



John T. Boyd Company
Mining and Geological Consultants

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James W. Boyd

President and CEO
John T. Boyd II

Managing Director and COO
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Ian L. Alexander

Managing Director - China
Jisheng (Jason) Han

Managing Director - South America
Carlos F. Barrera

Assistant to the President
Mark P. Davis

Pittsburgh
4000 Town Center Boulevard, Suite 300
Canonsburg, PA 15317
(724) 873-4400
(724) 873-4401 Fax
jtboyd@jtboyd.com

Denver
(303) 293-8988
jtboydd@jtboyd.com

Brisbane
61 7 3232 5000
jtboydau@jtboyd.com

Beijing
86 10 6500 5854
jtboydent@jtboyd.com

Bogota
+57 3115382113
jtboydc@jtboyd.com

www.jtboyd.com

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New York State Department of Environmental Conservation
Bureau of Resource Management & Development
Division of Mineral Resources
625 Broadway, Third Floor
Albany, NY 12233-6500

Attention: Mr. Matthew Podniesinski
Chief, Resource Development Section
Bureau of Resource Management &
Development

Subject: Annual Report Review - 2014
Cayuga Mine, Cargill, Inc.
Seneca and Tompkins Counties, New York

Gentlemen:

John T. Boyd Company (BOYD) received a CD from Cargill Deicing Technology (Cargill) on January 16, 2015 and post-marked January 14, 2015. The CD included a cover letter¹, the Annual Report², maps as AutoCAD® files, extensometer and closure readings as Excel® files, and consultant reports. Two reports are from RockTec

¹ Plumeau, David B., 2015, untitled letter from Cargill Deicing Technology to Vincent A. Scovazzo, John T. Boyd Company, January 9.

² Cargill Deicing Technology, 2014, "Annual Report for Mine File #709-3-29-0052; Cayuga Salt Mine, Permit ID#0-9999-00075-00001," with cover letter from Shawn G. Wilczynskito to Matthew Podniesinski of New York State Department of Environmental Conservation, November 24.

"Large" events are those with a magnitude of 0.5 or greater. The frequency of large events located north of U52, peaked in January 2011 when mining was occurring beneath a line defined by the location of these events. The frequency of large event south of S3 has declined since early 2012.

Mr. Petersen noted in his second report that "... mine-wide closure rate graphs and, except for those areas mentioned in this report, they were all indicating very stable conditions." Drawing the same conclusions for U-40B, U12, and U28, he repeated recommendations for mining near the anomaly in the north, and repeated the microseismic discussion as in the first report.

A RESPEC report was also reviewed. RESPEC discussed the closure rate for U40B which peaked in 2008. The increase in rate started in 2006 and backfilling started in August 2007. RESPEC does not expect closure rates to slow until after the openings close approximately 4 ft. But in contradiction RESPEC noted that closure rates for some stations are less than those before 2006 but they do not expect other stations' closure rate to be below pre-2006 rates for several years to come.

Panel U12 experienced an upturn in closure rates between 2006 and 2008, which was most pronounced in and near the intersections U12A/SW2 and U12/U12A. "The closure rates in U12 have declined since 2011, but are still greater than expected based on pre-2005 measurements ..." and as experienced throughout the mine. U12's 1993 backfill has not compacted enough to curtail closure.

RESPEC also notes "Well data in the northern part of the Cayuga Lake Valley have determined that brine is present on top of and in between beds in the Salina Group. The Frontenac Point Anomaly may reflect the southern extent of water infiltration." RESPEC opines that the planned 1,000 ft buffer around Frontenac Point Anomaly should prevent a hydraulic connection with the mine. Further, "As the mine progresses north, microseismic monitoring to detect anomalies and drilling in advance of the faces to detect an increase in moisture or presence of water is recommended as a precaution."

RESPEC notes that "Salt dissolution near the injection point on the 4-Level is visible and the pillars are being undercut ...", which can possibly result in mine collapse. And noting "A major collapse in this area could have a significant effect on Cayuga Lake's shoreline and the mine shafts. Continued dumping of waste salt at the base of the No. 2 Shaft is encouraged to increase salt saturation before the inflow enters the west pond."