

Date

On 6/23/2017 4:39:02 PM, Records Access wrote:
Dear John:

Thank you for your Freedom of Information Law (FOIL) request. Your request has been received and is being processed. Your request was received in this office on 6/23/2017 and given the reference number FOIL #W023582-062317 for tracking purposes. You may expect the Department's response to your request no later than **7/24/2017**.

Record Requested: All reports on the operation of Cayuga Salt Mine from year 2000 to the present including but not limited to those submitted to DEC by Cargill and including all CDs, all maps as AutoCad or Adobe Acrobat files, all extensometer and closure readings as Excel or other digital files, all consultant reports including but not limited to those reports from ESC, RESPEC, Rock Mechanics Assist and RockTec Solutions, and any other materials submitted as part of the annual report submission process including materials only sent to John T. Boyd company and not copied to a DEC office.

You can monitor the progress of your request at the link below and you'll receive an email when your request has been completed. Again, thank you for using the FOIL Center.

<https://mycusthelp.com/NEWYORKDEC/rs/RequestLogin.aspx>

New York State Department of Environmental Conservation, Record Access Office

Track the issue status and respond at: <https://mycusthelp.com/NEWYORKDEC/rs/RequestEdit.aspx?rid=23582>

On 6/23/2017 4:39:02 PM, wrote:
Request was created by customer

Request Details

Reference No: W023582-062317
Create Date: 6/23/2017 4:39 PM
Update Date: 7/12/2017 1:31 PM
Completed/Closed: No
Required Completion Date: 7/24/2017

Status: Processing
Priority: Medium
Assigned Dept: Regional Admin
Assigned Staff: Region 7 FOIL Coordinator

Customer Name: Dr. John Dennis
Email Address: johnvdennis@gmail.com
Phone: 6072275172

Source: Web

From: <Dave_Plumeau@cargill.com>
To: <psbriggs@gw.dec.state.ny.us>
CC: <paul.nelson@respec.com>
Date: 9/29/2008 9:55 AM
Subject: FW: Cargill Cayuga Rock Salt Mine

In further response to your original e-mail to me regarding Item #2 - subsidence effects on deep wells.

Issue #2 - Effect that mine subsidence might have on a well drilled within the subsidence bowl (i.e., possible casing damage/shearing):
 Before this issue can be evaluated and discussed further, a few questions for you. Does Cargill have a model showing the extent of the "bowl" and predicted horizontal displacement at varying depths over the area?
 Does the predicted subsidence bowl extend beyond lands owned or otherwise under the control of Cargill? Does Cargill currently have monuments and monitor for subsidence in the bowl? If "yes", how have predictions compared with measured results?

Cargill has been monitoring surface subsidence since about 1977. This is in the form of surface benchmarks which are surveyed for elevation periodically. While mining was beneath the greater Lansing area, they were surveyed annually for many years. Once mining ceased there, the surveys were conducted less often - about every 3 to 5 years. Because these surveys were across the Lansing area we have a decent understanding of the areal extent of the surface effects of mining. Our rule of thumb is that we detected elevation changes a distance away from the edge of mining equal to the depth. Where mining was 2,600 feet deep, the detectable effects extended about 2,500 feet laterally beyond the mine footprint. With the more recent mining being exclusively under the lake (since about 1990), we have been monitoring elevation changes along the highways and railroads adjacent the lake shore.

Cargill owns about 170 acres around our plant site. Beyond that we own the mineral rights for another 1500 acres beneath the land, and lease another 5000 acres of mineral rights beneath Cayuga Lake (through NYS OGS). Because we are mining mineral rights well beyond Cargill's owned land, the subsidence bowl extends very far from Cargill's property.

Regarding modeling, we have used the services of RESPEC in Rapid City, SD for about 14 years to model the subsidence using a standard program. Paul Nelson's response to your question is below. In general, the predictions of SALT_SUBSID compare favorably with the measured results. However this is not intended to predict horizontal shearing but only vertical movement. Because of the nature of rock salt, the mine will continue to squeeze closed until the roof is resting on the floor. Subsidence will continue for the thousand years that this takes. Long term shear damage to well casings could endanger any future uses for the mine - storage facility, waste repository, research facility, or who knows what else.

I am getting a map made up for our filing. This will make our property and mineral rights situation clear to you.

- > Dave....
- > Sr. Mine Engineer
- > Cargill Delcing Technology, Cayuga Mine, Lansing, NY
- > 607-533-3736
- > On enthusiasm: "Your energy and enjoyment, drive and dedication will stimulate and greatly inspire others" Coach John Wooden.
- >
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-----Original Message-----
From: Paul.Nelson@respec.com [mailto:Paul.Nelson@respec.com]
Sent: Monday, September 22, 2008 3:30 PM
To: Plumeau, Dave X. - Dave_Plumeau@cargill.com
Cc: Leo.VanSambeek@respec.com; John.Osnes@respec.com
Subject: RE: Cargill Cayuga Rock Salt Mine

Dave,

SALT_SUBSID does have the capability of predicting casing strains, but it is a very crude approximation, so I would not use it.

We did very recently perform an analysis to predict subsidence and casing strains based on the location and volumetric extraction of sulfur. I think that this analysis technique can be easily adapted to

your situation.

Give Peter my regards.

Paul E. Nelson, M.S., P.E.
Project Engineer

RESPEC
3824 Jet Drive/P.O. Box 725
Rapid City, SD 57709-0725
605.394.6400 (voice)
605.394.6456 (fax)