

From: Howe, Cheryl (DEQ)
To: "[Wehner, Doug \(DB\)](#)"
Cc: [Detrich, Kurt \(KL\)](#); [Bennett, Shane](#); "[Gautam, Vik](#)"; [Olenczuk, Tom \(TJ\)](#); [Gaudreau, Brent \(BT\)](#); [Montgomery, Delores \(DEQ\)](#); [Taylor, Al \(DEQ\)](#); [Qian, Xuede \(DEQ\)](#); [Himich, Virginia \(DEQ\)](#); [Browne, Elizabeth \(DEQ\)](#); [Ostaszewski, Arthur \(DEQ\)](#)
Subject: RE: Dow Chemical RCRA License MID 000 724 724 - Amendment 15 - Shear Testing of Materials Results - Revised Stability Analysis
Date: Tuesday, December 03, 2013 5:20:00 PM

This will confirm that Dr. Xuede (Dan) Qian of the Department of Environmental Quality, Office of Waste Management and Radiological Protection (OWMRP), has completed his review of the revised slope stability calculations conducted by URS-Cleveland and submitted via e-mail earlier today. These revised calculations are based on the shear strengths of 44 degrees for 4AA material and 37 degrees for 21AA material, which were obtained from the lab direct shear tests. Dr. Qian found the results of the calculations and the resulting factors of safety to be acceptable; therefore, construction may proceed as proposed, and remains subject to the requirements stipulated in Dow's Operating License Amendment 15 that was approved on August 27, 2013.

The OWMRP requests Dow to provide some photo documentation of the dike construction, along with other relevant construction certification documentation.

The OWMRP will post the revised Stability Analysis and this approval on the DEQ web site to make these changes available to the public, so there will be no need to send an amended modification notice out to the facility mailing list.

Please contact me at the address or phone number below if you should have any questions regarding this e-mail.

Cheryl Howe
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Hazardous Waste Section
Office of Waste Management and Radiological Protection
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From: Wehner, Doug (DB) [mailto:DBWehner@dow.com]
Sent: Tuesday, December 03, 2013 9:58 AM
To: Taylor, Al (DEQ); Qian, Xuede (DEQ)
Cc: Detrich, Kurt (KL); Bennett, Shane; 'Gautam, Vik'; Olenczuk, Tom (TJ); Gaudreau, Brent (BT); Montgomery, Delores (DEQ); Howe, Cheryl (DEQ)
Subject: Dow Chemical RCRA License MID 000 724 724 - Amendment 15 - Shear Testing of Materials Results - Revised Stability Analysis

Al and Dan,

Based on yesterday's conversation, attached is the revised Stability Analysis that shows the

changes in factor of safeties are minimal and results meet USACE recommendations.
Please call Vik Gautam at 216.622.2447 or myself at 248.613.4880 if you have any questions or comments.

Thanks,

Doug Wehner

URS Corporation, in partnership with

The Dow Chemical Company Environmental Remediation and Restoration Group

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