

Gold King Mine LAB Response



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Scientific Laboratory Division Response Timeline

Received call from NMED staff on Friday, 8/7/2015 that samples would be coming in on Monday, 8/10/2015.

98 Samples delivered at 8:00 AM on 8/10/15 collected from 8/6-9/15.

15 samples designated as Priority 1 were collected on Sunday, 8/9/2015 at tail-end of plume.

Priority 1= An imminent threat to a significant portion of the State's public health, natural environment, or economy. Work done ASAP!

86 samples collected earlier (8/6/15 - 8/8/15) were submitted as Priority 2.

Priority 2 = Samples moved to the front of the queue but done on regular schedule.

Scientific Laboratory Division Timeline

Work was started within a short timeframe of receipt and continued until results determined

Wednesday, 8/12/15: 86 remaining samples were changed to
Priority **1**.

Wednesday, 8/12/15: 84 new samples delivered (8/10-11/15)
(Priority **1**)

Monday, 8/17/15: 119 samples delivered (8/12-14/15)
(Priority **2**)

Analyses Requested: Total Metals, Dissolved Metals,
Aluminum, Alkalinity, Bromide, Chloride, Fluoride, Sulfate,
TSS/TDS, Total Cyanide

Scientific Laboratory Division Response

Routinely-Final Reports are generated after detailed review of data and only after all results are complete for each sample.

Because of the critical nature of the incident, decided to report Preliminary Results with Caveats (following established protocol) to allow for responding agencies to develop plans.

Preliminary Results were reviewed as data came off instruments.

-If further dilutions were needed, preliminary were reported.

Scientific Laboratory Division Response

- Sent to NMED Data Steward via email & fax as well as a notification phone call.
- NMED posted data on their website as 'Preliminary' within 1 day for public access.

Scientific Laboratory Division Timeline

PRELIMINARY RESULTS timeline for 15 original Priority #1's:

8/10/15 4:14 pm – Dissolved metals results (6 samples).

7:22 pm – Dissolved metals results (some corrections for earlier) & 3 Total Metal samples that required digestion of sediment.

8:39 pm – Alkalinity and Total Cyanide.

9:15 pm – Total Suspended Solids.

9:51 pm – Fluoride.

8/11/15 8:07 am – Bromide.

11:57 am – Total Dissolved Solids.

Scientific Laboratory Division Timeline

PRELIMINARY RESULTS timeline for original Priority #2's:
Started work on Tuesday, 8/11/15.

Preliminary reports:

8/11/15 4:29 pm – Total Metals.

8/12/15 7:42 am – Chloride & Sulfate .

8/12/15 2:12 pm – Total Metals. **

** When Priority 2's changed to Priority 1's.

Scientific Laboratory Division Timeline

Three batches of samples delivered (8/10/15, 8/12/15, 8/17/15).

Samples delivered 8/17/15 were Priority 2's.

Total of 301 samples received:

1,009 separate tests were run.

3,746 individual analytical results were reported.

Lead was below the detection level in all but a couple of the Dissolved Metal samples but was of significance in the Total Metal samples.

Scientific Laboratory Division Timeline

- Final results for original Priority 1's reported out within 4.8 days.
- Final results for original Priority 2's → 1's reported within 7.8 days.
- All Final results except for Bromide were reported by the end of August.
- Bromide results reported by 9/8/15 (Instrument down).

Laboratory Lessons Learned

1. Reporting Preliminary Results:

- Initial reporting of samples that needed further dilutions/digestions.
- Instead of waiting for all results from each sample.
- Final results would take into account any interactions.

NOTE: No major revisions reported. Few minor ones.

MOST IMPORTANTLY:

Allowed for Field Staff from NMED and NMDOH to develop plans for water use including irrigation, bathing, drinking.

Laboratory Lessons Learned

2. Communication Critical!

Both from the Field to the Lab AND Lab back to the Field!

3. Instruments Will Break Down!

Again...communication critical!

4. Be Realistic with Emergency! Response!

Staff will burn out.

A scenic view of a river flowing through a forested valley with rocky banks. The river is the central focus, winding through the landscape. The banks are covered in large, light-colored rocks and dense green trees. The background shows rolling hills and more forested areas under a clear sky.

More Info?

Please see Poster # P-001 for more details on the Samples and Results!

New Mexico's Response to the Gold King Mine Spill

Collaboration to Protect Public Health

Epidemiology & Response Division

Environmental Health & Epidemiology Bureau

June 2016

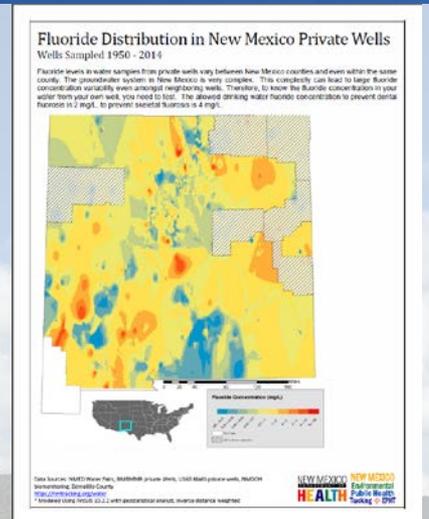


DOH Role

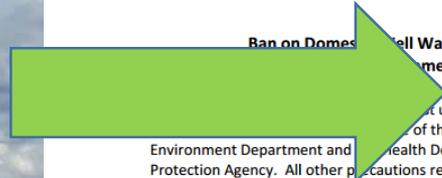
- Responded to calls from general public and other agencies.
- Provided in-person technical support to the New Mexico Environment department and to domestic well owners.
- Reviewed surface water, groundwater and sediment data and communicated relevant health concerns to involved agencies and directly to domestic well owners.
- Available to general public, federal and state agency leadership to answer questions about domestic well testing, test results, health concerns and water treatment options.
- Screened water samples for arsenic.
- Worked as liaison with the New Mexico Poison Control and was available to answer questions about surface water ingestion and contact.
- Developed press releases, factsheets, a Department of Health web page, and health advisories.
- Reviewed plans, attended public meetings and was available for an open house.
- Leveraged resources to provide testing of private well water for metals. This included those who were not eligible for testing by the EPA.

What do we do? (even when there is not a spill)

- Gather existing data/Collect new data
- Analyze data
- Map it
- Display data in a sensitive way
- Use the information to make decisions
- Share the information to help others make decisions



From data to message



NEWS RELEASE
August 14, 2015

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Ban on Domestic Well Water Use in the Animas Floodplain Lifted by Environment Department and Health Department

... using domestic wells of the Gold King Mine spill. The New Mexico Environment Department and Health Department are working together to ensure the safety of the public. All other precautions related to the spill remain in place.

"The only reason we're in this position today, to lift the ban on domestic wells, is because of the successful cleanup of the spill," said Environment Secretary...

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Never to Drink Untreated Surface Water

August 14, 2015 - [Public Relations](#) - [Alert](#)

Two individuals from New Mexico who say they consumed water directly from the Animas River, following the Gold King Mine spill, contacted the Department of Health and New Mexico Poison and Drug Information Center. The individuals contacted the Department of Health and New Mexico Poison and Drug Information Center to receive advice because they drank river water a few days after the spill. The Department of Health worked collaboratively with the New Mexico Poison and Drug Information Center to recommend...

Biomonitoring

- Study of metals and phthalates in urine, metals in drinking water from private wells
- 58 households, 83 individuals
- October 27th – 31st, 2015
- Residents concerned about Gold King Mine spill into Animas River
- Recruitment: “Not a response to the spill”, Water fairs and community events, EPA testing, and Word-of-mouth

NM Environment Department (NMED) – local region office support: Manpower, vehicles, local road knowledge

NMDOH staff - Lab/Epi cross-training, Water sample collection/field methods and arsenic speciation, how to use smart phone to take pictures (geotagged)



Disclaimer

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Thank you!

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<https://nmtracking.org/water>