with inlets to the river) continue.**

Non-Potable water distribution as of 8-14:

Total deliveries: 43 (repeat deliveries)

Approx. 113,830 Gallons

Due to Animas Consolidated being open and the press release, no new deliveries were made. People were informed of the new information.

Stakeholders:

- **Cattle & Horse Farms**
- **Nursery**
- **Fish Hatchery/Fish Ponds**
- **Commercial organic produce farm**
- **One operation, we have set up pumping and filtration from river to fill fish ponds.**

Potable Water Delivery as of 8-14:

Total Deliveries: 12 (Repeats)

No New Deliveries.

87,400 gallons

Stakeholders:

- **Single Family Home cisterns.**
- **Multiple family homes on neighborhood cistern.**

1120 cases of bottled water have been purchased to hand out to community.

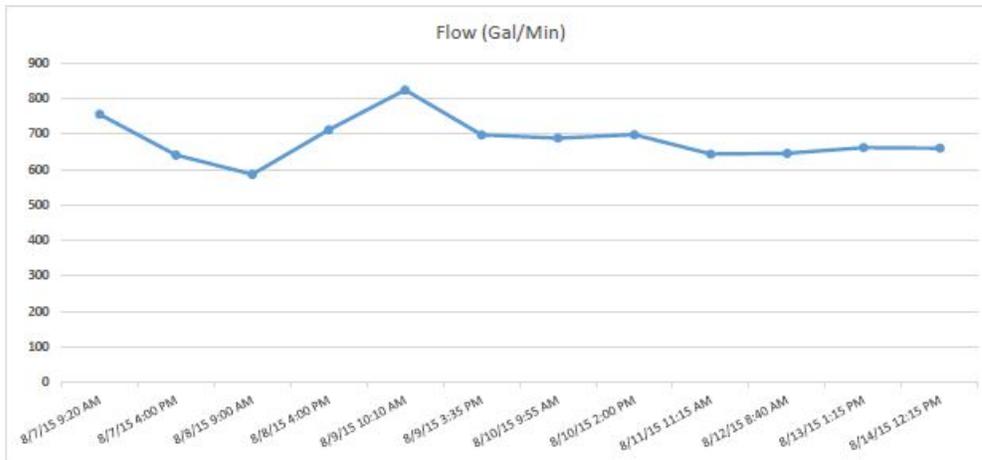
The CDPHE, and public water systems regulated by CDPHE in the impacted area, are taking raw and finished water samples to monitor water quality. **City of Durango in coordination with CDPHE has resumed pumping water from the Animas River for their water treatment plant.**

CDPHE has staff in area and continued collecting the Animas River surface water and sediment sampling. Also continued outreach to public water supply system operators.

Gold King Mine Site

The EPA continues to operate four treatment and sedimentation ponds at the mine site which are treating water by lowering acidity levels and removing dissolved metals. A technical expert from CDPHE is assisting at the Gold King Mine site in optimizing the water quality treatment system.

Flow from the mine through the morning of 8/14/2015 is shown in the following chart.



Treated water from the last treatment pond is discharging into Cement Creek. Flow data out of the mine is being collected manually two times per day. Water quality data is being collected at the influent and effluent of the treatment system as well.

2.2.1 Anticipated Activities

Sampling of the seven data points on the river will continue. **The EPA has four sampling teams; one surface water and four well water in the field on 8/15/2015.**

Ditch and property assessments will continue with focus on whether any mitigation of private properties need to be completed.

Sampling procedures and a sampling plan are being established and shared with all relevant parties to ensure consistency.

The call center is being integrated into the UC Joint Information Center (JIC) as of 8/15/2015.

2.2.1.2 Next Steps

2.2.2 Issues

2.3 Logistics Section

- **Two additional Polygon conference phones were delivered and installed in Area Command and conference rooms.**
- **JIC experienced Share point software issues with speeds, it was resolved.**
- **All Communications and IT systems are up and running.**

2.4 Finance Section

2.4.1 Narrative

Payroll, travel, and contracts for the three EPA regions has been consolidated and burn rates determined from the available information. Finance is awaiting final numbers for input into this cost analysis.

2.5 Other Command Staff

2.5.1 Safety Officer

As operations continue into the weekend, please take a minute to de-stress and rest. Fatigue and driving safety are still a top priority so be conscious of your health and look out for your coworkers as we continue to press forward.

2.5.2 Liaison Officer

No report.

2.5.3 Information Officer

At noon on 8/14/2015, a joint news release was issued announcing that the County Sherriff opened the Animas River to recreational activities.

The Southern Ute Tribe is holding a public meeting is also being held Saturday, August 15, at 3 pm at Sunside Elementary School.

2.5.4 Weather Forecast

Weather forecast for August 15 and 16, 2015:

DURANGO AREA

Today

Isolated showers and thunderstorms after 11am. Mostly sunny, with a high near 90. Light and variable wind becoming west northwest 5 to 10 mph in the afternoon. Chance of precipitation is 20%.

Tonight

Isolated showers and thunderstorms before 8pm. Partly cloudy, with a low around 56. Northwest wind 5 to 10 mph becoming north northeast after midnight. Chance of precipitation is 20%.

Sunday

A 20 percent chance of showers and thunderstorms after noon. Mostly sunny, with a high near 93. Light and variable wind becoming west 10 to 15 mph in the afternoon.

Sunday Night

A 10 percent chance of showers and thunderstorms before midnight. Partly cloudy, with a low around 56. West wind 5 to 15 mph becoming northeast after midnight.

SILVERTON AREA

Today

Isolated showers and thunderstorms after 8am. Partly sunny, with a high near 73. Light west wind increasing to 5 to 10 mph in the morning. Chance of precipitation is 20%.

Tonight

Isolated showers and thunderstorms before 9pm. Mostly cloudy, with a low around 43. West wind around 5 mph becoming calm in the evening. Chance of precipitation is 20%.

Sunday

A 30 percent chance of showers and thunderstorms, mainly after noon. Partly sunny, with a high near 76. Light and variable wind becoming west 5 to 10 mph in the morning.

Sunday Night

A 20 percent chance of showers and thunderstorms before midnight. Partly cloudy, with a low around 43. Northwest wind around 5 mph becoming calm after midnight.

3. Participating Entities

3.1 Area Command

The AC includes EPA Regions 6, 8 and 9, through the three unified commands: Colorado UC, New Mexico UC, and South West UC. The EPA Region 6 is working closely with the New Mexico Environment Department (NMED) and the EPA Region 9 is working with the Navajo Nation. **The AC is completing daily Executive Summary updates on AC activities.**

3.2 Unified Command and Cooperating Agencies

The UC includes EPA, State of Colorado Office of Emergency Management (OEM), Southern Ute Indian Tribe, La Plata County, San Juan Basin Health Department. The Ute Mountain Ute Tribe will likely join during the next operational period.

The City of Durango and the Ute Mountain Ute Tribe are involved through via their agency representatives. San Juan County is an Agency Administrator.

The EPA Region 8 is coordinating with Agency for Toxic Substances and Disease Registry (ATSDR) in response to public health concerns/questions associated with the mine waste plume. ATSDR has been in communication with local health officials at San Juan County Basin Health Department in Colorado. Public health questions should be directed to Chris Poulet, ATSDR.

4. Personnel On Site

Gold King Mine Release 2015	
	08/14/2015
Group	Number
EPA @ REOC	0 (24 on call 8/14)
Contractors @ REOC	0
EPA in Field (R8)	28
Contractors in Field (R8)	31
EPA Laboratory	0
Contractors Laboratory	7
USCG	14
ERT	1
Subtotal EPA Region 8 Resources	106
Colorado OEM	3
Southern Ute Tribe	6
La Plata County	15
San Juan County	3
CDPHE	10
Southwest IMT	6
City of Durango	12
Durango Fire	2
San Juan basin Health Dept.	5
Ute Mountain Ute Tribe	1
US Bureau of Reclamation	1
US Bureau of Indian Affairs	1
Grand Junciton Fire	1
Mountain Studies Institute	1
ATSDR	1
Total	181

5. Definition of Terms –

ATSDR= Agency for Toxic Substances and Disease Registry

EPA = United States Environmental Protection Agency

CERCLA = Comprehensive Environmental Responsibility, Compensation and Liability Act

CDPHE = Colorado Department of Public Health and Environment

USGS = United States Geological Survey

UC = Unified Command (Comprised of Southern Ute Indian Tribe, La Plata County, San Juan Basin Health Dept, EPA, State of Colorado OEM)

UCP = Unified Command Post

AC = Area Command (Comprised of EPA Regions 6, 8 and 9)

NMED = New Mexico Environment Department

BIA = Bureau of Indian Affairs
BOR = Bureau of Reclamation
COEM = Colorado Office of Emergency Management
CDPW = Colorado Department of Parks and Wildlife
SWIMT = South West Incident Management Team
MSDS = Material Safety Data Sheet
PPE = Personal Protective Equipment
USCG = United States Coast Guard
ERT = EPA Emergency Response Team
REOC = EPA Regional Emergency Operations Center

6. Additional sources of information – <http://www2.epa.gov/goldkingmine>