**To:** Daly, Eric[Daly.Eric@epa.gov]
**From:** Ludmer, Margo
**Sent:** Wed 3/8/2017 6:32:16 PM
**Subject:** RE: Niagara Falls Boulevard Site-Union Carbide

Thanks, Eric. In Tom's Feb 10 email, he says he attached documents with analytical data on the slag. Did you take a look at that data? Could you send me that attachment?

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**From:** Daly, Eric
**Sent:** Wednesday, March 08, 2017 9:54 AM
**To:** Ludmer, Margo <ludmer.margo@epa.gov>
**Subject:** FW: Niagara Falls Boulevard Site-Union Carbide

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**From:** Gieck, Tom (TE) [mailto:gieckte@dow.com]
**Sent:** Friday, February 17, 2017 9:29 AM
**To:** Daly, Eric <Daly.Eric@epa.gov>
**Subject:** FW: Niagara Falls Boulevard Site-Union Carbide

Hello Eric, I read through what I sent you yesterday and see a bit of miss statement. Volume or slag produced would provide enough material for a very small area not a very large area as I indicated below.

Thanks
Tom

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Thomas E. Gieck
Remediation Leader
2764 Compass Drive, Suite 114, Grand Junction, CO 81506
direct: 970.243.3260 | mobile: 970.260.2249
workstation IP: 979.238.3919 | fax: 970.245.7543
gieckte@dow.com

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**From:** Gieck, Tom (TE)
**Sent:** Thursday, February 16, 2017 11:49 AM
**To:** 'Daly, Eric' <Daly.Eric@epa.gov>
**Subject:** RE: Niagara Falls Boulevard Site-Union Carbide

Hi Eric,

Based on the information provided, i.e., radiological analysis only, there is not much to compare. I was hoping for an analysis of the waste material that would contain analytical results for various metals/minerals typical of various slags, e.g., MgO, CaO, FeO,etc. With only the radiological analysis I believe we can take a look at equilibrium and not much else and I don't believe that is going to tell us much in this case, however, I will have some folks far more knowledgeable than I take a look.

Honestly, I'm trying to figure out what could be done to secure any type of conclusion. Review of all of the information/search we have regarding columbium (niobium) processing was licensed as well as controlled slag disposal. We have not found any information of unlicensed columbium processing prior to licensing or prior to 1961 as the State assumed. The other thing I'm wondering about is the volume – it would appear that the total volume of slag produced and disposed of was about 500 tons – this would be enough material to provide road base for a very large area – only about 47′ x 47′ x 6″ (assuming sg of 2.25). Do you know how much contaminated material was removed?

We would obviously like to get this issue resolved but we have yet to determine what might accomplish that.

Thanks
Tom

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Thomas E. Gieck
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direct: 970.243.3260 | mobile: 970.260.2249
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**From:** Daly, Eric [mailto:Daly.Eric@epa.gov]
**Sent:** Thursday, February 16, 2017 9:47 AM
**To:** Gieck, Tom (TE) <gieckte@dow.com>
**Cc:** Nguyen, Lyndsey <Nguyen.Lyndsey@epa.gov>
**Subject:** RE: Niagara Falls Boulevard Site-Union Carbide
**Importance:** High

Hi Tom:

Can you provide a narrative on how you are comparing our analytical with historical Union Carbide information to come to any type of conclusion?

Thanks.

Eric

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**From:** Daly, Eric
**Sent:** Friday, February 10, 2017 12:20 PM
**To:** 'Gieck, Tom (TE)' <gieckte@dow.com>
**Cc:** Lyndsey Nguyen (Nguyen.Lyndsey@epa.gov) <Nguyen.Lyndsey@epa.gov>
**Subject:** RE: Niagara Falls Boulevard Site-Union Carbide
**Importance:** High

Hi Tom:

I received your email. None of the data I forwarded to you is post excavation. Some of the areas sampled are perimeter locations and may have background levels. This was part of our assessment based off of previous data. I have attached a soil data table from our Pre-Remedial Program. This was assessment work conducted by EPA prior to my removal team taking over. You will see some highlighted Ra-226 and Ra-228 values. For example, our background soil sample results may average around 1.5 piC/g for Ra-226. Our cleanup value for Ra-226 is 2.48 piC/g based on site specific risk using the PRG calculator. Therefore, areas that exhibit higher soil values of 2.48 piC/g for Ra-226 would need to be removed. The site health physicist is not in the office until Monday. I will pass your email info on to her and we may be able to respond with further comments next week.

Regards,
Eric M. Daly
On-Scene Coordinator/Radiological Response Specialist
US Environmental Protection Agency- Region II
ERRD/RPB/PPS
2890 Woodbridge Avenue
Edison, NJ 08837
daly.eric@epa.gov
908-420-1707

"We must, indeed, all hang together, or assuredly we shall all hang separately", Benjamin Franklin

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**From:** Gieck, Tom (TE) [mailto:gieckte@dow.com]
**Sent:** Friday, February 10, 2017 10:53 AM
**To:** Daly, Eric <Daly.Eric@epa.gov>
**Subject:** RE: Niagara Falls Boulevard Site-Union Carbide

Hello Eric:

As I indicated this morning I have attached some documents that contain some analytical data of the slag residue resulting from UCC columbium production. I would like to compare this data to the data on contaminated materials excavated EPA. I reviewed the data you sent attached to the e-mail below at it appears to be perhaps soil confirmation data (post clean-up) and not contaminated material data. Could you please send me the analytical data associated with excavated contaminated materials (slag) or waste disposal manifests – would be greatly appreciated.

Also note that I have relocated my office and have a new phone number.

Thanks
Tom

Thomas E. Gieck
Remediation Leader
2764 Compass Drive, Suite 114, Grand Junction, CO 81506
direct: 970.243.3260 | mobile: 970.260.2249
workstation IP: 979.238.3919 | fax: 970.245.7543
gieckte@dow.com

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**From:** Daly, Eric [mailto:Daly.Eric@epa.gov]
**Sent:** Wednesday, November 16, 2016 10:45 AM
**To:** Gieck, Tom (TE) <gieckte@dow.com>
**Subject:** Niagara Falls Boulevard Site-Union Carbide
**Importance:** High

Hi Tom:

How are you? I was pulled from the site last week due to a fire response in Lackawanna, NY. I am attaching the finalized analytical soil data my team has obtained so far. This consist of the raw lab data and the data tables we use to easily review the data. Please send me any information you have in regard to historical data from your facility in Niagara County.

Thanks

Regards,
Eric M. Daly
On-Scene Coordinator/Radiological Response Specialist
US Environmental Protection Agency- Region II
ERRD/RPB/PPS
2890 Woodbridge Avenue
Edison, NJ 08837
daly.eric@epa.gov

**From:** Daly, Eric [mailto:Daly.Eric@epa.gov]
**Sent:** Monday, October 31, 2016 10:36 PM
**To:** Gieck, Tom (TE) <gieckte@dow.com>
**Subject:** Re: Niagara Falls

Thanks Tom. My info is below

Regards,

Eric

"We must, indeed, all hang together, or assuredly we shall all hang separately", Benjamin Franklin
Eric M. Daly
On-Scene Coordinator/Radiological Response Specialist
US Environmental Protection Agency- Region II
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908-420-1707
On Oct 31, 2016, at 1:46 PM, Gieck, Tom (TE) <gieckte@dow.com> wrote:

> Eric, thanks for returning my call. Below is my contact information and I have been asked by Dow Chemical/Union Carbide to look into the technical aspect of this issue. The appropriate in-house counsel is Megan McCulloch who has been in contact with EPA's attorney.
>
> Thanks
> Tom
>
> ---
> Thomas E. Gieck
> Remediation Leader
> 2754 Compass Drive, Suite 280, Grand Junction, CO 81506
> phone: 970-256-8889 | mobile: 970-260-2249 |fax: 970-245-7543
> gieckte@dow.com