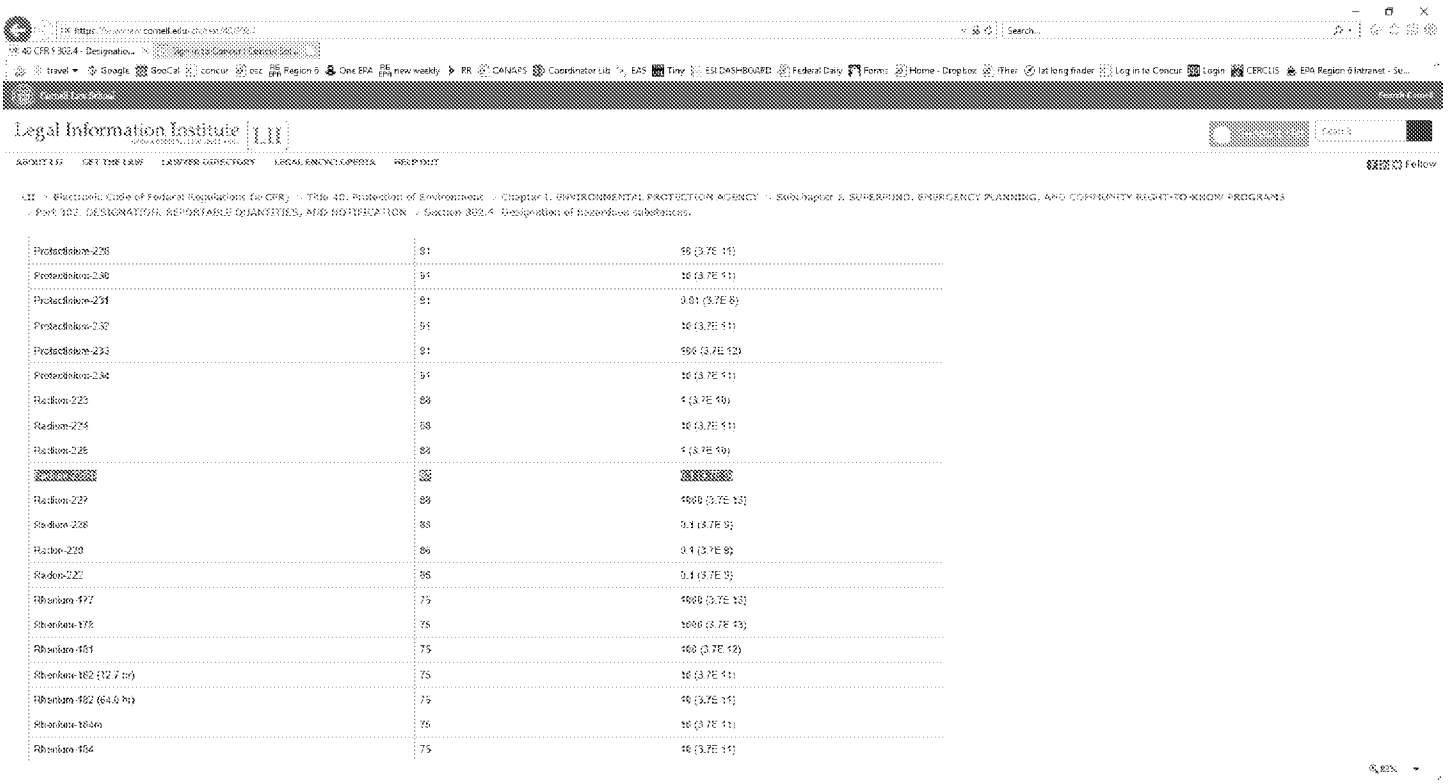
Message

From: Fife, Greg [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=1EBD5B1EB9104F3E93818DB928C8A313-FIFE, GREG]
Sent: 4/29/2019 3:50:01 PM
To: Webster, Susan [webster.susan@epa.gov]
Subject: lowerline draft action memo.docx
Attachments: lowerline draft action memo.docx

With regard to whether Radium-226 is a hazardous substance versus a pollutant or contaminant: Part 302.4 includes Radionuclides and then in Appendix B, the radionuclides are listed with specific RQs, etc.. I'd suggest the following addition in red.

Radium-226 is a radionuclide and a hazardous substance according to section 101(14) of CERCLA, 42 U.S.C. § 9601(14) and 40 C.F.R. § 302.4, specifically Appendix B. *See* Attachment 2, Material Safety Data Sheet for Radium.



Protactinium-228	91	10 (3.7E 11)
Protactinium-230	91	10 (3.7E 11)
Protactinium-231	91	0.01 (3.7E 8)
Protactinium-232	91	10 (3.7E 11)
Protactinium-233	91	100 (3.7E 12)
Protactinium-234	91	10 (3.7E 11)
Radium-223	88	1 (3.7E 10)
Radium-224	88	10 (3.7E 11)
Radium-226	88	1 (3.7E 10)
[redacted]	[redacted]	[redacted]
Radium-227	88	1000 (3.7E 13)
Radium-228	88	0.1 (3.7E 9)
Radon-220	86	0.1 (3.7E 9)
Radon-222	86	0.1 (3.7E 9)
Rhenium-177	75	1000 (3.7E 13)
Rhenium-178	75	1000 (3.7E 13)
Rhenium-181	75	100 (3.7E 12)
Rhenium-182 (12.7 h)	75	10 (3.7E 11)
Rhenium-182 (64.0 h)	75	10 (3.7E 11)
Rhenium-184m	75	10 (3.7E 11)
Rhenium-184	75	10 (3.7E 11)

If there is a question about the 'source of the base material' on page 5: The base material is the compactable dirt suitable for a base under the asphalt or other paving. The city has vague records of when the street was paved but has no record of where the soil or base material was acquired.