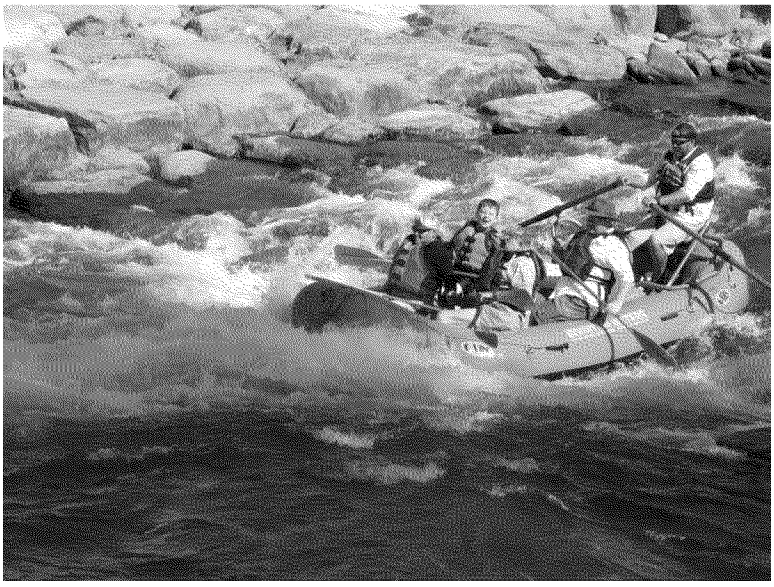
U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
2015 Gold King Mine Release SITREP

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 8



Subject:	Situation Report #8 Gold King Mine Release San Juan County, CO Latitude: 37.8945 Longitude: -107.6384
From:	Durango Unified Command (Situation Unit)
Date:	08/16/2015
Reporting Period:	08/15/2015 through 08/15/2015
Website:	http://www2.epa.gov/goldkingmine

1814647 ED_000552F_00008450-00001

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).

Highlights, Key Updates/ Changes:

- **Public Information Officer (PIO) assigned to Silverton / San Juan County bringing the count to two PIOs in Silverton.**
- **Southern Ute Indian Tribe held a public meeting on Saturday, August 15, 2015. The Tribe Unified Commander reported that the meeting was positive.**
- **All irrigation ditches are open and available for use.**
- **The community meeting originally scheduled for the afternoon of 8/16/15, was cancelled on 8/15/15, despite mis-information on 8/16/15 that the meeting was being held.**

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**

On August 6, 2015 the La Plata County Sheriff issued an order closing the river to all watercraft. The 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.

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.

1.1.1.1 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.

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 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 samples 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 sampling plan and develop strategy to evaluate and mitigate risks due to sediment in the river.**
- **Continue river assessment through water sampling.**
- **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**
- **Continued coordination with the Department of Agriculture (including state and local veterinarians) and the Colorado Extension.**
- **Continue management of adit discharge.**
- **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 by Tuesday 8/18/2015**
- **Roll current well sampling effort into interim shallow groundwater monitoring plan currently under development. Communicate private well results and other follow up action within 96 hours of sampling.**
- **Develop a demobilization plan for next operational period.**
- **Long term planning for mine ops for Silverton and San Juan County (including community outreach).**
- **Implement medium term river monitoring plan with contractor per their scope of work**
- **Ensure the coordination of CDPHE's notification system with monitoring contractor to implement event specific sampling.**

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 subject matter experts 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.

The EPA continues taking daily residential well sampling as requested and Animas River water quality sampling at seven locations. Sediment samples on 8/14/2015 were taken from the intake of Animas-La Plata project for the Nighthorse Reservoir. **The EPA sample count by media for 8/15/2015 is provided in the following table:**

Count of Samples as of 8/15/15			
Matrix	**SampleDate**	**Number of Samples Collected**	**SampleType**
Potable Water	8/15/2015	33	Field Sample
Surface Water	8/15/2015	7	Field Sample

Call center totals are provided in the following table:

	8/15	To Date Total
Well Water Test Scheduling	6	338
Water Concerns	4	104
Health Concerns	0	31
Recreation	0	20
Ecological Concerns	0	17
Livestock/Irrigation	2	19
Tourism/Media	0	52
Volunteer Offers	0	21
General Concerns	1	120
Daily Totals:	14	722

Total calls received at the Call Center through Saturday, 8/15/2015 is 722. The call center is being integrated into the UC Joint Information Center (JIC) as of 8/15/2015.

Bottled water is available at the UC/AC facility for pickup by community members.

As of 8/15/2015 all irrigation ditches were open and available for irrigation use.

Non-Potable water distribution as of 8/15/2015:

Total deliveries: 45 (repeat deliveries)

132,530 Gallons

There will only be two deliveries scheduled for Sunday 8/16/2015. It is anticipated that these will be the last deliveries for non-potable water.

Stakeholders:

- **1 Cattle & Horse Farm**
- **1 Nursery**

- **One operation, we have set up pumping and filtration from river to fill fish ponds at Little Fishes LLC.**

Potable Water Delivery as of 8/15/2015:

Total Deliveries: 16 (Repeats)

No New Deliveries.

134,200 gallons

As of Sunday 8/16/15 deliveries will be made to three locations.

Stakeholders:

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

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

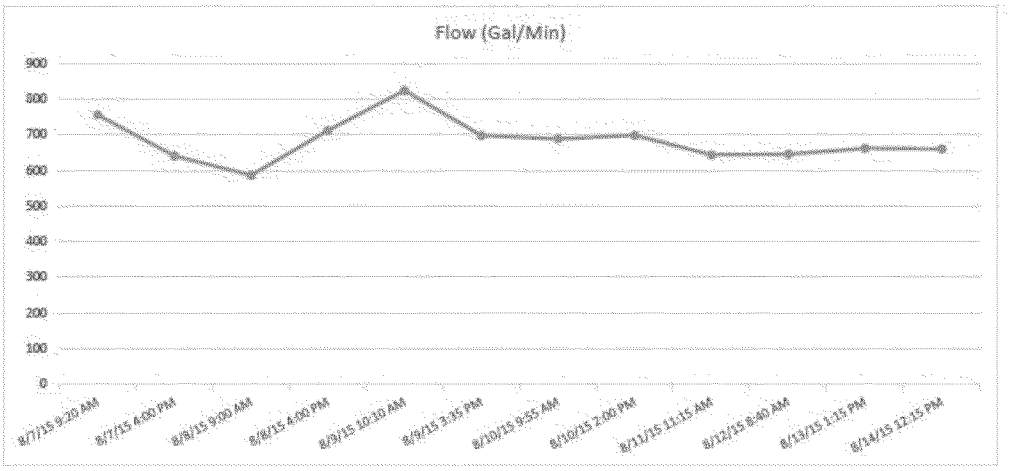
The CDPHE, and public water systems regulated by CDPHE in the impacted area, are taking raw and finished water samples to monitor water quality. City of Durango in coordination with CDPHE resumed pumping water from the Animas River for their water treatment plant on 8/15/2015.

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. The flow chart will be updated for the next SITREP. **The treatment pond effluent pH on the afternoon of 8/13/2015 was 4.95.**



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 will be conducting well water sampling as needed.**

The EPA will be conducting property assessments and mitigation as needed.

2.2.1.2 Next Steps

2.2.2 Issues

2.3 Logistics Section

The call center was relocated from the Durango communications center to the JIC.
Due to logistical needs of the JIC assuming the call center function, the AC and JIC will trade facilities locations on 8/16/2015.

2.4 Finance Section

Finance will be transitioning a new person in starting Monday to take over the lead EPA finance role.

2.5 Other Command Staff

2.5.1 Safety Officer

On Saturday 8/15/2015, Safety officers from both Area Command and Unified Command were able to visually assess the mine operations. As activities progress, there will also be an increase in probability of occurrence and severity for serious injury. Anyone visiting or responding to the mine is reminded to have a heightened sense of awareness of their surroundings, and to recognize and evaluate their position and situation. Personal Protective Equipment is required at the mine so please see your safety officer prior to departure.

2.5.2 Liaison Officer
No report.

2.5.3 Information Officer
Starting on Sunday 8/16/2015, there will be two PIOs in Silverton to support the mine site work.
There is a community event planned for this week. The announcement for this is attached to this SITREP.
Social Media Sites being maintained buy the UC JIC through local and state resources are:

- **Blog – goldkingminerelease.blogspot.com**
- **FB – facebook.com/goldkingminerelease**
- **Twitter - @GKMRelease**
- **YouTube Channel – Gold King Mine Release**

2.5.4 Weather Forecast

Weather forecast for August 17, 18 and 19, 2015:

DURANGO AREA
Monday Aug 17
A 20 percent chance of showers and thunderstorms after 10am. Mostly sunny, with a high near 89. North northeast wind 5 to 10 mph becoming west in the afternoon.
Monday Night
Partly cloudy, with a low around 53. West wind 5 to 10 mph becoming north after midnight.
Tuesday Aug 18
Mostly sunny, with a high near 85. Breezy, with a north wind 10 to 20 mph becoming west southwest in the afternoon. Winds could gust as high as 30 mph.
Tuesday Night
Mostly clear, with a low around 48.
Wednesday Aug 19
Sunny, with a high near 83.
Wednesday Night
Mostly clear, with a low around 50.

SILVERTON AREA

Monday Aug 17

A 50 percent chance of showers and thunderstorms, mainly after 10am. Partly sunny, with a high near 69. West wind 5 to 15 mph.

Monday Night

A 30 percent chance of showers and thunderstorms before midnight. Partly cloudy, with a low around 43. West northwest wind 5 to 10 mph.

Tuesday Aug 18

A 20 percent chance of showers and thunderstorms. Mostly sunny, with a high near 65. Breezy, with a northwest wind 10 to 15 mph increasing to 15 to 20 mph in the morning. Winds could gust as high as 30 mph.

Tuesday Night

Mostly clear, with a low around 38.

Wednesday Aug 19

Sunny, with a high near 67.

Wednesday Night

Mostly clear, with a low around 40.

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), the Southern Ute Indian Tribe (SUIT), La Plata County, and San Juan Basin Health Department. The Ute Mountain Ute Tribe will likely join during the next operational period.

The SUIT continues water delivery and will be sampling one additional private tribal drinking water well on 8/16/2015. As a proactive measure, the SUIT is installing reverse osmosis on tribal residential kitchen taps. If well sampling results show any concerns, additional actions will be taken.

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 Basin Health Department and San Juan County Public Health in Colorado. Public health questions should be directed to these local public health organizations.

4. Total Personnel On Incident

Gold King Mine Release 2015	
	08/15/2015
Group	**Number**
EPA @ REOC	0 (24 on call 8/15)
Contractors @ REOC	1
EPA in Field (R8)	20
Contractors in Field (R8)	30
EPA Laboratory	0
Contractors Laboratory	0
USCG	3
ERT	1
Subtotal EPA Region 8 Resources	**79**
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 Junction Fire	1
Mountain Studies Institute	1
ATSDR	1
Total	**147**

Personnel working at the Colorado (Durango) Unified Command Post on 08/15/15 (Does not include Area Command Personnel):

Position / Section	Number of Personnel
Unified Command	8
PIO	9
Safety	2
Operations	2
Planning (incl SITL, ENVL & RESL)	8
Logistics	4
Finance	1
Liaisons	4
Agency Representatives/Administrators	1
Total	**39**

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
   MCL=Maximum Contaminant Levels
   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

Attachment: Community Event Information
Event: Love the Animas

Joining in and supporting the Event "Durango is back - River and Bike Parade", Mild to Wild wants to show our love for the #AnimasRiver and our appreciation for the community support.

In celebration,
1. We have 2 boats reserved for local officials and media. Please call Mild to Wild to reserve your seat (970.247.4789).
2. We are also are donating 40 seats in rafts to the 1st 40 reservations. To reserve your seat: http://bit.ly/1ffVXLs

3. We will be facilitating private boaters and help manage congestion by providing people shuttles. We will be making loops from Four Corners & Santa Rita Park to 32cd or 29th Street from 4:30pm-5:30pm and 7:30-8:30pm.

Thanks again for all your love and support. The Animas River really is the heart of Durango and impacts us in more ways than most of us thought! If you have your own boat, the parade starts at 5:30 pm. If you prefer to show your support via the riverside bike path, join in by foot or bike. Let's show the world how beautiful Durango is, how lucky we are to live here and what a beautiful recreational and adventure waterway the #AnimasRiver is.

Date: Tuesday, August 18th

Time for event "Durango is back - River and Bike Parade: 5:30 pm at 32cd, 29th or anywhere on the bike path.

Meet time for Mild to Wild's Raft Trip "Love theAnimas", join us at Mild to WIld at 4:45pm.

Post parade: Head downtown to support our businesses there!

Spread the word! #AnimasRiver #LoveRiver #VisitDurango #LoveTheAnimas

Molly Mickel
P: 970.247.4789

Explore. Experience. Escape.
And Always, Live with Adventure!

Mild to Wild Rafting & Jeep Trail Tours, Inc.
50 Animas View Drive
Durango, CO 81301

Adventure with us!
website • facebook • twitter • you tube • pinterest