

Notes regarding low level radiologic material from Cabot Oil ico/Diaz
Prepared by Dave Hanson

Wednesday, August 08, 2012

- Approx. 11:30 am; Soil from Cabot Oil (approvals 42151018796, NY# 3097) set off the back scale radiation alarm. The material is drilling solids from gas well installation in Pennsylvania. Two first two dump trucks loaded from a rail car set off the radiation alarm. Both trucks were sent to the front scale to double check the readings. Scale detectors read between 2,000 and 3,000 counts per minute. The alarm setting is 1,000 cpm. A scan from a Ludlum Model 19 Micro R Meter was between 20-30 micro R/hr on both dump trucks. Background is around 4 micro R/hr. The material was unloaded from the dump trucks and put back into the rail car (Rail Car #NDYX 314914).

- At the rail spur there were 3 remaining cars. Three cars from Cabot/Diaz were unloaded earlier without issue. A scan of the remaining cars indicated activity in two of the 3 cars. Car NYDX 314914 had a maximum reading of 30 micro R/hr and car NDYX 314906 had a maximum reading of 50 micro R/hr. The third car showed no activity. These measurements were taken by walking along side the car and checking the outside car wall every 6 to 8 feet. Visual inspection of the material showed that the soil in car NYDX 314914 was dark grey and contained lengths of lumber. The material in car NYDX 314906 was a yellow sandy clay soil.

- I spoke to Gary Cochran at CSX and explained the very low readings and where the material came from. He said to his knowledge, no transport permit is required by CSX and that similar material is moved regularly by the rail road.

- Diaz Disposal is the contractor that handles drilling solids. Their facility is located in Kingsley, PA.

Thursday, August 09, 2012

- Spoke to Kevin Hintz (R9-NYSDEC) early am. He said Albany NYSDEC thinks the rail road may need a DOT permit and for the time being wants us to keep the cars here. Kevin also indicated he spoke to Tim Rice and that Albany NYSDEC wanted to sample the material. He did not have any more details than that. I told Kevin we would hold the cars.

- Adam Diaz called me regarding the matter. Adam is in charge of operations for Diaz Disposal. He will be the contact for the PA facility. He can be reached at 570-289-8760.

- Jim Strickland from NYSDEC, Buffalo Hazardous waste section called and said Albany was looking for his people to take a sample. Jim had some reservations about putting his people on top of a rail car. I told him I would be happy to take the sample for him as long as NYSDEC people observed and directed. I told Jim that based on all the information I have and the readings I took with our meter that I have advised our employees and CSX employees that in my opinion there is absolutely no safety or health issue here. Jim said he would call back with a

- time for the following day (Friday, 08/10/12). Jim called back and said sampling was scheduled for 10:00 am tomorrow.

- I received a call from Sandy of Cabot Oil Corporation. They wanted me to fill them in on events. They agreed they knew of no safety or health issues with this stuff. They confirmed that the physical description I provided fits the description of the drilling materials.

Friday, August 10, 2012

- Sampled both cars with NYSDEC-9 people Pat Concannon (716-851-72200) and Ken Martin at 10:00 am. Steve Moeller from URS (716-923-1112) was there to represent Cabot Oil and split samples with the NYSDEC. Presently the NYSDEC does not know what parameters will be run. There were three different colored soil materials. One was grey, another was grey to black and a third was yellow to tan.

- A recheck of the radiation detector on top of the cars showed the highest reading from either car was the yellow-tan soil material with a reading of 80 micro R/hr.

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau A, 12th Floor
625 Broadway, Albany, New York 12233-7015
Phone: (518) 402-9625 • Fax: (518) 402-9027
Website: www.dec.ny.gov

TestAmerica St. Louis



Joe Martens
Commissioner

August 16, 2012

Sample Receiving
TestAmerica
13715 Rider Trail North
Earth City, MO 63045

To Whom it may Concern,

Re: 6 soil samples

Enclosed you will find 6 soil samples. All of the samples should be analyzed with a 30 day turn-around time, allowing for contract bidding.

Please analyze the enclosed soil samples by gamma spectroscopy and perform Isotopic Uranium analysis (U-234, U-235 and U-238) and Isotopic Thorium analysis (Th-228, Th-230 and Th-232) by alpha spectroscopy.

If you have any questions, call me at (716) 851-7279.

Sincerely,

Kenneth Martin
Environmental Radiation Specialist
Region 9
270 Michigan Avenue
Buffalo, New York

Enclosure

Hanson, David

From: Mark Hans [mjhans@gw.dec.state.ny.us]
Sent: Friday, January 25, 2013 11:33 AM
To: Hanson, David
Cc: Dennis Weiss; James Strickland; Patrick Concannon
Subject: Fwd: Determination of Exempt Status - Railcars NDYX314906 and NDYX314914

Follow Up Flag: Follow up
Flag Status: Purple

Attachments: Cabot - Final Determination of Exempt Status Report - 12-21-12 .pdf



Cabot - Final
Determination of..

Dave,

Albany radiation staff have reviewed the attached and agree that the material in the rail cars meets the exemption determination per 40CFR173.403 and may be released.

Mark

>>> Andy Mehalko <andy.mehalko@cabotog.com> 1/24/2013 7:17 PM >>>
Patrick, Jim and Tim,

I apologize for not getting this over to you sooner, with the Christmas Holidays and some family medical issues I have fallen behind and am just now getting caught up. Attached is the requested Determination Letter prepared by URS Corporation demonstrating the exempt status under 40CFR173.403 of the materials contained in the railcars at the Allied Waste Niagara Facility. With this information, as discussed during our previous conference call, I trust that we will be able to obtain release for the two railcars from the Niagara Facility and allow transport of the materials for proper disposal at an approved landfill. Once you have had a chance to review, please let me know if this is acceptable and what steps will need to be made with the Allied Waste Niagara Facility to facilitate the release.

If you need any additional information, please do not hesitate to contact me at 412-249-3852.

Thanks,

Andy

Andy Mehalko
Environmental Supervisor
Cabot Oil & Gas Corporation, North Region Five Penn Center West, Suite 401 Pittsburgh, PA 15276
412-249-3852 (Office)
412-759-4829 (Cell)



December 21, 2012

Mr. John Smelko
Cabot Oil & Gas Company
Manager, Environmental & Regulatory Compliance
Five Penn Center West
Suite 401
Pittsburgh, PA 15276

**RE: Determination of Exempt Status per 40CFR173.403
Drilling Related Materials Contained within Railcars NDYX314906 and NDYX314914
Allied Waste Niagara Disposal Facility, Niagara Falls, NY**

Dear Mr. Smelko:

Attached is a table summarizing the analytical results of split samples collected from drilling related materials contained within rail cars NDYX314906 and NDYX314914 staged at the Allied Waste Niagara Falls, NY disposal facility (Niagara). We have also included the laboratory data packages for your reference as well. These samples were collected by both URS Corporation (URS) on behalf of Cabot Oil & Gas Corporation (Cabot) and the New York Department of Environmental Conservation (DEC) on August 10, 2012 following the triggering of the radiation alarm used to screen materials entering Niagara. The screening alarm is conservatively set to trigger at approximately 10 μ R/hr above background levels. The materials originated from Cabot's Susquehanna County, PA well drilling operations. Within the table, the analytical results are compared to the US Department of Transportation (DOT) activity concentrations for exempt material as found in 40CFR173.436. The results of this comparison demonstrate that even the highest measured activity concentration is below the applicable exempt activity concentration. Moreover, considering the material as a whole, the representative average activity concentrations would be even lower. As such, the material meets the exemption determination per 40CFR173.403 and is acceptable for release from the Niagara facility and transport without restrictions prescribed in 40CFR173 Subpart I.

Sincerely,

A handwritten signature in black ink that reads "David Testa".

David Testa, QEP
Sr. Environmental Scientist/Project Manager

cc: Andy Mehalko, Cabot Oil & Gas Corporation

Attachments

URS Corporation
Foster Plaza 6
681 Andersen Drive
Suite 400
Pittsburgh, PA 15220
Direct Tel: 412-503-4560
Fax: 412-503-4701

Summary of Analytical Results and Comparison
 Cabot Oil & Gas Corporation - Drilling Related Materials C
 Allied Waste Niagara I

Parameter	Ac-227	Ac-228	Bi-212	Bi-214	Co-60	Cs-137	K-40	Pa-231	Pb-210	
49CFR173.436 Exemption Level	(pCi/g)	2.7	270	270	-	270	270	2,700	27	270
NYSDEC Report Results	Sample #001	-1.9	U 26.3	2.6	U 171	-0.17	U -0.07	U 2	U 1	U 3
Cabot Oil & Gas Corporation Results		-2.9	U 26.5	3.2	U 194	0.028	U 0.08	U 2	U 4.4	U -0.5
NYSDEC Report Results	Sample #001 (DUP)	-1.5	U 26.1	3.2	U 169	0.028	U -0.94	U 3.7	U -0.32	U 0.7
Cabot Oil & Gas Corporation Results		-2.8	U -26.7	9.7	196	-0.26	U -0.99	U -0.6	U -3	U -4
NYSDEC Report Results	Sample #002	0.09	U 0.65	0.16	U 2.12	0	U 0	U 7.1	0.23	U 1.2
Cabot Oil & Gas Corporation Results		0.14	U 0.53	U -0.0002	U 2.57	0.028	U 0	U 4.4	-	0.5
NYSDEC Report Results	Sample #003	-0.57	U 1.67	0.19	U 1.6	0.016	U -0.0006	U 18.9	0.44	U -0.05
Cabot Oil & Gas Corporation Results		0.3	U 1.57	0.98	U 1.6	-0.03	U -0.03	U 16.6	0.74	U 2.5
NYSDEC Report Results	Sample #004	-2.4	U 11.2	-0.7	U 67.9	0.05	U 0.007	U 11.9	0.1	U -3.5
Cabot Oil & Gas Corporation Results		0.7	U 12.5	-1.1	U 82.6	0.024	U 0.06	U 6	-3.7	U 0.9
NYSDEC Report Results	Sample #005	-0.62	U 0.57	0.12	U 1.78	-0.003	U -0.01	U 8.2	0.04	U 1
Cabot Oil & Gas Corporation Results		0.00022	U 0.74	0	U 2.01	-0.0005	U -0.019	U 7.6	-0.4	U 1
NYSDEC Report Results	Sample #006	-1.9	U 25.9	3.2	U 173	0.06	U 0.004	U 3.6	U 5	U 3.3
Cabot Oil & Gas Corporation Results		-3.3	U 25.5	1.2	U 205	0.022	U 0.04	U 13.7	-2	U -6

Notes:

The NYSDEC results in this table were compiled from TestAmerica Laboratories, Inc. Analytical Report dated August, 30, 2012 (Laboratory Lot #F2H170454)
 The Cabot Oil & Gas Corporation results in this table were compiled from TestAmerica Laboratories, Inc. Analytical Report dated September 24, 2012 (Laboratory Lot #F2H200425). The Cabot Oil & Gas
 U - Result is less than the minimum detected activity.
 Total uncertainty levels have been omitted from this table for conciseness but do not affect the evaluation of the data.

Concentration Levels Under 49CFR173.436
 within Railcars NDYX314906 and NDYX314914
 Facility

U-212	Pb-214	Ra-226	Ra-228	Th-228	Th-230	Th-232	Th-234	Tl-208	U-234	U-235 / 236	U-238					
170	-	270	270	27	27	270 alpha/gamma	27,000	0.53	270 4?	270 alpha/gamma	270 alpha/gamma					
0.08	171	171	26.3	0.65	0.114	0.066/26.3	0.1	U	0.105	0.01/1.4	U	0.08/0.1				
0.5	197	194	26.5	0.53	0.093	0.05/26.5	-0.4	U	0.53	U	0.143	0.09/0.004	U	-0.4	U/0.088	
33	U	170	169	26.1	0.61	0.078	0.034/26.1	-2	U	0.41	U	0.078	0.007	U/3.4	0.031/-2	U
0.5	200	196	26.7	0.61	0.077	0.028/26.7	0.6	U	-0.05	U	0.132	0.0047/-0.16	U	0.047/0.6	U	
37	2.34	2.12	0.65	0.418	1.45	0.361/0.65	0.98	U	0.097	U	1.53	0.106/0.07	U	1.48/0.98	U	
33	2.92	2.57	0.53	U	0.356	1.37	0.344/0.53	U	1.3	U	0.33	1.51	0.055/0.04	U	1.54/1.3	U
8	1.32	1.6	1.67	1.04	0.9	1.23/1.67	0.64	U	0.53	0.74	0.025/0.24	U	0.76/0.64	U		
2	1.39	1.6	1.57	1.06	0.81	1.06/1.57	3.5	0.71	0.85	0.017	U/0.25	0.77/3.5				
2	68.9	67.9	11.2	0.93	0.52	0.47/11.2	-0.2	U	0.27	0.59	0.018/-0.012	U	0.58/-0.2	U		
2	89	82.6	12.5	0.69	0.62	0.53/12.5	-0.8	U	0.22	U	0.55	0.060/0.45	U	0.6/-0.8	U	
3	1.88	1.78	0.57	0.51	2.06	0.42/0.57	0.55	U	0.233	1.74	0.102/0.12	U	1.74/0.55	U		
	2.01	2.01	0.74	0.38	2.05	0.33/0.74	0.85	U	0.122	1.79	0.093/0.31	U	1.97/0.85	U		
U	172	173	25.9	1.08	0.099	0.047/25.9	2.6	U	0.83	0.096	-0.0031/0.7	U	0.035/2.6	U		
	205	205	25.5	0.98	0.044	0.025/25.5	-4	U	0.61	0.089	0.001/0.9	U	0.109/-4	U		

Sample collected by URS Corporation