

Appendices



August 5, 2015: Contaminated water rushed into Cement Creek. Photo taken about twenty minutes after the plug was breached at the Gold King Mine.¹

What Was EPA Doing When the Blowout Began?

EPA OSC in EPA Video (Right): “We built a platform here for the ramp basically up. Oh, near the level of the top of those posts (*gestures to timbers*). So that the backhoe, the trackhoe, could get up (*gestures above adit*) and start pulling that dirt down. And he would bring it out a little bit and a front end loader would come in, pick it up, take it out, and dump it. That’s what we were doing.”¹

EPA Internal Review: “Excavation began at the top of the adit to remove consolidated soils and debris. The goal was to find competent bedrock within which to anchor a support structure for the adit. . . .”²

DOI Technical Evaluation: “The plan consisted of excavating the rock crown over the adit but leave the fill below the adit roof in place. A steel pipe would be inserted through the fill and into the mine pool . . . and the water in the mine would be pumped down. . . .” It was asserted that the EPA crew believed the water inside the adit was below the crown of the adit . DRMS again discussed the plan to reopen the adit with the EPA OSC and all were in agreement to proceed. The two DRMS specialists left the site, and “*the contractor began excavating. . .*”³ The ACOE peer reviewer more directly refers to EPA actions as “start[ing] to dig out the plug. . . .”⁴



EPA Addendum: “The team had *just finished locating the bedrock*, and were clearing away some additional rubble in front of the adit face, when they spotted a water spout. . . .”⁵

EPA OSC Email (to those on-site August 5, OSC Way and other EPA officials) Sent on 10/28/15: “The truth is we decided to avoid any contact with the blockage whatsoever and simply remove the loose dirt above the blockage for two reasons. First, to prevent it from falling down and covering what we had exposed and second, to reveal the bedrock above the blockage in order to better plan the next steps. . . .”⁶

Within Moments of the Blowout, Two Videos Sequentially Recorded Nearly the Same Conversation about “Digging High.”

The conversation is not only similar but was reportedly held by the same individuals.¹

Gold King Mine Video 7

Contractor 1: Get a little video of this I suppose.

Contractor 2: Oh he's gonna be pissed. This isn't good.

Contractor 1 : No, this is not good.

Contractor 2: **We were so high too.**

Contractor 1 : **I know, we were about 20 feet up.**

Contractor 2 : Send your bucket over, I want a ride to that side. I'm serious.

(unknown voice 1): what?

Contractor 2 : Send your bucket over. Get me over there.

(unknown voice 2): Where's he going? Where's he going?"

Contractor 2 : He's getting the f--- out of here

Gold King Mine Video 8

Contractor 2 : get outta here?

Contractor 1 : huh?

Contractor 2 : should we get outta here?
[Pause]**Ya know, we were digging high.**

Contractor 1 : **We're digging really high.** Is he gonna go close it out?

Contractor 2 : I don't think he can. Can we get outta here?

Contractor 1 : What do we do now?

Claims of Digging High

EPA's *Internal Review and Addendum*, the *DOI Technical Evaluation*, and the statements of the EPA OSC and contractors on-site, asserted that the EPA crew was "digging high." Several individuals from the site stated that they were clearing dirt from the rock face above the adit opening. The rock face appears to have been exposed prior to EPA digging into the plug.¹



Above:
8/5/15 9:46 AM.²

Rock face – area of bedrock above the adit entrance appears devoid of dirt and unconsolidated material.



Above:
8/5/15 10:51 AM.⁴

Right:
8/5/15 after 9:46 AM
(Although not time-stamped, cast shadows show the sun was higher than in prior photo.)³

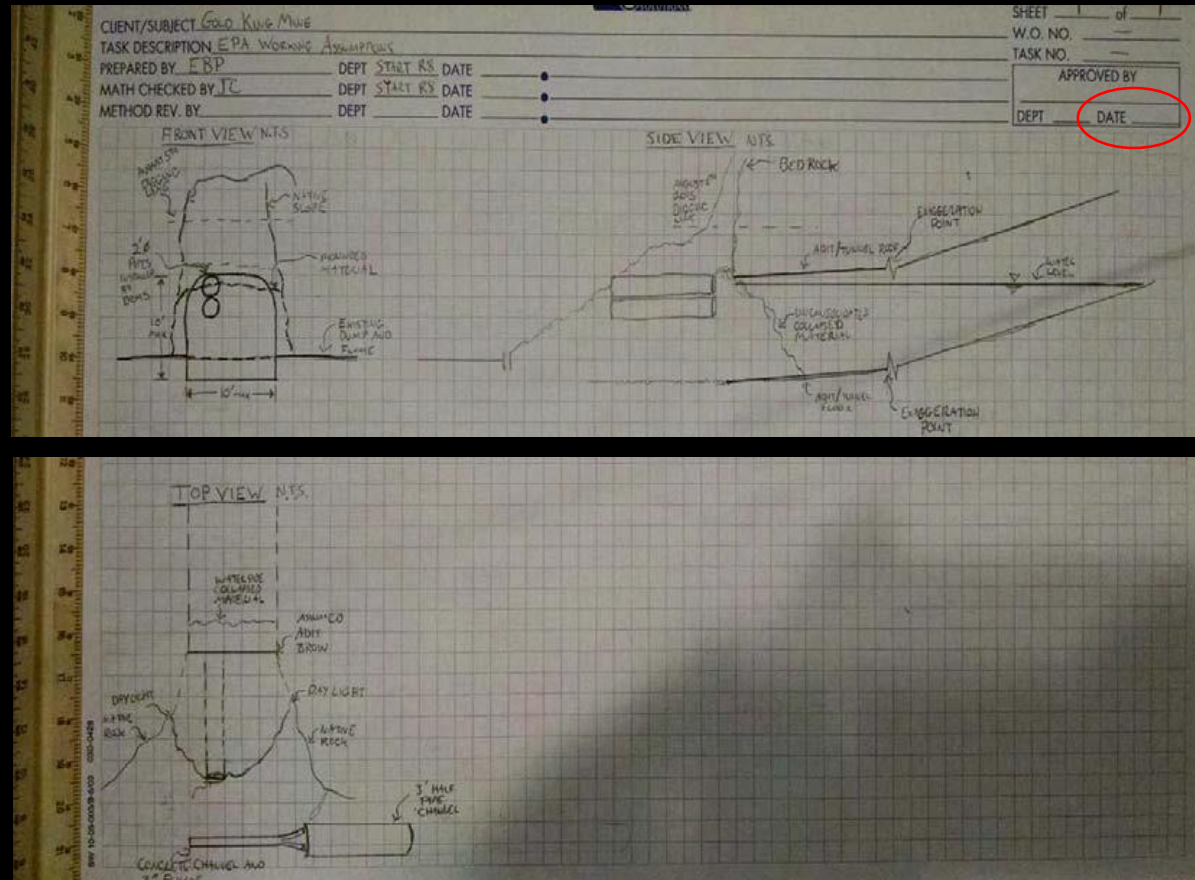


The dirt pile in the photo above is a berm. It is further from the rock face than the dirt pile in the other photos.

DOI and EPA Misled About Undated Attachment D Figure

In discussing the EPA drawing, "Attachment D," the *Technical Evaluation* states: "the cross-section view from figure 39 was used as the basis for illustrating the steps that EPA was going to take to open the adit (figures 40 through 45). . . ."¹

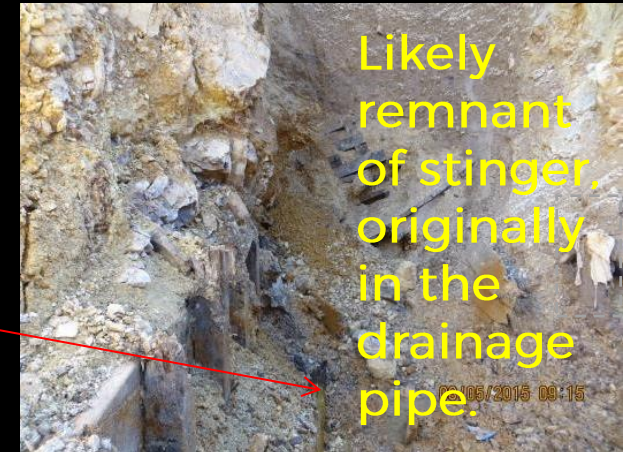
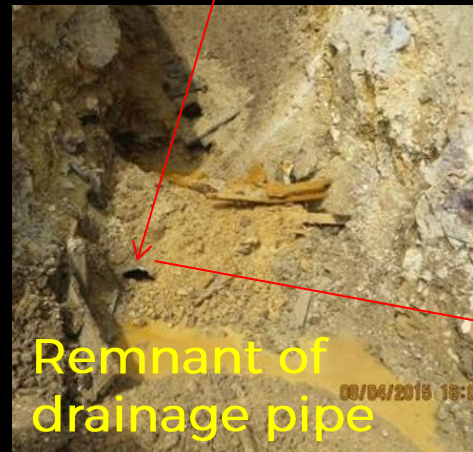
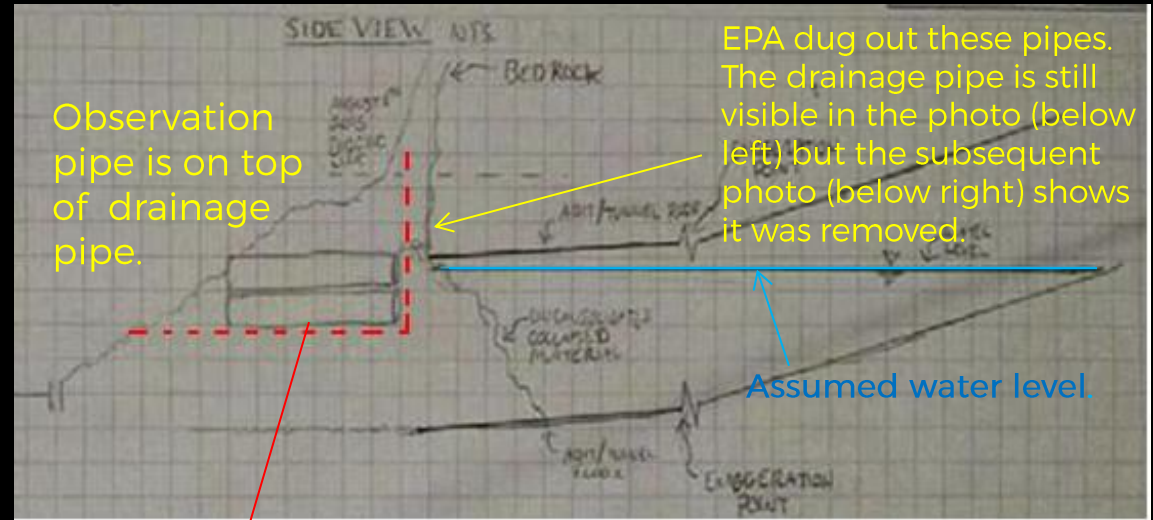
Both DOI's *Technical Evaluation* and EPA's *Internal Review* allow the reader to assume that the drawing was used at the site. The Committee was advised that the undated figure was produced on August 11th.²



DOI Falsely Asserted that EPA Was Trying to Dig High when it Actually Excavated Below Assumed Water Level

EPA's Attachment D indicates that EPA knowingly excavated close to the plug, and, in doing so, was at an elevation below the water level that they reportedly assumed in the drawing.¹ The pipes (and dashed red lines) were actually lower relative to the floor as shown in figures A 17, 18, and 19. This means that EPA actually was digging even lower than their assumed water level.

DOI's *Technical Evaluation* includes a photo showing a partially *backfilled* excavation (See, A 4) and its caption misleadingly states, "[t]his indicates that the bottom of the excavation was about 10 feet above the level of the floor of the adit; this corroborates reports that they were *digging high*, trying to stay above the assumed water level in the adit. . . ."² DOI failed to mention that this statement relates to the elevation after EPA backfilled and relies on the idea the drainage pipe was substantially above the floor.



Excavation Progression to Blowout (1)

Below: 9:15 AM, August 5. After excavation fully removed the pipes and exposed the plug.¹

Right: 9:46 AM, August 5. After the excavation toward the adit was partially backfilled and the rock face above the adit entrance was exposed.²



Likely remnant of stinger



Wooden debris
embedded in plug

Annotations added by Committee. Yellow annotations are reference points. Please note the images have different perspectives, scales and lighting.

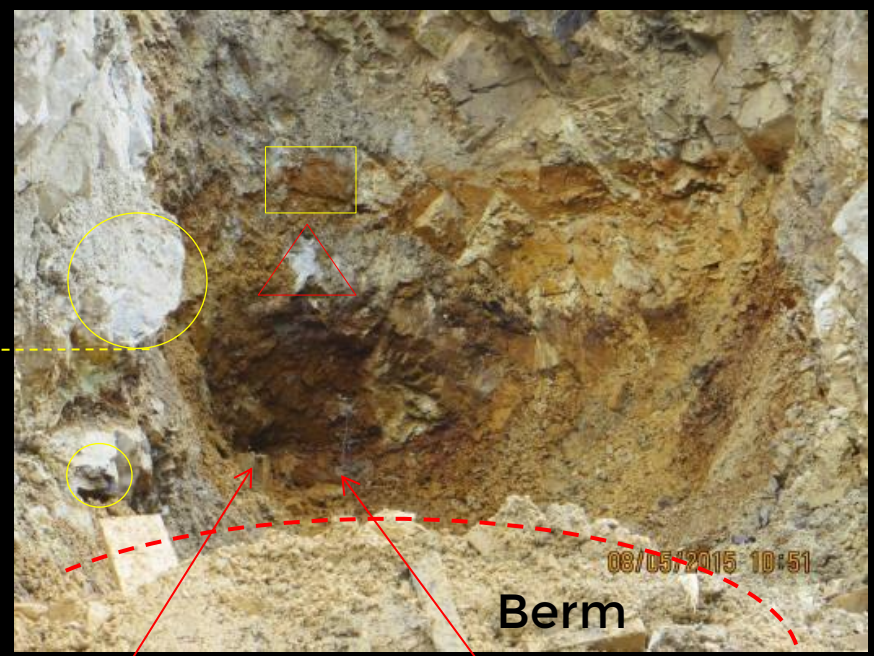
Excavation Progression to Blowout (2)

Below: 9:46 AM, August 5.¹

Annotations added by Committee. Yellow annotations are reference points. Please note the images have different perspectives, scales and lighting.



Below: 10:51 AM, August 5. The mound from the previous photo was removed. The top of a berm is visible at the bottom of the photograph. A timber top also is visible. The EPA crew has dug into the plug. The blowout's initial spurt is discernable. There is a white mark on the rock face, possibly from the tooth of the track hoe bucket.²



Timber

Initial spurt

Excavation Progression to Blowout (3)

Below: 10:54 AM, August 5. The spurt turned into a wave of orange water. In the lower right, planks are set to direct water toward a channel.²



Above: 10:51 AM, August 5.¹



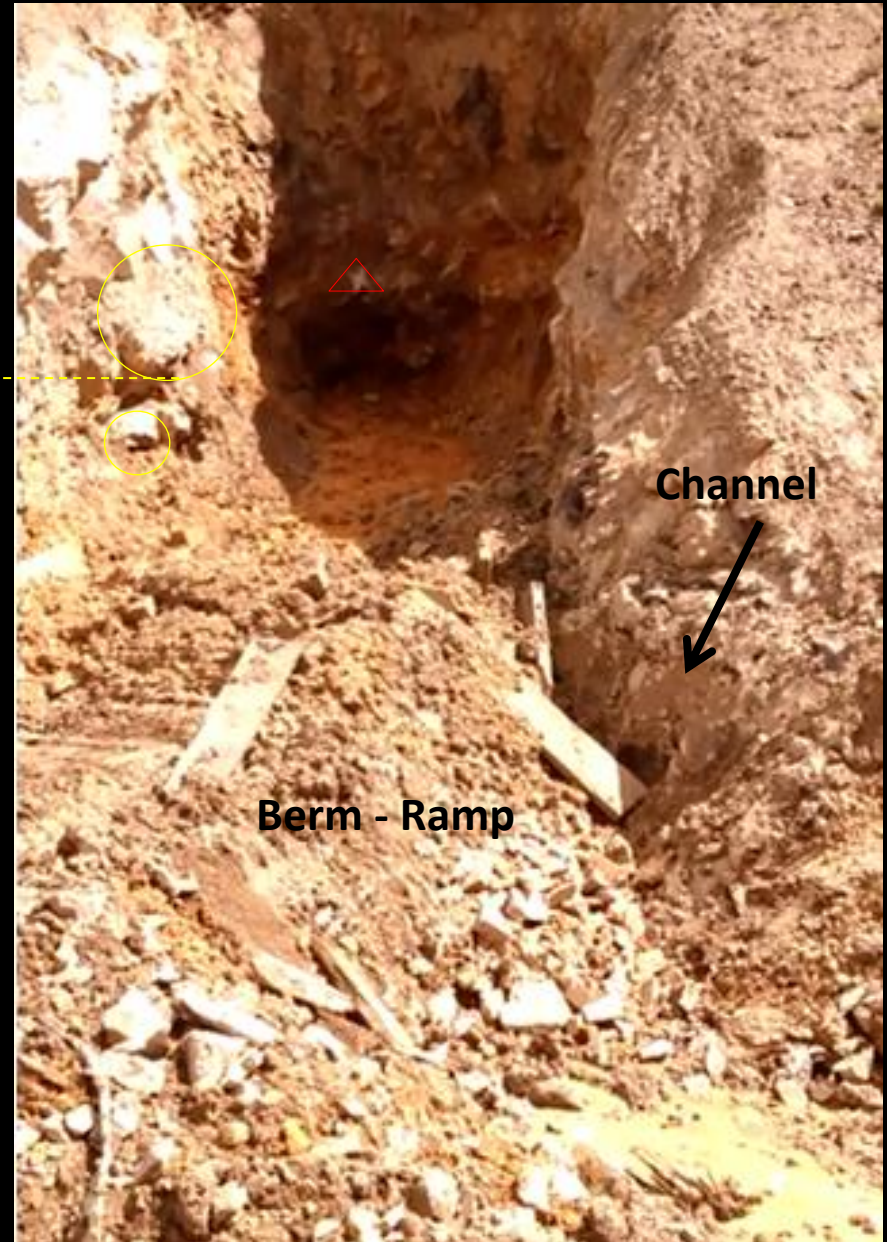
Annotations added by Committee. Yellow annotations are reference points. Please note the images have different perspectives, scales and lighting.

Excavation Progression to Blowout (4)

Below: Still from video filmed concurrently on August 5.²



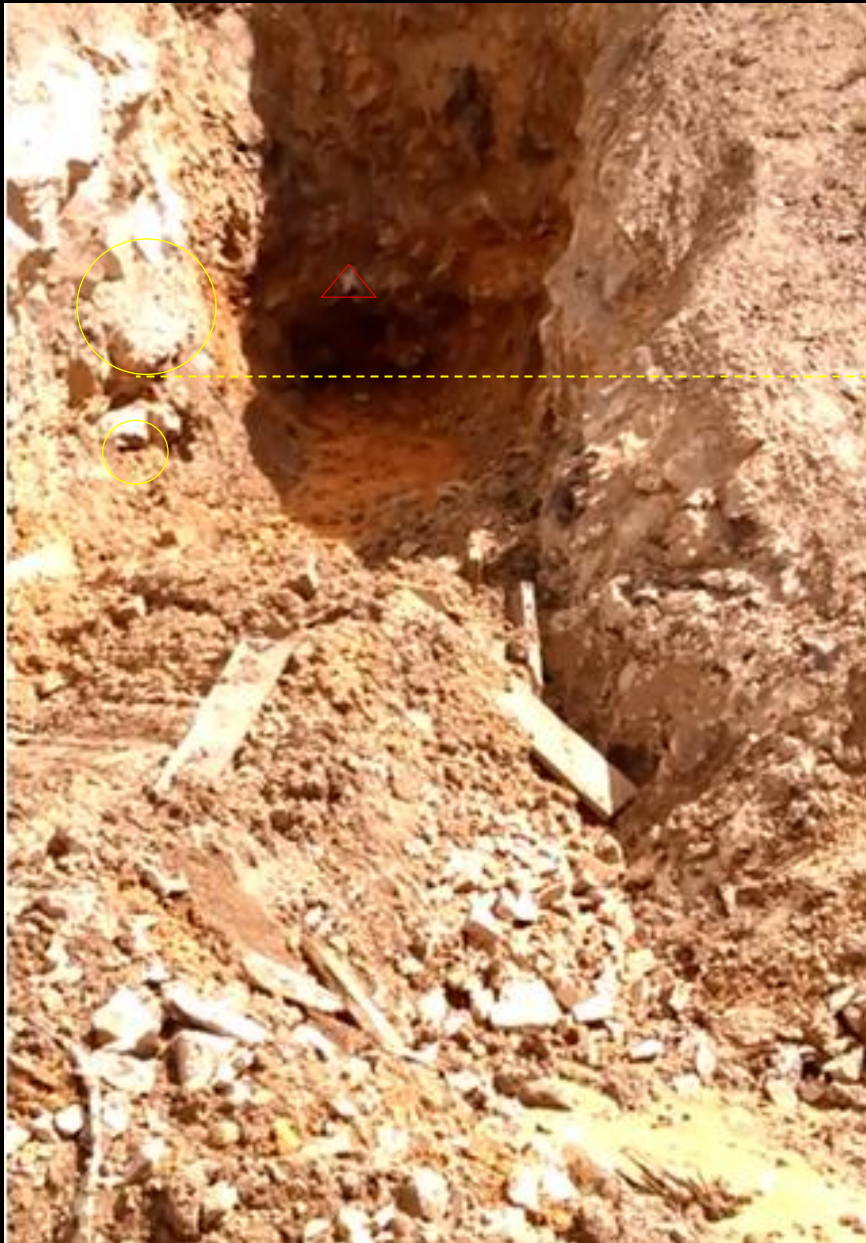
Above: 10:54 AM, August 5.¹



Channel

Berm - Ramp

Annotations added by Committee. Yellow annotations are reference points. Please note the images have different perspectives, scales and lighting.



Left: Still from video, August 5.¹

Below: After peak of blow out, August 5.²



Annotations added by Committee. Yellow annotations are reference points. Please note the images have different perspectives, scales and lighting.

Excavation Progression to Blowout (6)

Below: Believed to be taken around 9:15 AM, August 5.¹

Below: After peak of blow out, August 5.²



Annotations added by Committee. Yellow annotations are reference points. Please note the images have different perspectives, scales and lighting.

Excavation Progression to Blowout (7)

These images run chronologically from left to right. The first image reveals the elevation of the drainage pipe, close to the adit floor. The second image shows the plug above where the drainage and observation pipes had been, and a remnant of the stinger close to the adit floor. The third image shows the extensive amount of backfilling of the excavation before EPA began digging into the plug. The channel prepared on the right side appears to be designed to direct water to the half pipe channel (not pictured). EPA likely dug into the plug below the white mark on the rock face. In the fourth image, the berm in the third image has clearly been washed away and a new berm (at very bottom of photo) has been constructed to divert the later stages of the blowout to the half pipe channel.¹



August 4, image believed to be taken around 2 PM



August 5, image believed to be taken around 9:15 AM



August 5, image from video about 10:54

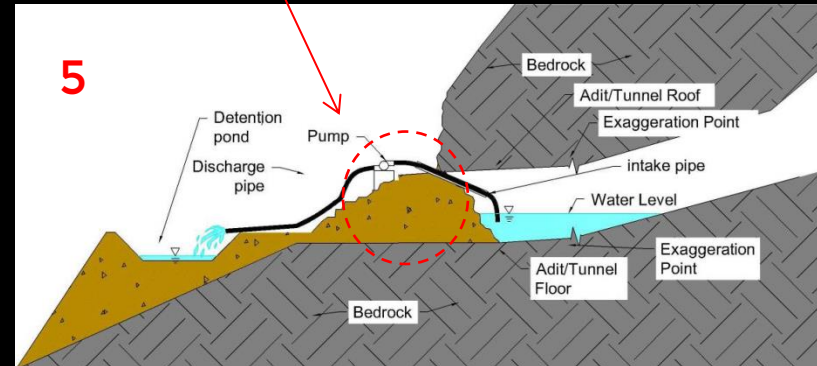
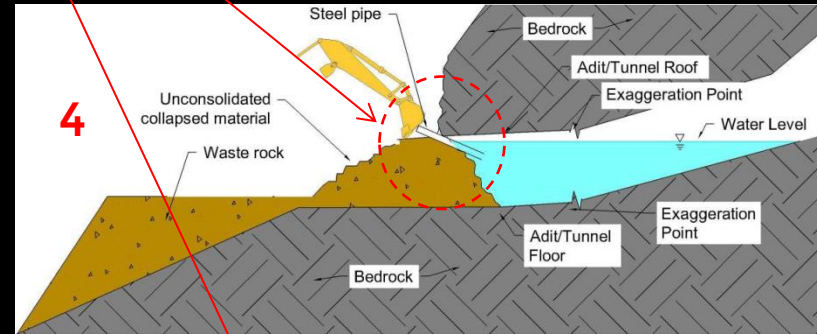
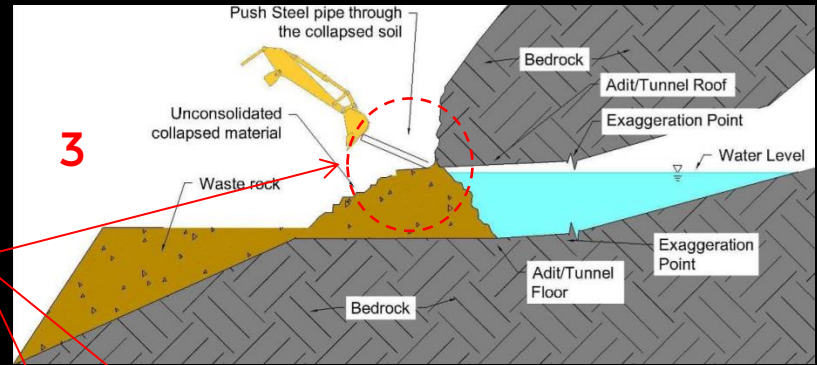
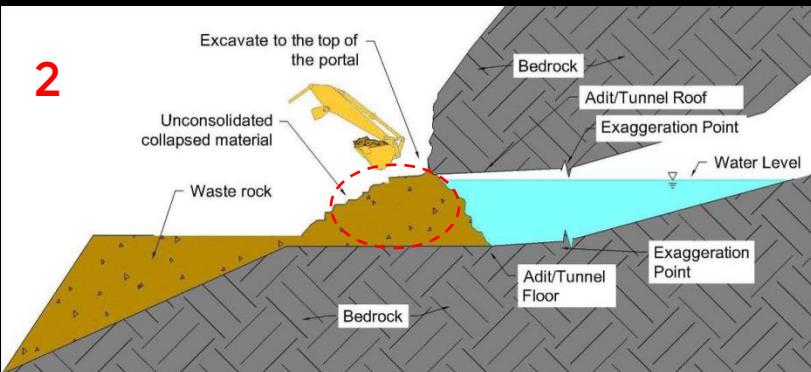
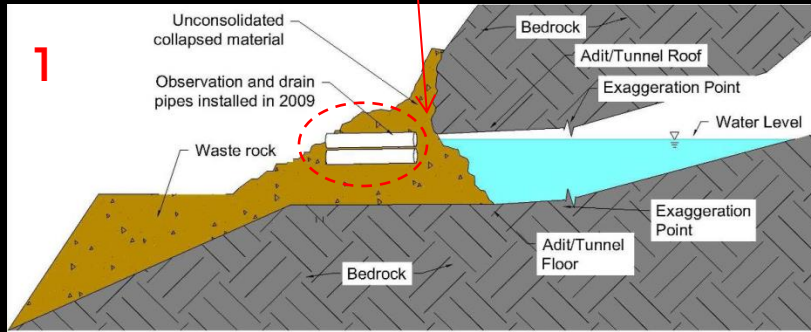


August 5, image believed to be taken around 3 PM

Depiction of "EPA's Plan" in DOI's Technical Evaluation

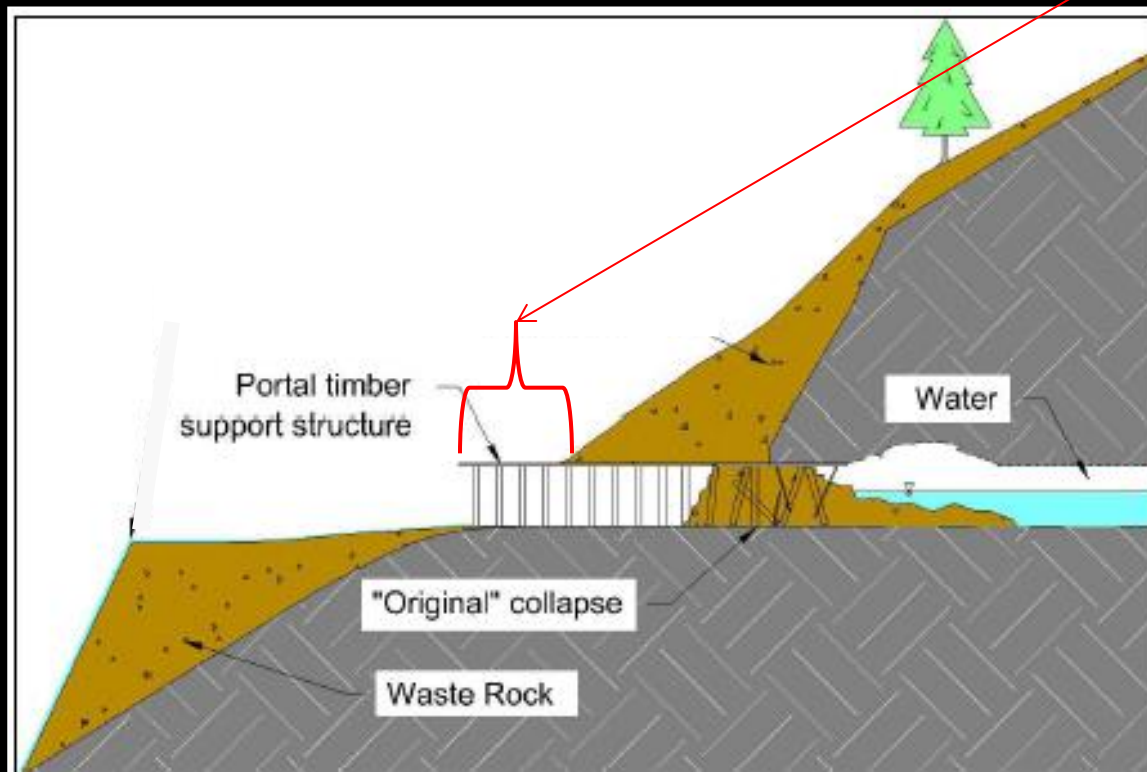
Although not shown in DOI's sequential figures, these pipes were removed by EPA.¹

Despite DOI's account, the Committee was advised by individuals present at the Gold King Mine on August 5th, 2015 that there was neither a stinger nor a pump on-site at the time of the blowout.²



DOI Wrong About Basic Technical Details of the Gold King Mine

DOI's *Technical Evaluation* depicts the opening of the portal structure (below left) as extending four timber sets (two vertical timbers supporting a horizontal cap timber) beyond the slope of the mountainside. This is inaccurate, as evidenced by a 2004 DRMS photo (right) and a construction photo from 1984 (below right).¹



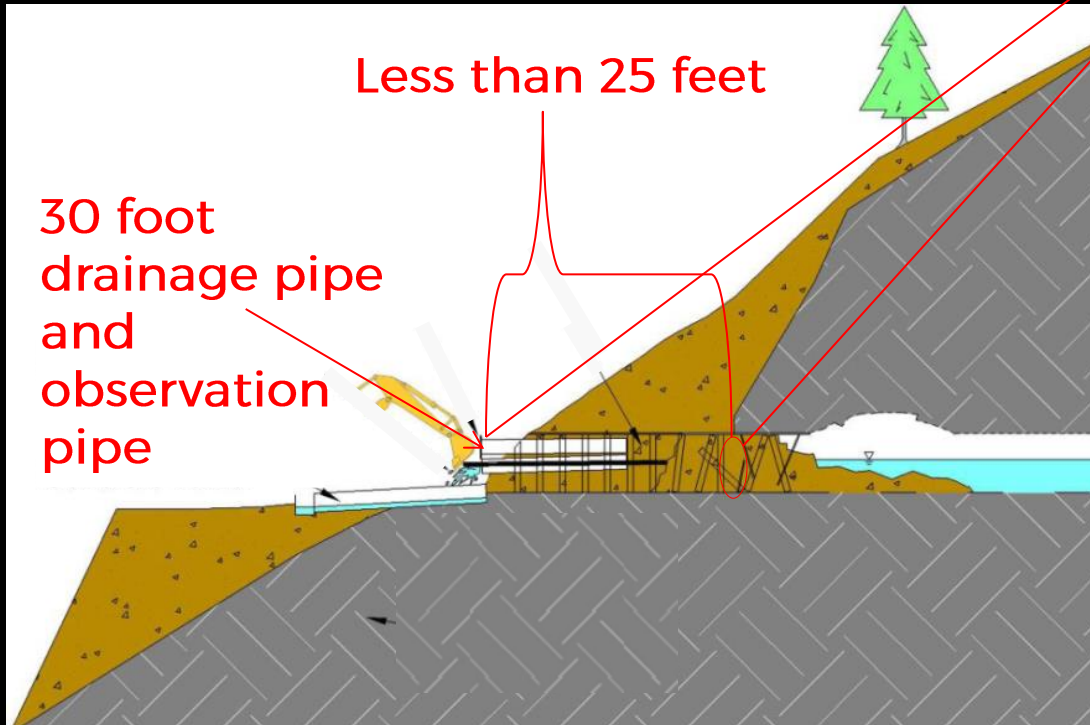
The adit in 2004.²



Portal Construction in 1984.³

DOI Wrong About Basic Technical Details of the Gold King Mine - Continued

DRMS installed pipes in the portal structure in 2009 (bottom left).¹ The pipes began at the “sealed portal” that is annotated on the EPA topographical image (right).² The image also annotates the “estimated start of adit.” The distance between these two points appears to be less than 25 feet. Contrary to the *Technical Evaluation’s* depiction, this distance could not accommodate a collapse that extended significantly beyond the adit opening, a stinger that reportedly ran 12 to 16 feet (from the collapse to the drainage pipe), and 30 feet of a drainage pipe.



Gold King Mine Adit After 2009 DRMS Work

The end of the drainage pipe was buried below the observation pipe. It connected to the pipe that is visible in the top of the concrete channel.



Observation pipe end is covered by a gate.

Concrete channel directed water off of the waste rock dump. The channel turned to the right. (See photos at right).



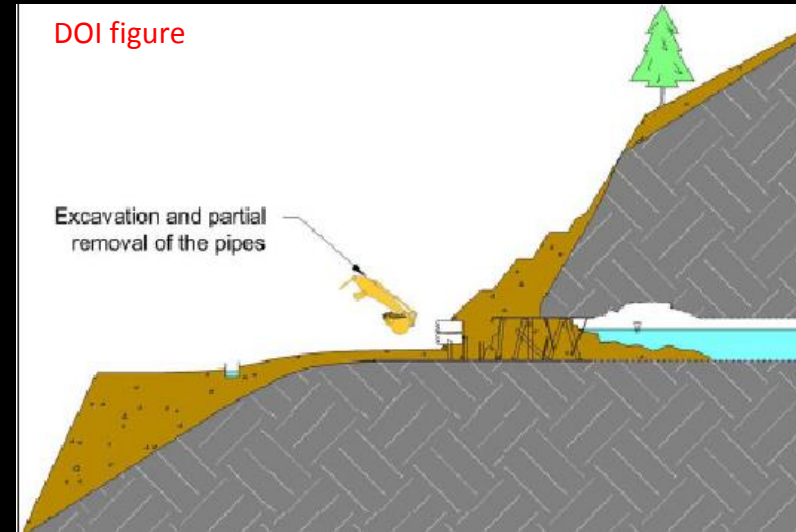
Waste rock dump.



EPA 2014 Work at the Gold King Mine

DOI's *Technical Evaluation* states and depicts that "most" of the drainage and observation pipes were removed by EPA in 2014.¹ Photos of work done in 2014 show that little, if any, of the pipes were removed.²

The pipes installed in the lower right photo appear to be 12" in diameter although the DOI *Technical Evaluation* states that they were 24".³



Same rock
Same damage to pipe



Pipes revealed by excavation in 2014



Pipes before being reburied in 2014

DOI Made Use of “Not to Scale”

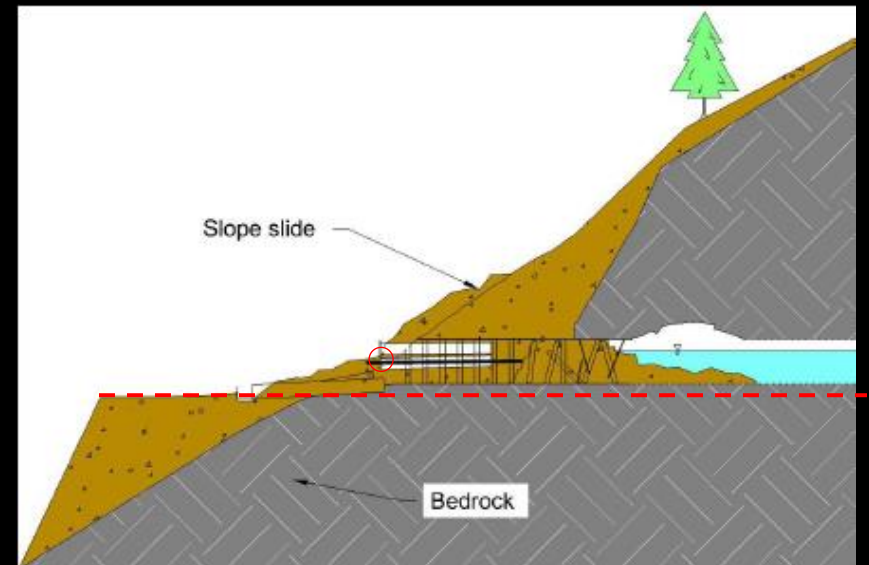
The enlarged portion of the figure in the *Technical Evaluation* (right) reveals that DOI was accurate in noting that the figure is “not to scale.”¹ It is not possible for a two foot diameter drainage pipe to rest at about the same elevation as the waste rock dump/adit floor (photo below)² and abut another two foot diameter pipe that is flush with a eight (or 10) foot roof.³ DOI’s not-to-scale figure makes the physically impossible scenario less obvious, and it obscures EPA’s error.



Above : Enlargement of below DOI figure showing distortion of distance between drainage pipe and waste rock dump.



Drainage pipe (red) about level with waste rock dump in 2014. Inset: Pooling water.



Adit floor and waste rock dump at similar elevation as depicted in DOI’s *Technical Evaluation*.

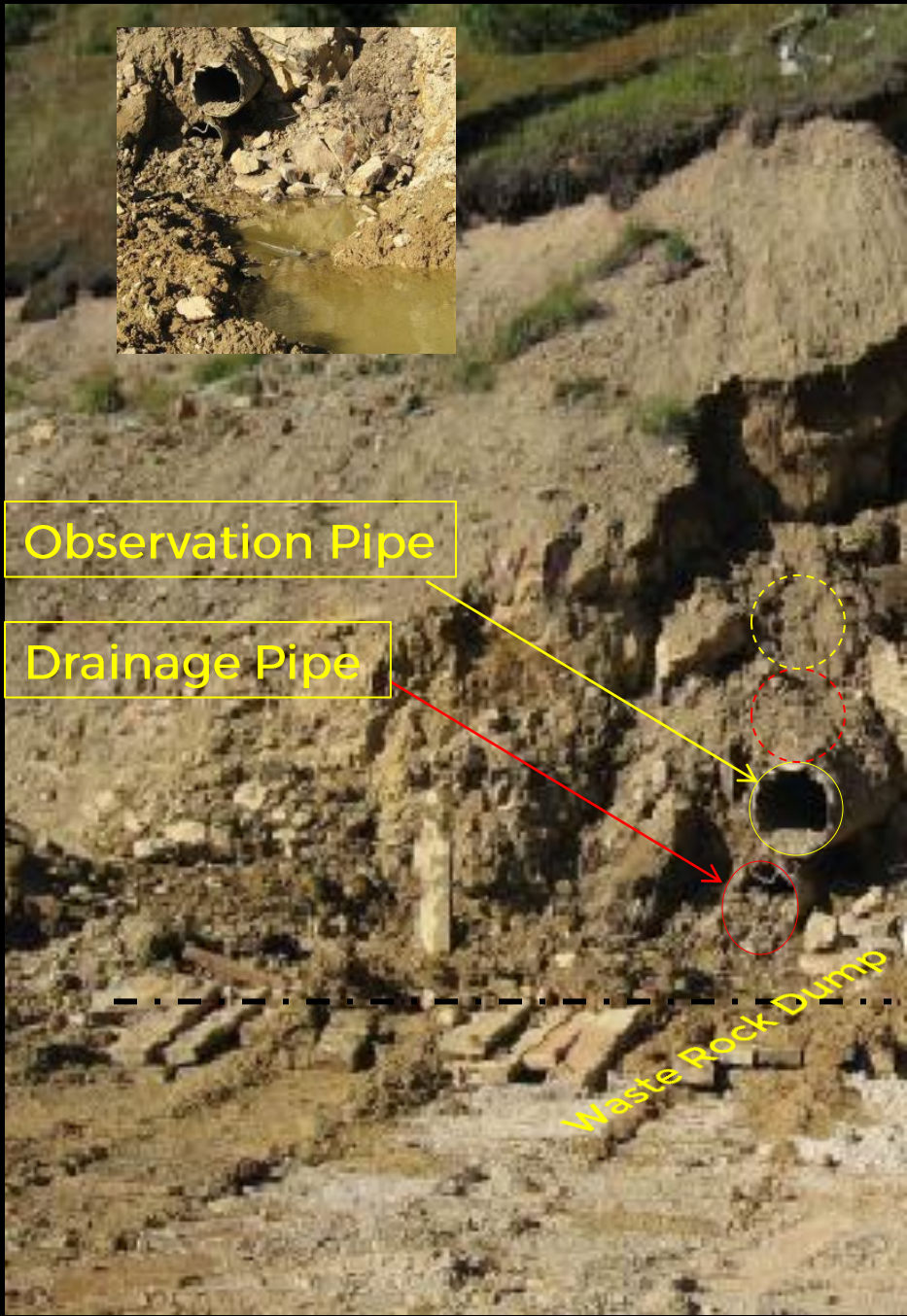
EPA Scenario on Relative Elevation of Adit Floor and Mine Waste Rock Dump

The EPA asserted in its *Internal Review* and in its 2014 Report that the adit floor was 6 feet lower than the waste dump and that EPA's assumed 6 foot water level within the mine was based on observations of pooling water beneath the drainage pipe. EPA asserted that it stopped its work in 2014 when it concluded that the elevation of the adit floor was 6 feet below the waste rock dump.¹

2014 excavation photos show the observation and drainage pipes, and the beginning of the waste rock dump in front of the adit.² The pool is more easily identified in the inset.³ Despite EPA's assertion in 2014 and in its *Internal Review* that the adit floor was six feet lower than the mine, it was not.



DOI Scenario on Relative Elevation of Adit Floor and Mine Waste Dump



Observation Pipe

Drainage Pipe

Waste Rock Dump

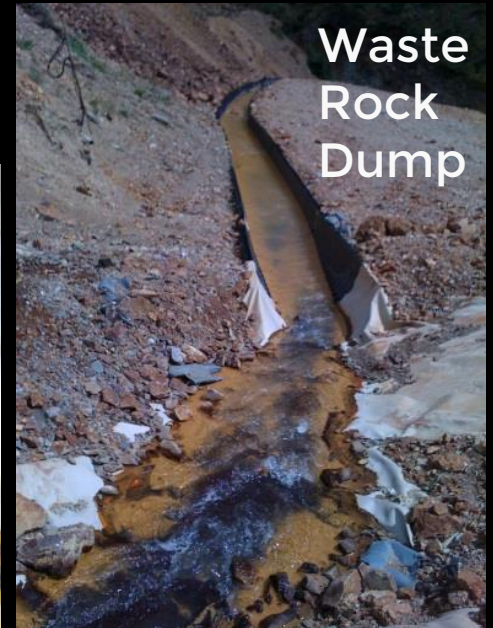
The DOI *Technical Review* is nonsensical. It avoided EPA’s assertion that the adit floor was lower than the waste rock dump. Instead, DOI repeatedly produced figures that showed the adit floor and waste rock dump at a similar elevation (see figures on A12 and A13 for example).

However, DOI also incorporated EPA’s assertion that the observation pipe abutted the roof of the portal structure, and that the drainage pipe was immediately beneath it.¹ For both of these assertions to be true, the drainage pipe would have to be elevated noticeably above the waste rock dump. This is not the case (see left). The dashed circles show the approximated locations of the 24” pipes, abutting an eight foot portal structure roof with a floor approximately level with the waste rock dump.² DOI explained that the water from the drainage pipe pooled because the excavation had a lip (inset).³ However, to make that scenario plausible water draining from the pipe would have required a huge “lip” that was almost level with the bottom of depicted drainage pipe elevation.

The Adit Floor and Waste Rock Dump Were at Similar Elevations

EPA incorrectly asserted that the adit floor was 6 feet lower than the waste rock dump in its *Internal Review* and its 2014 Report, which would be contrary to the drainage purpose of the adit. Discharges from the adit are seen seeping over the waste dump in 2009 (below left).¹ If the adit floor had been six feet lower in elevation at the time, the adit already would have contained six feet of impounded water.

According to a photo provided by the mine owner, mine water (below center) was flowing from the adit in September 2009.² The same month, DRMS installed drainage and observation pipes and a concrete channel. Another photo reportedly taken at the same time, shows water routed into a channel to keep it from flowing from the adit onto the waste rock dump.³ When EPA arrived to conduct work in 2014 it found the concrete channel (right).⁴ The channel was not buried six feet beneath the surface of the waste dump.



EPA Stated it Did Not Observe Seepage Above the Drainage Pipe

While EPA dropped the claim that the adit floor was six feet beneath the waste rock dump in its *Addendum*, its 2014 report and its *Internal Review* asserted that work stopped at the mine in 2014 based on the pooling water observed by EPA(right).¹

The *Internal Review* also asserted that “The hill above the adit was inspected . . . it was reported that there were no seeps. . .” This assertion also was included in DOI’s *Technical Evaluation*.² The only seepage mentioned as being observed during the 2014 work in either of EPA’s 2014 report or its *Internal Review* is the pool at left.



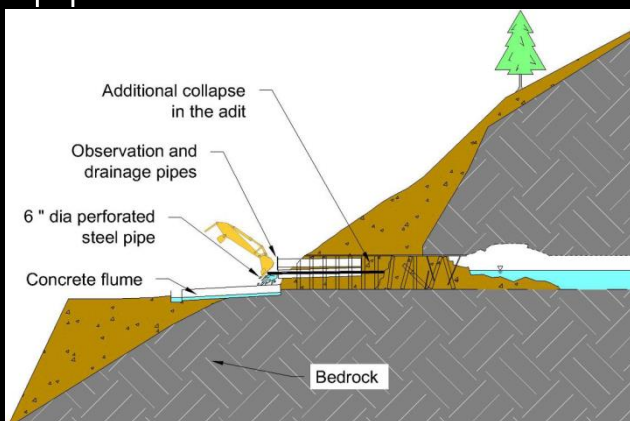
Photos of EPA work in 2014 may show that EPA unearthed seepage higher than the observation pipe (below left covered by grate).³ Striations from digging are visible (below right).³ Visible seepage at this level would not support the assertion in EPA’s 2014 Report and in its *Internal Review* that the water level was believed to be below the level the drainage pipe (photo at right shows drainage pipe below observation pipe.)⁴



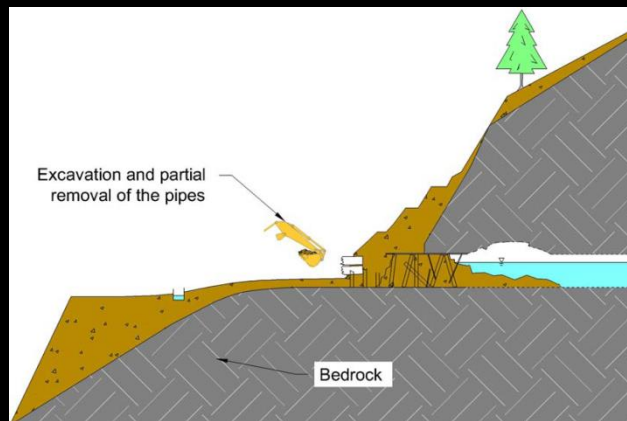
EPA and DOI Neglect to Mention Removal of Portion of Stinger in 2014

A stinger is a perforated pipe with an enclosed end that can be inserted through solid material to drain liquid. DRMS reportedly installed a stinger in 2009, and stated: “[t]he installed 6 inch perforated steel pipe penetrated approximately 12 feet of collapsed material thought to exist between the original collapse and the end of the drainage pipe. The well point was unable to penetrate through any of the original existing collapse in the tunnel. . . .”¹ The *Technical Review* includes DRMS’s Report on its 2009 work at the mine including installation of the stinger. However, it never mentions the stinger’s partial removal.² EPA’s own *Internal Review* and its 2014 Report also do not mention the partial removal or prior insertion of the stinger. Given DOI’s misrepresentation of the proximity of end of the drainage pipe to the adit opening, DOI also misrepresented the stinger’s position. Having extended at least 12 feet beyond the drainage pipe (or more), the stinger was closer to and may have even penetrated the adit entrance.

In the below left image, DOI shows the bottom drainage pipe discharging directly to the concrete flume.³ This also is incorrect. There was a pipe between the concrete flume and the discharge pipe.



DOI *Technical Evaluation* depicts stinger installation.



The stinger is gone in the next image, but the *Technical Evaluation* does not mention its removal.

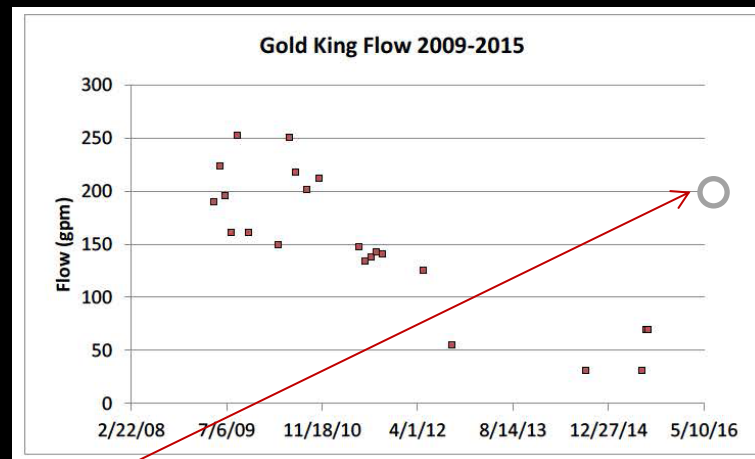


Part of stinger removed by EPA in 2014.

Gold King Discharge Flow Measurements Prior to Blowout



EPA OSC : Explaining the events of August 5 on an EPA video: “It was draining like, 200 gallons a minute or so, underneath. Nothing was coming out anywhere high (*gestures to top of existing adit*).”¹



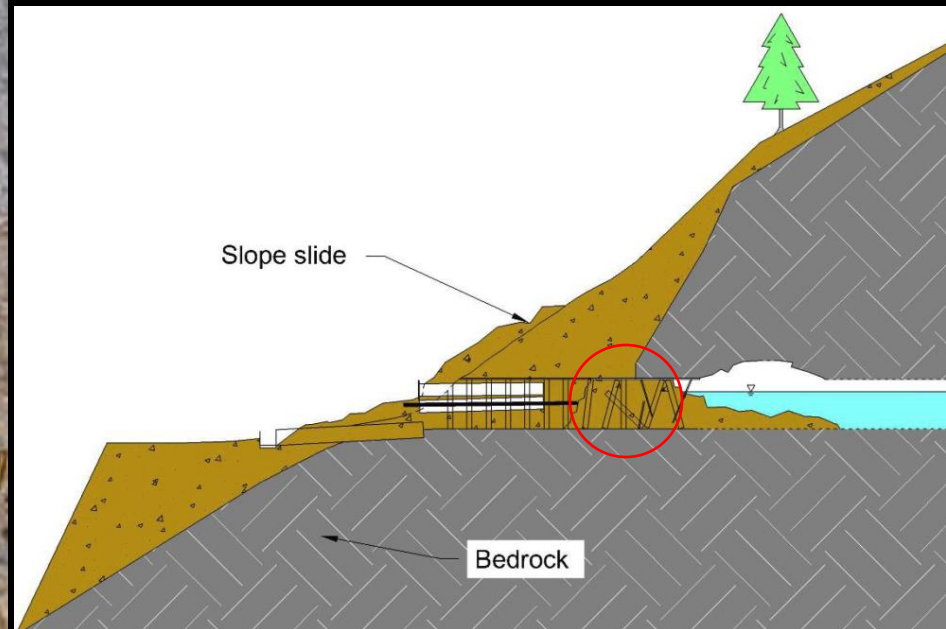
EPA’s *Internal Review* charted a steady decline in discharge from the mine. The added point approximately represents the EPA’s OSC’s description of the discharge prior to the blowout on the 5th.²

DOI Inaccurately Depicted Condition of Support Timbers Near Portal.

Right: EPA OSC explained the events of August 5 on an EPA video: "So we cleared all that out to about where these posts are (*gestures to timbers at adit portal*). You see they're leaning in, they were straight up then."¹

Lower right: DOI's *Technical Evaluation* consistently depicted the vertical timbers in the sets nearest the adit opening as collapsing.²

Below: Upright timbers are revealed as the excavation approached the adit portal.³



Photos Provided by EPA to the Committee Include a Substantial Time Gap in Depiction of Excavation



11:56 AM¹

Although there is a large time gap in the photographs taken late in the excavation stage on August 4, the contractor responsible for photographic documentation reported “excavation was proceeding slowly” in the middle of the time gap.⁴



12:20 AM²

4:08 PM³



DOI Did Not Address Volume of Mine Waste Rock Washed Away by the Blowout

When three million gallons of contaminated water blew out of the mine, it washed away a mountainside of mine waste.¹



DOI's *Technical Review* has no discussion of the pollution from a waste pile that a DRMS official advised Committee Investigators was referred to as "hot."² By rough estimate between 4,000 and 7,000 cubic yards may have been washed out and carried into the watershed.

REFERENCES

- Title page
 1. Elliott Petri, Photo of Gold King Mine Released Materials, Photo no 2015-08-1111 (Aug. 5, 2015) (on file with the U.S. Environmental Protection Agency).

- A 1:
 1. U.S. Environmental Protection Agency, *Gold King Mine August 14, 2015 Video 5* (Aug. 14, 2015), <https://www.youtube.com/watch?v=h1dZX40fiDA&feature=youtu.be>.
 2. U.S. ENVIRONMENTAL PROTECTION AGENCY, SUMMARY REPORT: EPA INTERNAL REVIEW OF THE AUGUST 5, 2015 GOLD KING MINE BLOWOUT 5 (2015), [hereinafter EPA INTERNAL REVIEW].
 3. U.S. BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR, TECHNICAL EVALUATION OF THE GOLD KING MINE INCIDENT at 52-53 (2015), [hereinafter DOI TECHNICAL EVALUATION]. (emphasis added).
 4. *Id.* at 3.
 5. U.S. ENVIRONMENTAL PROTECTION AGENCY, ADDENDUM TO EPA INTERNAL REVIEW OF GOLD KING MINE INCIDENT (2015), [hereinafter EPA ADDENDUM].
 6. Email from Hays Griswold, On Scene Coordinator, U.S. Environmental Protection Agency, to David Ostrander, Director of Emergency Response and Preparedness, U.S. Environmental Protection Agency (Oct. 28, 2015) (on file with U.S. Environmental Protection Agency).

- A 2:
 1. U.S. Environmental Protection Agency, *Gold King Mine August 14, 2015 Video 7* (Aug. 14, 2015), <https://www.youtube.com/watch?v=NDeGM1VGvFw&feature=youtu.be>, and U.S. Environmental Protection Agency, *Gold King Mine August 14, 2015 Video 8* (Aug. 14, 2015), <https://www.youtube.com/watch?v=Xvrs5f-DVW0&feature=youtu.be>. (emphasis added).

- A 3:

1. See, EPA ADDENDUM, DOI TECHNICAL EVALUATION, and Email from Hays Griswold, On Scene Coordinator, U.S. Environmental Protection Agency Agency, to David Ostrander, Director of Emergency Response and Preparedness, U.S. Environmental Protection Agency (Oct. 28, 2015) (on file with U.S. Environmental Protection Agency), and U.S. House Committee on Natural Resources Subcommittee on Oversight and Investigations telephone call with Elliott Petri, Professional Engineer, Weston Solutions (Nov. 13, 2015).
2. Elliott Petri, Photo of Gold King Mine Adit, Photo no 2015-08-0946 (Aug. 5, 2015) (on file with U.S. Environmental Protection Agency).
3. Elliott Petri, Photo of Gold King Mine with Two Men, Doc no ER 000522 (Aug. 5, 2015) (on file with U.S. Environmental Protection Agency).
4. Elliott Petri, Photo of Gold King Mine Adit with Berm, Photo no 2015-08-1051 (Aug. 5, 2015) (on file with U.S. Environmental Protection Agency).

- A 4:

1. DOI TECHNICAL EVALUATION, at 47-48.
2. U.S. House Committee on Natural Resources Subcommittee on Oversight and Investigations telephone call with Elliott Petri, Professional Engineer, Weston Solutions (Nov. 13, 2015).

- A 5:

1. DOI TECHNICAL EVALUATION, at 48.
2. Elliott Petri, Photo of Pipe Remnant, Photo no 2015-08-1608 (Aug. 4, 2015) (on file with U.S. Environmental Protection Agency), and Elliott Petri, Photo with Timbers, Photo no 2015-08-0915 (Aug. 5, 2015) (On file with U.S. Environmental Protection Agency). See also, DOI TECHNICAL EVALUATION at 52-53. (emphasis added).

- A 6:
 1. Elliott Petri, Photo of Timbers at Adit, Photo no 2015-08-0915 (Aug. 5, 2015) (on file with U.S. Environmental Protection Agency).
 2. Elliott Petri, Photo of Gold King Adit Excavation in Progress, Photo no 2015-08-0946 (Aug. 5, 2015) (on file with U.S. Environmental Protection Agency).

- A 7:
 1. *Id.*
 2. Elliott Petri, Photo of Water Spurt, Photo no 2015-08-1051 (Aug. 5, 2015) (on file with U.S. Environmental Protection Agency).

- A 8:
 1. *Id.*
 2. Elliott Petri, Photo of Channel, Photo no 2015-08-1054 (Aug. 5, 2015) (on file with U.S. Environmental Protection Agency).

- A 9:
 1. *Id.*
 2. U.S. Environmental Protection Agency, *Gold King Mine August 5, 2015 Video 9* (Aug. 5, 2015) (on file with U.S. Environmental Protection Agency).

- A 10:
 1. *Id.*
 2. Elliott Petri, Photo of Gold King Adit Post-Blowout, Doc no ER 002848 (Aug. 5, 2015) (on file with U.S. Environmental Protection Agency).

- A 11:
 1. Elliott Petri, Photo of Timbers at Adit, Photo no 2015-08-0915 (Aug. 5, 2015) (on file with U.S. Environmental Protection Agency).
 2. Elliott Petri, Photo of Gold King Adit Post-Blowout, Doc no ER 002848 (Aug. 5, 2015) (on file with U.S. Environmental Protection Agency).

- A 12:
 1. Appendix, supra A 6-A 12.

- A 13:
 1. DOI TECHNICAL EVALUATION, at 48-50.
 2. U.S. House Committee on Natural Resources Subcommittee on Oversight and Investigations telephone call with Elliott Petri, Professional Engineer, Weston Solutions (Nov. 13, 2015).

- A 14:
 1. DOI TECHNICAL EVALUATION, at 29.
 2. COLORADO DIVISION OF MINERALS AND GEOLOGY, MINERALS PROGRAM INSPECTION REPORT (Nov. 5, 2004).
 3. Todd Hennis, Photo of Gold King Mine Portal Construction (1984) (on file with U.S. House Committee on Natural Resources).

- A15:
 1. STEVEN WAY, U.S. ENVIRONMENTAL PROTECTION AGENCY, POLREP #1 (INITIAL POLLUTION REPORT) – REMOVAL ASSESSMENT GOLD KING MINE SITE (Sep. 25, 2014), http://www.epa.gov/sites/production/files/2015-08/documents/goldkingmine_polrep1_9-23-14_redacted.pdf, [hereinafter 2014 WAY REPORT], and EPA INTERNAL REVIEW.
 2. DOI TECHNICAL EVALUATION, at 38.

- A 16:
 1. Environmental Restoration LLC, Photo of Mine with Channel, Doc no 409 (2014), Environmental Restoration LLC, Photo of Channel, Doc no ER001428 (2014) (on file with U.S. Environmental Protection Agency) , and Environmental Restoration LLC, Photo of Channel and Half Pipe, Doc No ER 001517 (2014) (on file with U.S. Environmental Protection Agency).

- A 17:
 1. DOI TECHNICAL EVALUATION, at 39 and 40.
 2. Environmental Restoration LLC, Photo of Two Men at Gold King Adit, Doc no ER 000501 (2014) (on file with U.S. Environmental Protection Agency).
 3. Environmental Restoration LLC, Photo of Blue Pipes, Doc no. 2014-09-11 (2014), and DOI TECHNICAL EVALUATION, at 40.

- A 18:
 1. DOI TECHNICAL EVALUATION, at 39.
 2. *Id.* at 38. Inset, Environmental Restoration LLC, Photo of Gold King Level 7 Adit, Doc no ER 000503 (2014) (on file with U.S. Environmental Protection Agency).
 3. DOI TECHNICAL EVALUATION, at 37.

- A 19:
 1. 2014 WAY REPORT, and EPA INTERNAL REVIEW.
 2. DOI TECHNICAL EVALUATION, at 38.
 3. Environmental Restoration LLC, Photo of Gold King Level 7 Adit, Doc no ER 000503 (2014) (on file with U.S. Environmental Protection Agency).

- A 20:
 1. DOI TECHNICAL EVALUATION, at 48-50.
 2. *Id.* at 38.
 3. Environmental Restoration LLC, Photo of Gold King Level 7 Adit, Doc no ER 000503 (2014) (on file with U.S. Environmental Protection Agency).

- A 21:
 1. DOI TECHNICAL EVALUATION, at 27.
 2. Todd Hennis, Photo of Gold King Mine Adit (Sept. 2009) (on file with U.S. House Committee on Natural Resources).
 3. Todd Hennis, Photo of Gold King Mine Drainage (Sept. 2009) (on file with U.S. House Committee on Natural Resources).
 4. Environmental Restoration LLC, Photo of Gold King Level 7 Adit, Doc no ER 0001428 (2014) (on file with U.S. Environmental Protection Agency).

- A 22:
 1. EPA INTERNAL REVIEW, at 6, and 2014 WAY REPORT.
 2. *Id.* and DOI TECHNICAL EVALUATION, at 46.
 3. Environmental Restoration LLC, Photo of Mine with Grate, Doc no ER 000499 (2014) (on file with U.S. Environmental Protection Agency), and Environmental Restoration LLC, Photo of Possible Seepage, Doc no ER 000500 (2014) (on file with U.S. Environmental Protection Agency).
 4. Environmental Restoration LLC, Photo of Gold King Level 7 Adit, Doc no ER 000503 (2014) (on file with U.S. Environmental Protection Agency).

- A 23:
 1. COLO. DIV. OF RECLAMATION, MINING & SAFETY, PROJECT SUMMARY: GOLD KING BOND FORFEITURE M-1986-013, PHASE I – 2008 PERMANENT PORTAL DISCHARGE DIVERSION STRUCTURE (2008), and DOI TECHNICAL REVIEW at 32.
 2. Environmental Restoration LLC, Removal of Stinger, Doc no ER 1435 (2014) (on file with U.S. Environmental Protection Agency).
 3. DOI TECHNICAL EVALUATION, at 35 and 39.

- A 24:
 1. U.S. Environmental Protection Agency, *Gold King Mine August 14, 2015 Video 5* (Aug. 14, 2015), <https://www.youtube.com/watch?v=h1dZX40fiDA&feature=youtu.be>.
 2. EPA INTERNAL REVIEW, at Attachment E.

- A 25:
 1. U.S. Environmental Protection Agency, *Gold King Mine August 14, 2015 Video 5* (Aug. 14, 2015), <https://www.youtube.com/watch?v=h1dZX40fiDA&feature=youtu.be>.
 2. DOI TECHNICAL EVALUATION, at 37.
 3. Elliott Petri, Photo with Timbers, Photo no 2015-08-0915 (Aug. 5, 2015) (on file with U.S. Environmental Protection Agency).

- A 26:

1. Elliott Petri, Photo of Buried Pipe, Photo no 2015-08-1156 (Aug. 4, 2015) (on file with U.S. Environmental Protection Agency).
2. Elliott Petri, Photo of Stream Drainage, Photo no 2015-08-1220 (Aug. 4, 2015) (on file with U.S. Environmental Protection Agency).
3. Elliott Petri, Photo of Pooling, Photo no 2015-08-1608 (Aug. 4, 2015) (on file with U.S. Environmental Protection Agency).
4. U.S. House Committee on Natural Resources Subcommittee on Oversight and Investigations telephone call with Elliott Petri, Professional Engineer, Weston Solutions (Nov. 13, 2015).

- A 27:

1. See, Bruce Finley, Animas River Spill: Hurdles Remain at Gold King, Photo 1/5, The Denver Post (Aug. 14, 2015), http://www.denverpost.com/environment/ci_28638259/hurdles-remain-at-gold-king. See also, Environmental Restoration LLC, Photo of Mountainside, Doc no ER 00545 (Aug. 2015) (on file with U.S. Environmental Protection Agency), and Environmental Restoration LLC, Photo of Bulldozer and Washed-Out Mountainside, Doc no ER 00542 (Aug. 2015) (on file with U.S. Environmental Protection Agency).
2. U.S. House Committee on Natural Resources Subcommittee on Oversight and Investigations telephone call with Bruce Stover, Director, Inactive Mine Reclamation Program, Colorado Division of Reclamation, Mining, & Safety (Oct. 22, 2015).