

August 24, 2015



Karin Madsen
UtahAmerican Energy, Inc.
P.O. Box 910
East Carbon, Utah 84520

Dear Ms. Madsen:

In 2004, West Ridge Resources contracted with RB&G Engineering, Inc. to provide engineering services including instrumentation installation, visual observation, monitoring, and evaluation of Mining Induced Seismicity (MIS) at Grassy Trail Dam and Reservoir. On-site instrumentation used for monitoring included (1) piezometers, (2) inclinometers, and (3) seismographs. Daily monitoring of activity from nearby stations recorded by the University of Utah Seismic Station (UUSS) was also performed during mining. Monitoring continued during mining through May 2012. Frequency of monitoring was planned to be dependent upon mining locations and their proximity to the dam and reservoir.

We understand that the longwall mining operation started up again in March 2015 and is currently taking place in Panel 19. This panel starts about 2800 feet northeast of the dam. We were asked to initiate monitoring starting the first of August. Michael Hansen, the engineering geologist that has performed monitoring since 2005, made an initial site visit on August 5th and a second visit on August 13 and 14th. Copies of his project reports for these site visits are included herewith.

As recorded, readings were obtained on all inclinometers except I-1 located on the left side of the dam at the crest. This inclinometer has been covered with fill and could not be located during the initial visits. A survey and metal detector will be used during the next visit to locate the inclinometer metal cover. It is noted that this inclinometer experienced very minor movement through mid 2012.

We have also plotted the piezometer levels and drain flows obtained by East Carbon City and submitted to the Utah State Dam Safety Engineer. These readings and plots are also included. It is noted that readings of the right abutment seepage do not appear to be correct. Flow was observed going down the road. As stated in the project report, this flow needs to be diverted back

into the proper channel to monitor flow rates. Readings show that flow from the left abutment drain increased about 5 gpm from 7/15/15 to 8/13/15, with no increase in reservoir elevation. Flow in the toe drain increased about 6 gpm between 7/31/15 and 8/13/15. While the flow quantity is not alarming, the sudden change raises concern. We will verify these flows during our next site visit.

Based upon visual observations, inclinometer readings, and evaluation of piezometer levels and drain flows, the dam appears to be performing in a satisfactory manner at present. No sign of significant landslide movement was noted or observed on the abutments or within or adjacent to the reservoir basin.

As per your direction, to comply with regulatory requests while mining is occurring, we will make site visits every two weeks and monitor instrumentation. We will check the UUSS records daily and take appropriate action if threshold values are observed. Reports will be provided to you following each site visit and the State Dam Safety Engineer will be notified of any significant changes which occur.

If there are any questions regarding the information contained herein, please call.

Sincerely,

RB&G ENGINEERING, INC.

A handwritten signature in blue ink that reads "Bradford E. Price". The signature is written in a cursive style with a large initial 'B'.

Bradford E. Price, P.E.

bep/jal

Cc: David Hibbs

PROJECT REPORT

Project No.	201404-006		
Project	Grassy Trail – West Ridge Mine		
Day / Date	Wednesday / August 5, 2015	Weather	
Report By	Michael N. Hansen	Position	Engineering Geologist

Observations / Activities

Inclinometers

Inclinometers 2, 3 and 4 are open to the bottom.

Inclinometer I-1 (left abutment) is buried under 6-12 inches of new fill material that was placed on the crest of the dam.

I-4 was dug out from under the slide material during this site visit.

Accelerometers

Both accelerometers need to be calibrated and have new batteries installed. The North Hillside unit solar power tower is broken off and power cords have been eaten by rodents and needs repairs.

North Hillside Unit: Monitored from June 9, 2012 to December 10, 2012 and recorded 166 events.

The Dam Unit: Monitored from June 9, 2012 to May 11, 2014 with 122 events recorded.

Piezometers

Piezometers are being read every two weeks by the East Carbon City.

Seepage Monitoring

Right abutment seepage is not flowing into the culvert that drains the water under the road. The flow is currently going down the road. The flow needs to be diverted back into the proper channel either by digging by hand or backhoe. Until then, flow rates can't be calculated.

PROJECT REPORT

Project No.	201404-006		
Project	Grassy Trail – West Ridge Mine		
Day / Date	Thursday - Friday / August 13-14, 2015	Weather	
Report By	Michael N. Hansen	Position	Engineering Geologist

Observations / Activities

West Ridge Mine stopped operations at the end of Panel 18 in February, 2013. Mining operations started again in Panel 19 during March, 2015.

Inclinometers I-2, I-3, and I-4 were read on August 13-14, 2015. Inclinometer I-1 was not read as it is currently buried beneath new fill material placed on the crest of the dam. This instrument will need to be uncovered. In the past, I-1 had shown a total of less than 0.25 inches of movement through June 2012.

Inclinometer I-2 has shown the most movement since MIS monitoring began in 2005, with a total of about 3.75 inches of displacement. From June of 2012 to August 2015, this inclinometer shows about 0.25 inches of movement. Inclinometers I-3 and I-4 currently show that no significant movement has occurred since June 2012. Plots of the inclinometer readings are attached.

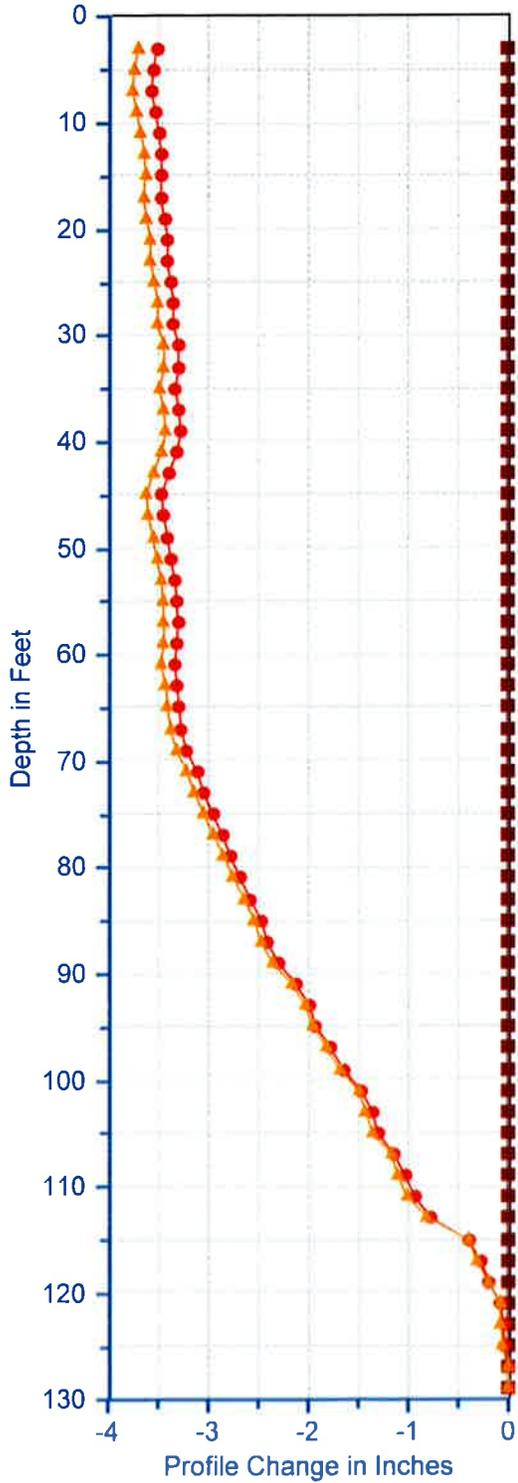
The accelerometer located on the crest of the dam was reactivated on August 13, 2015. The Accelerometer which had been located on the hillside about 0.9 miles north of the dam was removed and is currently being repaired and calibrated. This accelerometer should be back and ready for installation by the end of August. Within the past couple of months the largest seismic event reported by the UUSS within the area was a magnitude 1.2 on August 11, 2015.

Reservoir elevation and piezometer readings are being taken by East Carbon City every 2 weeks and available online at the Dam Safety Website. At the time of this site visit the water level in the reservoir was 1.6 feet below the top of the spillway.

During the site visit, no sign of significant landslide movement was noted on the hillsides or at the dam.

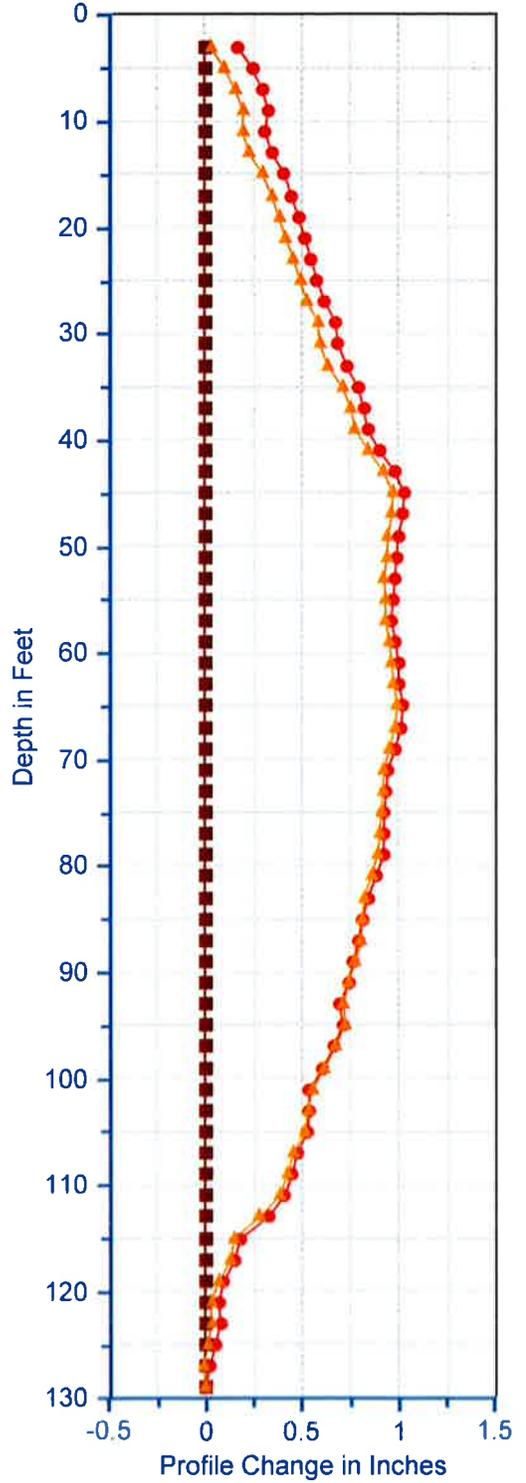
GRASSY 2A A

7/20/2004 6/10/2012 8/13/2015



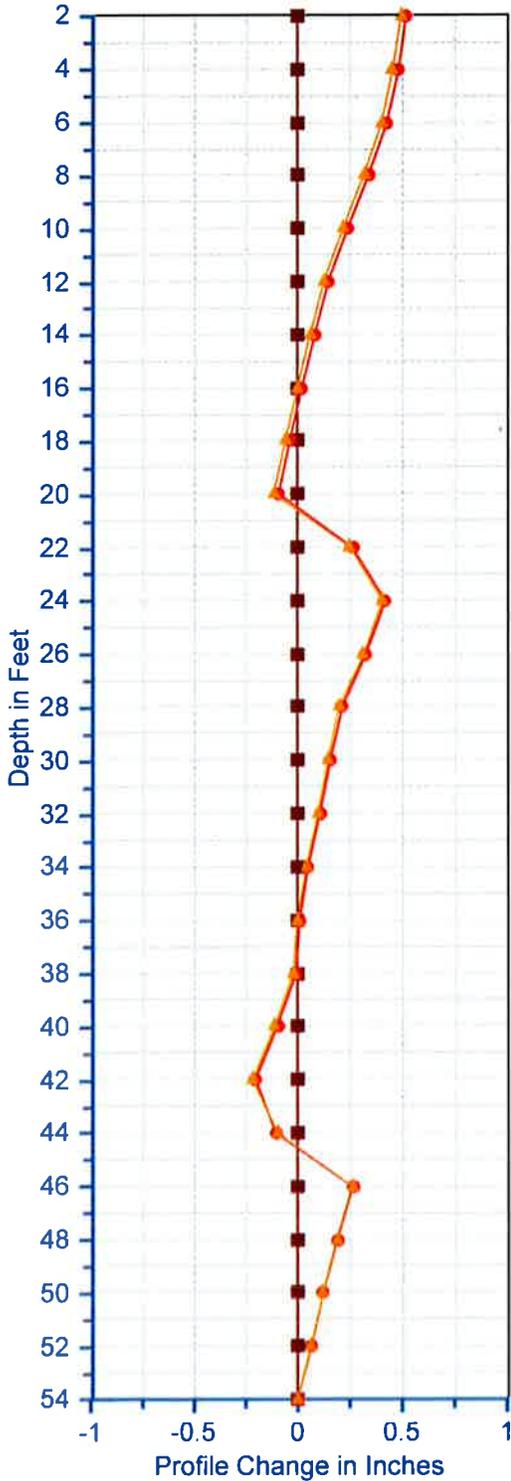
GRASSY 2A B

7/20/2004 6/10/2012 8/13/2015



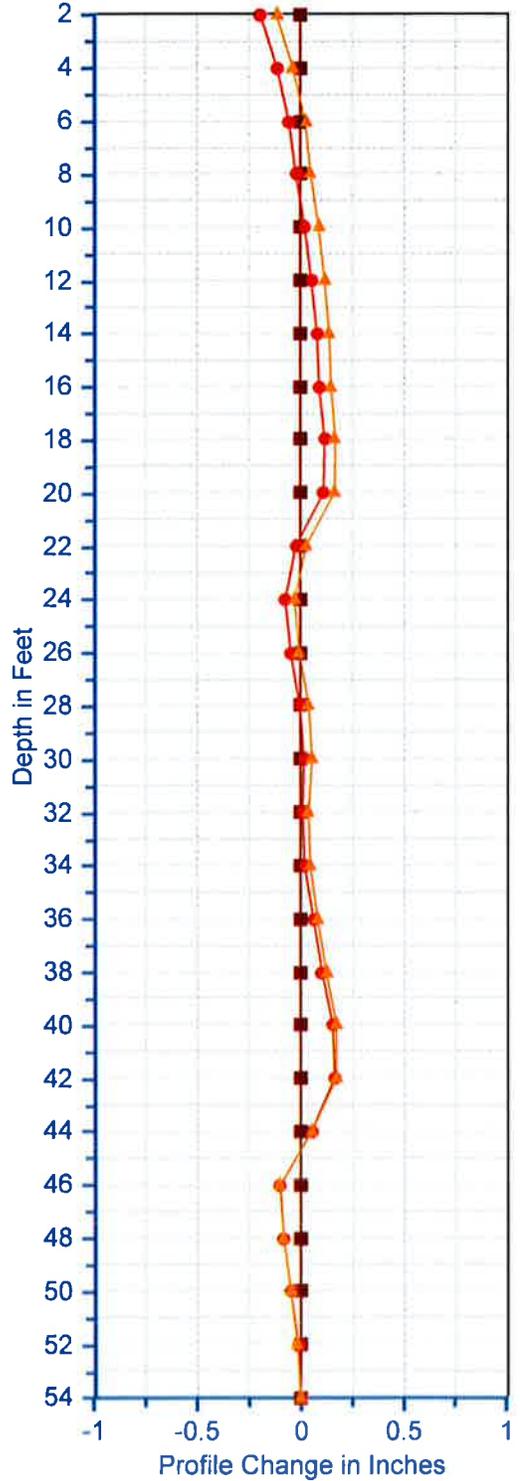
GRASSY 3A A

7/20/2004 6/10/2012 8/13/2015



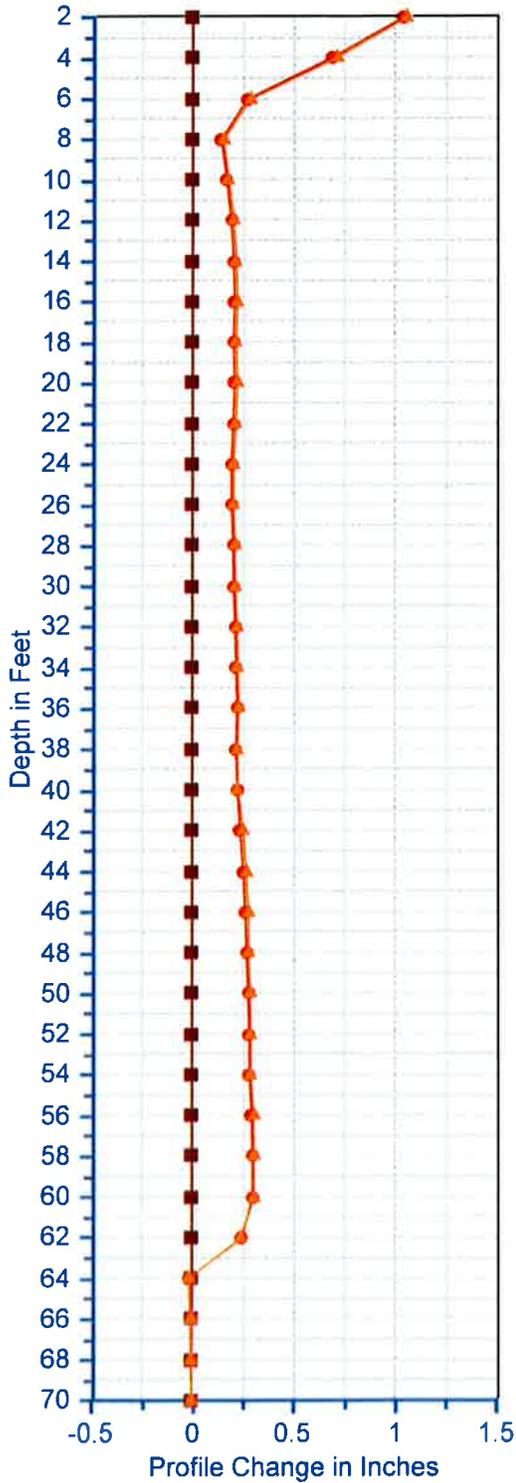
GRASSY 3A B

7/20/2004 6/10/2012 8/13/2015



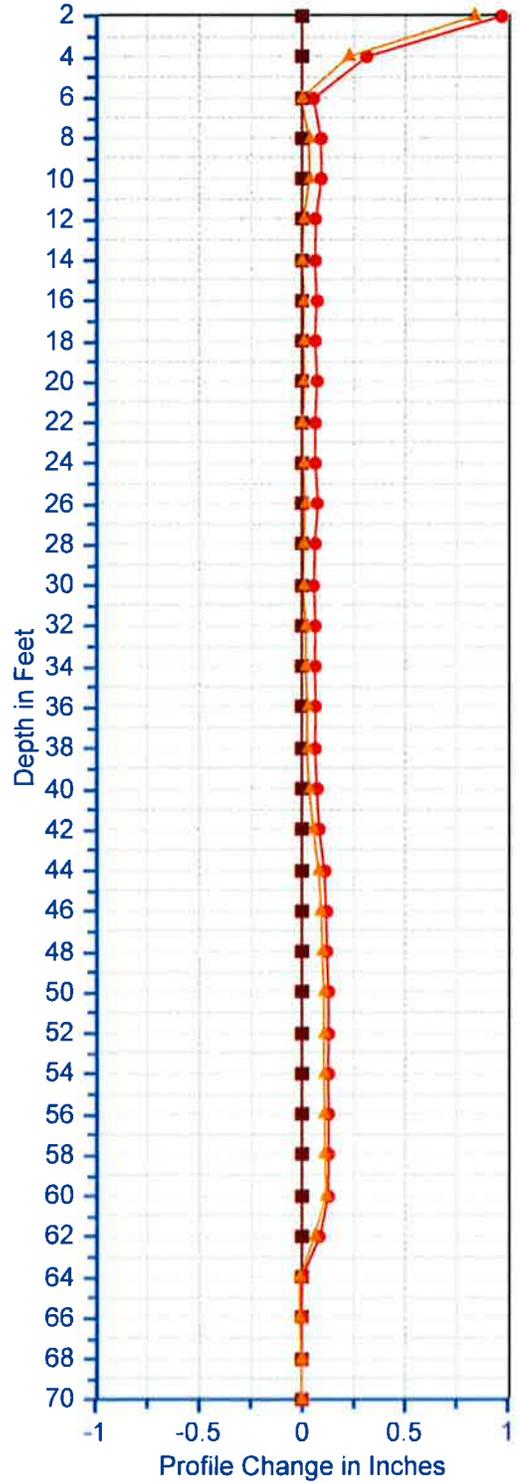
Grassy 4 A

2/16/2005 10/23/2010 8/14/2015



Grassy 4 B

2/16/2005 10/23/2010 8/14/2015



GRASSY TRAIL DAM SEEPAGE READINGS

Dam Crest Elev(ft)		7600.0	Seep1:Toe Drain			Seep 2: Left Abutment (East Seep)		Seep 3: Right Abutment (West Seep)			
Spillway Elev. (ft)		7592.5	Seep Location:								
Date	Initials	Reservoir Elev.	Reservoir Characteristics	GAL/MIN	Water Characteristics	GAL/MIN	Water Characteristics	GAL/MIN	Water Characteristics	Weather Conditions	Temperature (°F)
10/15/2014	Values taken from Dam Safety web page	7582.417		0.006		1.765		0.001			
10/24/2014		7582.417		0.006		1.775		0.001			
11/13/2014		7581.667		0.001		1.579		0.001			
12/5/2014		7581.5		0.006		1.563		0.001			
12/18/2014		7581.333		0.006		1.546		0.001			
12/31/2014		7581.25		0.006		1.531		0.001			
1/16/2015		7581.25		0.006		1.25		0.001			
2/10/2015		7581.5		0.006		1.245		0.001			
2/23/2015		7581.667		0.006		1.25		0.001			
3/6/2015		7581.75		0.006		1.261		0.001			
3/19/2015		7582.167		0.006		1.327		0.001			
5/4/2015		7583.5		0.006		1.974		0.001			
5/26/2015		7586.083		0.006		1.333		0.001			
7/14/2015		7591.5		0.006		1.339		0.001			
7/15/2015		7591.5		0.006		1.339		0.001			
7/31/2015		7590.75		0.006		7.692		0.001			
8/13/2015	7590.5			6		6					

Grassy Trail Dam Reservoir Elevation and Piezometer Readings

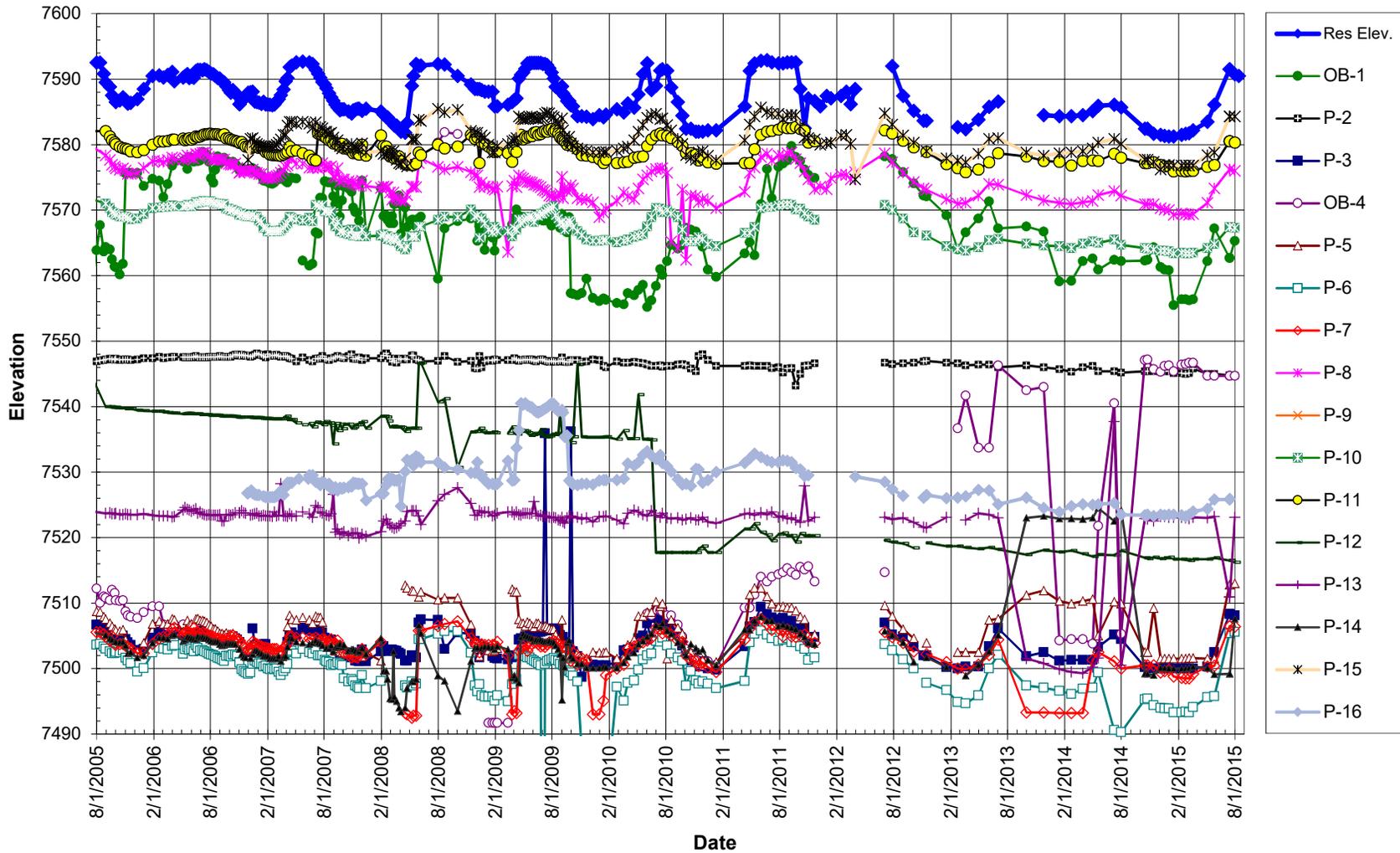


Figure Reservoir Elevation and Piezometer Readings
August 2005 to August 2015

Grassy Trail Dam and Reservoir

Grassy Trail Dam Reservoir Elevation and Piezometer Readings

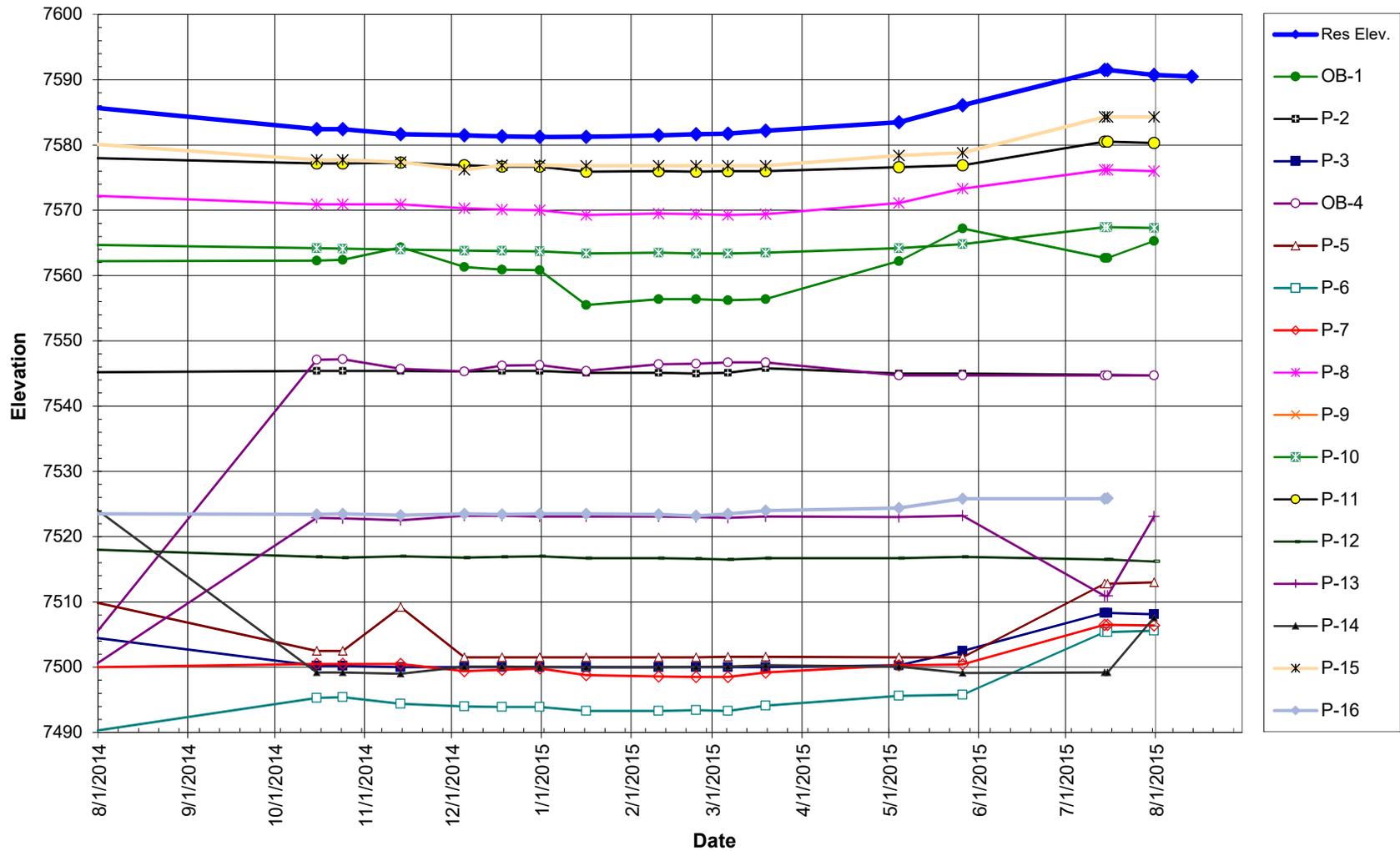


Figure Reservoir Elevation and Piezometer Readings
August 2014 to August 2015

Grassy Trail Dam Reservoir Elevation and Seepage Readings

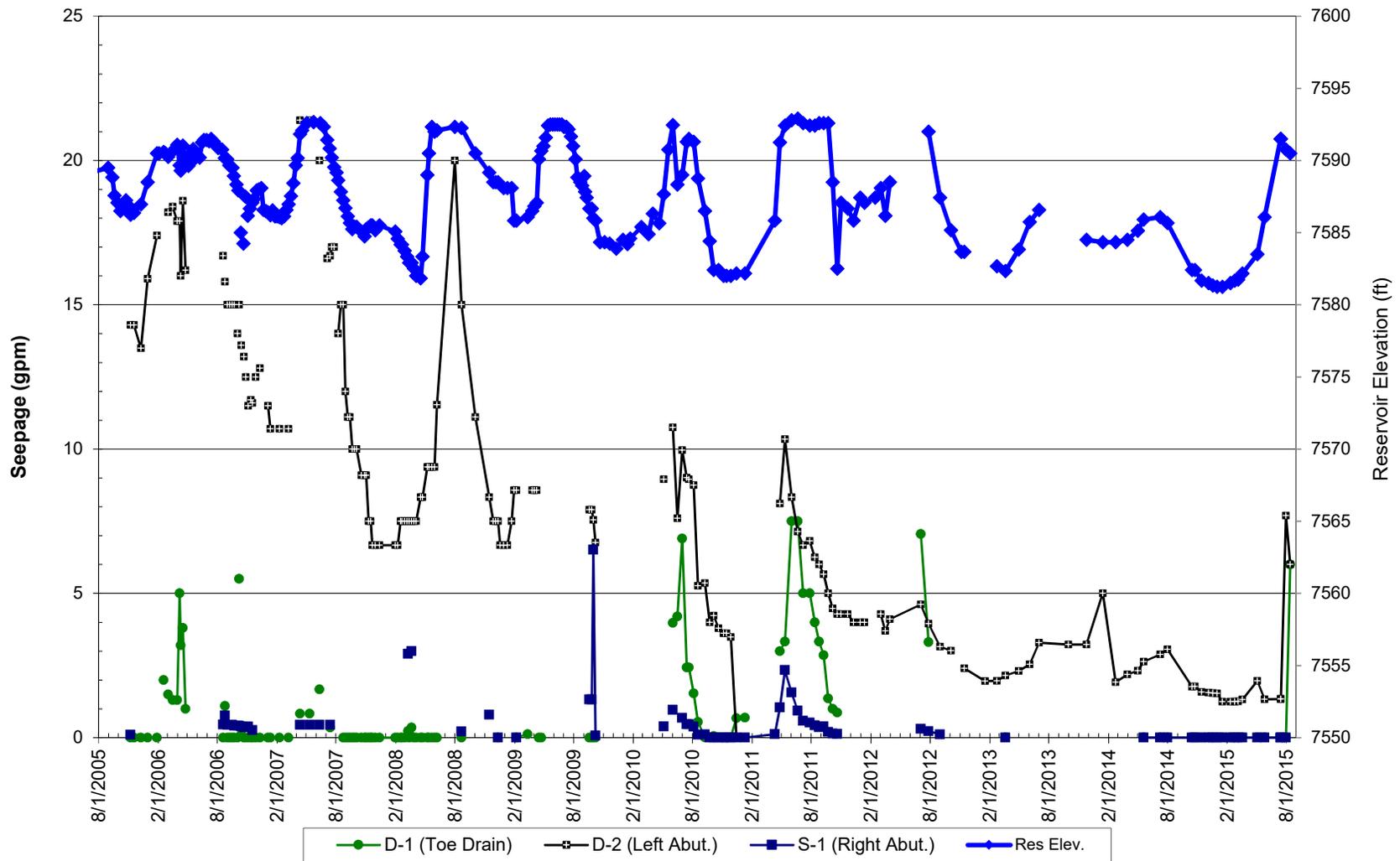


Figure Reservoir Elevation and Seepage Readings
August 2005 to August 2015

Grassy Trail Dam and Reservoir

Grassy Trail Dam Reservoir Elevation and Seepage Readings

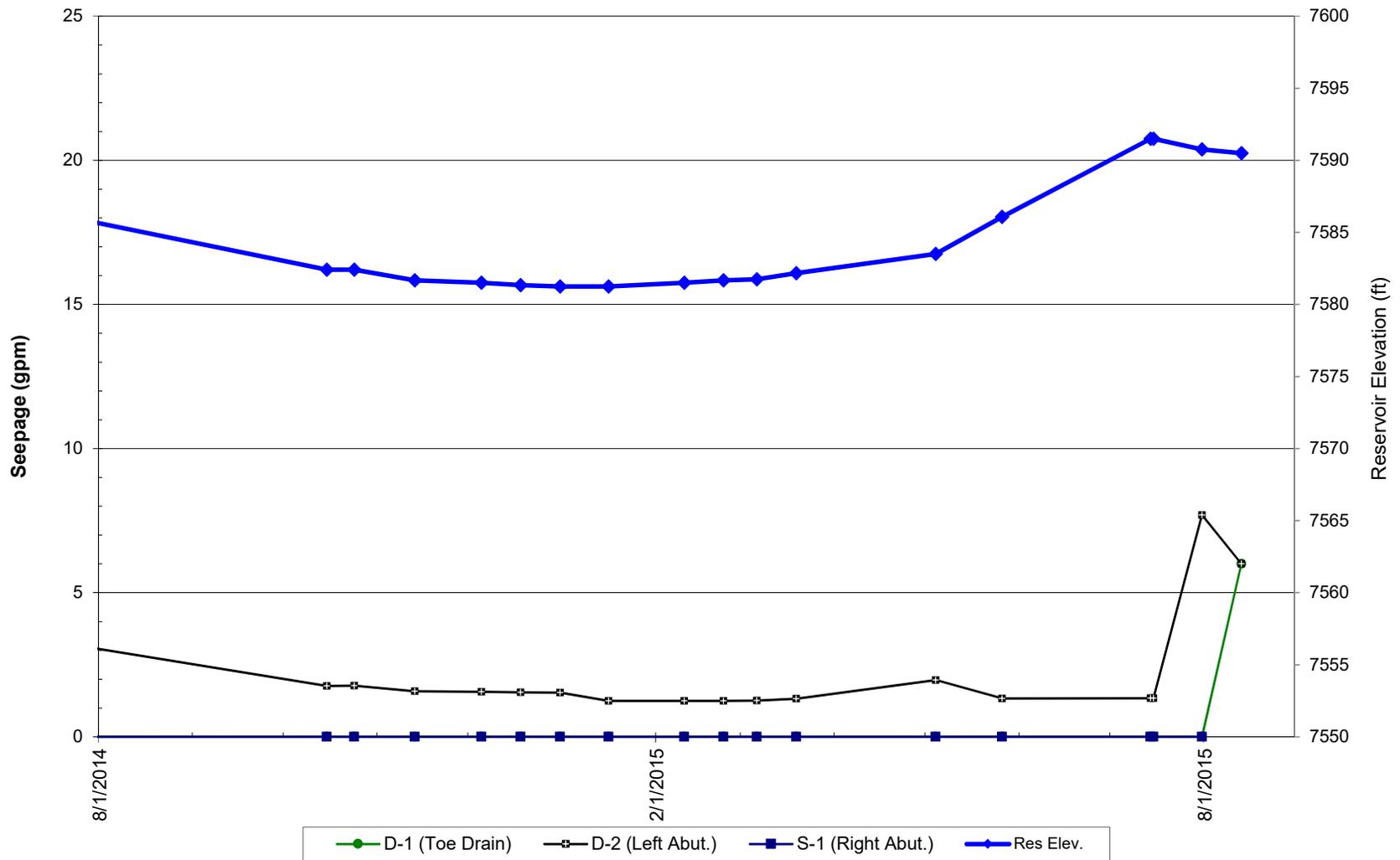


Figure Reservoir Elevation and Seepage Readings
August 2014 to August 2015

Grassy Trail Dam and Reservoir