

Records Partially Released (only
nonresponsive portions redacted)

FOIA-2016-0320

Clay, Jim

From: Logaras, Harra
Sent: Wednesday, January 06, 2016 2:44 PM
To: Mitlyng, Viktoria; Chandrathil, Prema
Cc: Heck, Jared; Lynch, James; McCraw, Aaron; Barker, Allan
Subject: Article I Came Across: EPA proceeds with long-delayed barrier between burning landfill and radioactive waste

I did not notice this until now - from New Year's Eve;

http://www.stltoday.com/business/local/epa-proceeds-with-long-delayed-barrier-between-burning-landfill-and/article_334a4ffa-1abf-5bd3-82c2-f34d95219087.html#.Vo1vhfVrYUM.email

Sincerely,

Harra

Clay, Jim

From: Heller, James
Sent: Wednesday, May 29, 2013 9:30 AM
To: Barker, Allan; Mitlyng, Viktoria; Logaras, Harral
Subject: West Lake Landfill - DNR

<http://www.dnr.mo.gov/env/hwp/fedfac/westlakelandfill-ffs.htm>

Clay, Jim

From: Heller, James
Sent: Wednesday, May 29, 2013 9:30 AM
To: Barker, Allan; Logaras, Harra; Mitlyng, Viktoria
Subject: FW: Landfill fire

From: Pelke, Paul
Sent: Wednesday, May 29, 2013 7:49 AM
To: Heller, James
Subject: Landfill fire

<http://www.ksdk.com/news/article/381927/3/Meeting-Thursday-night-for-residents-near-Bridgeton-Landfill>

Roberts, Darrell

From: Giessner, John
Sent: Tuesday, February 23, 2016 4:49 PM
To: Pederson, Cynthia; Roberts, Darrell; Mitlyng, Viktoria; Chandrathil, Prema; Barker, Allan; Logaras, Harral
Cc: Lipa, Christine
Subject: FW: Logbook Entry: 02/23/2016

-----Original Message-----

From: McCraw, Aaron
Sent: Tuesday, February 23, 2016 3:07 PM
To: Giessner, John <John.Giessner@nrc.gov>; Collins, Daniel <Daniel.Collins@nrc.gov>; Henderson, Pamela <Pamela.Henderson@nrc.gov>
Cc: Lipa, Christine <Christine.Lipa@nrc.gov>; Lynch, James <James.Lynch@nrc.gov>
Subject: RE: Logbook Entry: 02/23/2016

Jack, Dan, and Pam,

I called Keith Henke of the Missouri Dept of Community and Public Health to give him a heads up on this logbook entry. He was already aware of it and is working with the local Coast Guard to gather more information (i.e., dose rates, pictures, shipping papers, markings, etc.). He committed to provide any additional information gathered to me for our information. He was very sensitive to public interest in radioactive material in Missouri given the media reporting on the West Lake Landfill. I will pass along any additional information I receive.

Non Responsive

Non Responsive

Roberts, Darrell

From: Lipa, Christine
Sent: Friday, February 12, 2016 2:24 PM
To: Pederson, Cynthia; Loudon, Patrick; Lara, Julio; OBrien, Kenneth; Shuaibi, Mohammed; Giessner, John
Cc: Roberts, Darrell; Pelke, Patricia; McCraw, Aaron; Kunowski, Michael
Subject: RE: Chairman briefing
Attachments: Feb 2016 Talking Points for RA mtg w Chairman.docx

Hi Cindy -- attached is an update on a few Materials topics. Included are

Non Responsive

Non Responsive

Please let us know if you would like more info or a brief on any of the topics.

Thanks, Christine

From: Pederson, Cynthia
Sent: Friday, January 29, 2016 7:44 AM
To: Loudon, Patrick <Patrick.Loudon@nrc.gov>; Lara, Julio <Julio.Lara@nrc.gov>; OBrien, Kenneth <Kenneth.OBrien@nrc.gov>; Shuaibi, Mohammed <Mohammed.Shuaibi@nrc.gov>; Giessner, John <John.Giessner@nrc.gov>; Lipa, Christine <Christine.Lipa@nrc.gov>
Cc: Roberts, Darrell <Darrell.Roberts@nrc.gov>
Subject: Chairman briefing

Good morning,

On February 19 i have a meeting with the Chairman. 30 minutes. It is different than my typical drop in. It is scheduled at his request to focus more on licensee performance. Fortunately it will be right after EOC so I should not need anything about reactors (unless something important is left out of discussions).

I will need input on materials however. Jack/Christine, please provide me something or brief me by Feb 16.

Thanks.

DNMS Inputs for RA Meeting with Chairman February 2016

Non Responsive

Non Responsive

Non Responsive

Non Responsive

West Lake Landfill

Non Responsive

the West Lake Landfill is also located near St. Louis.

Closed in the 1970s, the landfill contains radioactive material from the Manhattan Project and was licensed by the AEC. It currently is classified as a Superfund Site. There currently is significant press interest in the site. NRC transferred regulatory responsibility for West Lake to the EPA in 1995.

Roberts, Darrell

From: Mitlyng, Viktoria
Sent: Monday, January 04, 2016 7:05 AM
To: Roberts, Darrell; Pederson, Cynthia
Subject: News reports of interest today

Non Responsive

Study Finds Radioactive Waste "Seeping" From St. Louis-Area Landfill. The Wall Street Journal (1/3, Emshwiller, Fields, Subscription Publication, 6.23M) reported that a new study published in the Journal of Environmental Radioactivity this week, conducted by former Energy Department official Robert Alvarez, has indicated that radioactive contamination from the West Lake landfill in the Bridgeton area of St. Louis is seeping off site, though the study also stated that there is no immediate health risk from the contamination. The EPA and the landfill's owner, Republic Services, stated that their studies have not shown this seepage or any health threats to the public from the landfill. The AP (1/2) added that the EPA has ordered that an isolation barrier consisting of an underground wall be installed at the site.

Viktoria Mitlyng
Sr. Public Affairs Officer
US Nuclear Regulatory Commission
Region III
Lisle, IL 60532
Tel 630-829-9662
Email viktoria.mitlyng@nrc.gov
Website <http://www.nrc.gov>

Clay, Jim

From: Heck, Jared
Sent: Tuesday, November 10, 2015 10:48 AM
To: Barker, Allan; Logaras, Harra
Subject: Principal Staff Notes 11/10
Attachments: 11-10-15 Notes.docx

Jared K. Heck
Regional Counsel
NRC Region III
Tel. 630-829-9653
Fax 630-515-1096

Principal Staff Meeting Notes 11/10/15

Non Responsive

OPA

- Working with NRC HQ on West Lake landfill questions; preparing messages to explain NRC role in the past and role now (no role, lack jurisdiction, EPA is lead federal agency).

Non Responsive

Non Responsive

Lipa, Christine

From: Kunowski, Michael
Sent: Monday, February 08, 2016 6:24 AM
To: Lipa, Christine
Subject: FW: Westlake/underground fire approaching waste
Attachments: West Lake Landfill Summary.docx

Christine,

Here's the document on West Lake that I mentioned last week.

Mike

From: Giessner, John
Sent: Friday, December 04, 2015 6:53 AM
To: Mitlyng, Viktoria <Viktoria.Mitlyng@nrc.gov>; Chandrathil, Prema <Prema.Chandrathil@nrc.gov>; Barker, Allan <Allan.Barker@nrc.gov>; Logaras, Harral <Harral.Logaras@nrc.gov>; Pederson, Cynthia <Cynthia.Pederson@nrc.gov>; Roberts, Darrell <Darrell.Roberts@nrc.gov>; McCraw, Aaron <Aaron.McCraw@nrc.gov>; Kunowski, Michael <Michael.Kunowski@nrc.gov>
Subject: Fw: Westlake/underground fire approaching waste

Hdqtrs completed their review- EPA jurisdiction.

From: Norato, Michael
Sent: Friday, December 04, 2015 07:08 AM
To: Giessner, John
Cc: Persinko, Andrew
Subject: FW: Westlake/underground fire approaching waste

Jack -

Drew asked me to touch base with you re: Westlake Landfill....

It was placed on the CERCLA NPL in 1990. NRC staff requested deferral to EPA in 1995 in SECY-95-056. Commission approved staff proposal on April 28, 1995 (ML003756957).

Bottom line...EPA has it.

DUWP staff wrote up a summary on NRC's role. Please find it attached. Give me a call if you have any questions. Thanks, much!

Mike

Michael A. Norato, Ph.D.
Acting Deputy Director
Division of Uranium Recovery and Waste Programs
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Phone: 301-415-6830
NRC Blackberry (b)(6)
Fax: 301-415-5160

LaFranzo, Michael

From: Kunowski, Michael
Sent: Friday, December 04, 2015 7:03 AM
To: LaFranzo, Michael
Subject: FW: Westlake/underground fire approaching waste
Attachments: West Lake Landfill Summary.docx

fyi

From: Giessner, John
Sent: Friday, December 04, 2015 6:53 AM
To: Mitlyng, Viktoria <Viktoria.Mitlyng@nrc.gov>; Chandrathil, Prema <Prema.Chandrathil@nrc.gov>; Barker, Allan <Allan.Barker@nrc.gov>; Logaras, Harral <Harral.Logaras@nrc.gov>; Pederson, Cynthia <Cynthia.Pederson@nrc.gov>; Roberts, Darrell <Darrell.Roberts@nrc.gov>; McCraw, Aaron <Aaron.McCraw@nrc.gov>; Kunowski, Michael <Michael.Kunowski@nrc.gov>
Subject: Fw: Westlake/underground fire approaching waste

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Sent: Friday, December 04, 2015 07:08 AM
To: Giessner, John
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Mike

Michael A. Norato, Ph.D.
Acting Deputy Director
Division of Uranium Recovery and Waste Programs
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Phone: 301-415-6830
NRC Blackberry: (b)(6)
Fax: 301-415-5160

From: Giessner, John
Sent: Thursday, December 03, 2015 12:09 PM

To: Persinko, Andrew <Andrew.Persinko@nrc.gov>

Subject: Westlake/underground fire approaching waste

I recall Weber tasked folks to look at the licensing aspect to validate this is truly EPA superfund. I haven't heard anything. Do you have any info or need anything for us?

Summary of NRC's Role at West Lake Landfill

Main Message

AEC discovered that radioactive material was disposed of in the West Lake Landfill in 1974. The NRC was working with the responsible party to ensure that the site was remediated, when in 1995, by mutual agreement with the EPA, responsibility for the site was transferred to the EPA for remediation under CERCLA.

Timeline in brief

- In 1974, AEC discovered Cotter Corporation had inappropriately disposed of waste in a local landfill in 1973
- As a result of allegations from MDNR in 1976, NRC conducted an investigation and determined that 43,000 tons of material had been disposed of at the West Lake Landfill
- Between 1980 and 1986, the NRC sponsored studies to determine the radiological status of the landfill
- From 1989-1990, the NRC discussed licensing the West Lake Landfill with the Cotter Corp. and informed Cotter that they were responsible for remediation of the West Lake Landfill
- In 1990, the NRC identified the West Lake Landfill for inclusion in the NRC's SDMP
- In 1990, the West Lake Landfill was included in the CERCLA NPL by the EPA
- In 1995, the NRC deferred regulatory oversight of the West Lake Landfill to the EPA

Background

The West Lake Landfill property is located on the outskirts of St. Louis and contains both hazardous and radioactive waste. Radioactively contaminated soil from the Cotter Corporation's Latty Avenue site was disposed of in the unregulated landfill in 1973. Two areas on the site have a layer of radioactively contaminated soil, mostly covered with 3 to 20 feet of other waste. The contamination originated from residues from the extraction of uranium and radium from very rich uranium ores for the former Atomic Energy Commission (AEC). This landfill has recently been receiving public attention because of a smoldering fire in an adjacent disposal area.

License History for Latty Avenue Site

Ore residues and uranium- and radium-bearing process wastes were generated at the Mallinckrodt plant in St. Louis from 1942 through the late 1950s under contracts with the Manhattan Engineer District (MED) and AEC in support of the atomic weapons program. This material was subsequently stored at the St. Louis Airport Project Site (SLAPS) prior to its transfer to the Latty Avenue site. In early 1966, the wastes were purchased by the Continental Mining and Milling Company and moved to a storage site on Latty Avenue. Continental Mining and Milling possessed AEC license SMA-862 for this program. In January 1967, the Commercial Discount Corporation (CDC) took possession of the material and license SMC-907 was issued to CDC allowing possession of the residues, removal of moisture, and shipment to the Cotter Corporation facilities in Colorado. In 1969, the remaining material was sold to Cotter,

who obtained license SUB-1022 from the AEC that authorized drying of the material and shipping it to Colorado. On November 13, 1974, the AEC terminated license SUB-1022.

AEC/NRC Evaluations of Disposal of Material at the West Lake Landfill

In April 1974, an AEC inspection of the Latty Avenue site found that soil from the Latty Avenue site was disposed of at a local landfill in 1973 (ML13008A246). Note that the inspection report stated that the landfill in question was "St. Louis County sanitary area No. 1 on Old Bridge Road". The inspection report stated that the licensee was in violation of 10 CFR 20.301 in that the licensed material was disposed of in a manner not authorized by AEC regulations. On November 1, 1974, two weeks before the license was terminated, the AEC sent a letter to Cotter Corporation (ML13008A249) describing the inspection findings and stating that "the disposal does not appear to be within the intent of the Commission's regulation, 10 CFR Part 40, to allow alteration of the physical nature of source material (i.e., dilution of solids with nonradioactive source material) in order to obtain a physical mixture which would no longer be subjected to licensing by the Commission." Note the difference between the inspection report and the AEC letter. It is not known why the letter and the IR are inconsistent.

The NRC received a letter dated June 2, 1976 from the Missouri Department of Natural Resources (MDNR) that forwarded newspaper articles from the St. Louis Post-Dispatch containing allegations regarding the disposal of uranium ore residues. The NRC conducted an investigation (ML13008A244) and found that 43,000 tons of waste and soil were removed from the Latty Avenue site and were dumped at the West Lake Landfill and that this material is covered by about three feet of soil. It was also found that the identification and location of the landfill in the inspection report from 1974 was inaccurate as a result of a miscommunication.

The NRC conducted a number of surveys and evaluations of the West Lake Landfill during the 1980s. The surveys and evaluations are documented in NUREG/CR-2722, "Radiological Survey of the West Lake Landfill, St. Louis County, Missouri", and NUREG-1308, "Radioactive Material in the West Lake Landfill".

On October 25, 1989, the NRC sent a letter to Cotter Corporation that concluded that Cotter Corporation is responsible for the presence of the radioactive material in the West Lake Landfill and is responsible for the consequent environmental and radiation health problems that may result from the material (ML13007A487). As is documented in a letter from the NRC to Congressman Mike Synar on May 23, 1991, meetings were held between the NRC and the Cotter Corporation in 1990 to discuss licensing (ML051701550).

Inclusion of West Lake Landfill in Site Management Decommissioning Program

In 1990, the NRC staff developed the Site Decommissioning Management Program (SDMP) (SECY-90-121, NUREG-1444). The West Lake Landfill was identified as a site for inclusion in the SDMP. On August 30, 1990 the Environmental Protection Agency (EPA) listed the site on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), National Priorities List (NPL) for Uncontrolled Hazardous Waste Sites, making the site eligible for remediation under CERCLA. On March 9, 1995, the NRC staff transmitted

SECY-95-056 (ML051820481) to the Commission requesting approval for the staff to defer to the EPA for the oversight of the remediation activities at the West Lake Landfill. The commission approved the staff's proposal on April 28, 1995 (ML003756957). A letter was sent to the EPA on June 16, 1995 informing the EPA of the deferral of regulatory oversight for the site to the EPA.

Responsibility for Remediation of Latty Avenue, SLAPS, and Mallinckrodt sites

As described above, the Latty Avenue, SLAPS, and Mallinckrodt sites were involved with the material prior to its improper disposal at West Lake Landfill. The US Army Corps of Engineers (USACE) is responsible for the remediation of the Latty Avenue and SLAPS sites under its Formerly Utilized Sites Remedial Action Program (FUSRAP). Additionally, a portion of Mallinckrodt's downtown St. Louis site is also being remediated by USACE under FUSRAP. The NRC is responsible for the oversight of the remediation of the residual contamination from licensed activities at the Mallinckrodt site. Mallinckrodt has completed remediation of portions of the site contaminated with licensed material and provided the NRC with Final Status Survey (FSS) characterization data. NRC staff is finalizing its review of Mallinckrodt's FSS and intends to terminate Mallinckrodt's license in the next few months.

Giessner, John

From: Giessner, John
Sent: Wednesday, November 04, 2015 3:56 PM
To: Pederson, Cynthia; Roberts, Darrell
Subject: RE: ACTION - WEST LAKE LANDFILL

Will do. We talked last week on the topic and will continue to inform them.

From: Pederson, Cynthia
Sent: Wednesday, November 04, 2015 2:30 PM
To: Roberts, Darrell <Darrell.Roberts@nrc.gov>; Giessner, John <John.Giessner@nrc.gov>
Subject: Re: ACTION - WEST LAKE LANDFILL

And please keep Vika and Prema in the loop. Thanks

On: 04 November 2015 09:37. "Roberts, Darrell" <Darrell.Roberts@nrc.gov> wrote:
Jack,

Keep me and/or Cindy posted on what comes out of NMSS' review or discussions with you. There's lots of info on this site on the web (Wikipedia, etc.).

thanks,
DJR

From: Giessner, John
Sent: Tuesday, November 03, 2015 5:57 PM
To: Moore, Scott <Scott.Moore@nrc.gov>; Lara, Julio <Julio.Lara@nrc.gov>
Cc: Lombard, Mark <Mark.Lombard@nrc.gov>; Henderson, Pamela <Pamela.Henderson@nrc.gov>; Persinko, Andrew <Andrew.Persinko@nrc.gov>; Roberts, Darrell <Darrell.Roberts@nrc.gov>; Norato, Michael <Michael.Norato@nrc.gov>; McCraw, Aaron <Aaron.McCraw@nrc.gov>
Subject: Re: ACTION - WEST LAKE LANDFILL

I recall this has been asked before. I believe this is under jurisdiction of EPA as superfund site. We can discuss

From: Moore, Scott
Sent: Tuesday, November 03, 2015 05:13 PM
To: Giessner, John; Lara, Julio
Cc: Lombard, Mark; Henderson, Pamela; Persinko, Andrew; Roberts, Darrell; Norato, Michael
Subject: FW: ACTION - WEST LAKE LANDFILL

RIII: FYI ... we've been asked to look into West Lake Landfill. See string of e-mails below, including article. If you have info or records to that would be of interest, please let Drew Persinko (Acting Director, NMSS/DUWP) or Michael Norato (Acting Deputy Director, NMSS/DUWP) know. Thanks much!

Scott

From: Moore, Scott
Sent: Tuesday, November 03, 2015 4:52 PM

To: Persinko, Andrew <Andrew.Persinko@nrc.gov>; Norato, Michael <Michael.Norato@nrc.gov>; Henderson, Pamela <Pamela.Henderson@nrc.gov>; Gendelman, Adam <Adam.Gendelman@nrc.gov>; Safford, Carrie <Carrie.Safford@nrc.gov>; Conley, Maureen <Maureen.Conley@nrc.gov>; Weil, Jenny <Jenny.Weil@nrc.gov>
Cc: Lombard, Mark <Mark.Lombard@nrc.gov>
Subject: ACTION - WEST LAKE LANDFILL

Drew and Mike: See message from Mike Weber to Glenn further down this e-mail about the West Lake Landfill, especially the article from the St. Louis Post-Dispatch. The article mentions NRC throughout, including a role that NRC had in licensing the site (including terminating the license, and not citing or fining the licensee for "unauthorized" dumping). Please also see Glenn's message to me, below. I've done a cursory look through NRC's search engine and found that West Lake Landfill was a former SDMP site. ACTION: Please have your staff review NRC's documentation on West Lake Landfill (e.g., active, filed, held by OIS), and determine whether NRC has any remaining responsibilities or commitments regarding the site, or whether there are further actions that we should be taking under our regulatory framework (for a former site).

OGC, OPA, and OCA: Note Glenn's request below. Our staff will keep you advised as we proceed.

Everyone: This is just one of a number of articles that are publicly available on the Internet regarding the West Lake Landfill, cancer clusters that may be attributable to AEC work near St. Louis during the Cold War, disposal of AEC material in that area, the fire burning underground near the West Lake Landfill, and other related issues.

Scott

From: Tracy, Glenn
Sent: Tuesday, November 03, 2015 4:15 PM
To: Moore, Scott <Scott.Moore@nrc.gov>
Cc: Lombard, Mark <Mark.Lombard@nrc.gov>; Foster, Jack <Jack.Foster@nrc.gov>; Chen, Yen-Ju <Yen-Ju.Chen@nrc.gov>; Valentin, Andrea <Andrea.Valentin@nrc.gov>; Brown, Frederick <Frederick.Brown@nrc.gov>; Weber, Michael <Michael.Weber@nrc.gov>
Subject: RE: HEADS UP - WEST LAKE LANDFILL

Scott,

Thank you. I discussed this matter further with Mike Weber after the NAAC event. Based on that conversation and the tone and statements made in this press release, I request you determine NRC's status wrt any responsibilities/commitments regarding this site. I would also ask that you share the article with your OGC rep and OPA rep for their awareness, as you determine if there are any open NRC issues or further actions we need to take in this matter. I think we should also help prepare OPA for any possible reach to NRC stemming from this article. Look forward to further discussion when we meet. Best and thank you, again. Glenn

From: Moore, Scott
Sent: Tuesday, November 03, 2015 11:34 AM
To: Tracy, Glenn <Glenn.Tracy@nrc.gov>
Subject: FW: HEADS UP - WEST LAKE LANDFILL

Glenn: If you would like, I can begin to have my staff dig into the "status and extent" of NRC involvement. With regard to my opinion, I could only offer what I've personally read in the press. Mike is correct that there are newly emerging and re-emerging claims about elevated cancers, and cancer clusters, in the media. A quick check indicates that NRC does have some types of info e.g., a quick internal search shows that West Lake Landfill was on the "Site Decommissioning Management Plan" (SDMP); a plan during the 1990's for legacy decommissioning sites, and records are being retained by NRC on that.

Maybe we can discuss when we have our meeting? I'd like to discuss this with you in the context of resources and project AIM.

Scott

From: Weber, Michael

Sent: Tuesday, November 03, 2015 6:38 AM

To: Tracy, Glenn <Glenn.Tracy@nrc.gov>

Cc: Moore, Scott <Scott.Moore@nrc.gov>; Lombard, Mark <Mark.Lombard@nrc.gov>; Chen, Yen-Ju <Yen-Ju.Chen@nrc.gov>; Foster, Jack <Jack.Foster@nrc.gov>

Subject: HEADS UP - WEST LAKE LANDFILL

Good morning, Glenn. Here is a case to put on your radar screen. Would welcome NMSS views on the status and extent of NRC involvement. There have been persistent concerns about potential cancer clusters near the Westlake Landfill outside of St. Louis for years. Recently, this bubbled up in the news again, with newly emerging (re-emerging) claims about elevated cancers in the media. The landfill itself is slowly burning and the fire is approaching, as I understand the status, the approximate location where the radioactive waste was deposited. As pointed out in the article below, I was not aware that Cotter Corporation was owned by Commonwealth Edison, which became Exelon. Cotter also has a large and contentious uranium mill tailings site that is being remediated under Superfund in Colorado. There are many government parties involved in the case, as discussed in the article. I was not aware that we (NRC) exercised any regulatory control over the site, as the placement of the waste occurred before Congress established the NRC and the remediation of the site, if necessary, was to be conducted under FUSRAP first by DOE and then (now) by the Army Corps of Engineers.

Pointing fingers: Exelon says feds knew radioactive waste was being dumped at landfill

Nov 01 - St. Louis Post-Dispatch (MO)

During three months in 1973, dump trucks carrying more than 40,000 tons of dirt made their way from a site near the airport to a landfill on the western edge of St. Louis County. The truck owners didn't have to pay to dump their loads; what they delivered was billed as clean fill dirt that the landfill operator could use to cover other refuse. But it wasn't clean fill.

The dirt came from Latty Avenue, which was used as a storage site for radioactive materials purchased from the federal government. The materials were owned by a Colorado company, Cotter Corp., which was looking to squeeze what value remained in wastes left behind from uranium processing that supplied the nation's nuclear weapons buildup. Except for what those dump trucks took to the landfill, Cotter shipped much of what was stored at Latty Avenue to its facilities in Colorado, according to official reports. In the spring of 1974, Cotter representatives told the Atomic Energy Commission that the company decided to dispose of some of the radioactive material in "St. Louis County sanitary landfill area No. 1 on Old Bridge Road." The 8,700 tons of leached barium sulfate, which contained several tons of uranium, were mixed with dirt scooped right off the top of the Latty Avenue storage site, company representatives and documents told the AEC.

AEC records show the agency recommended citing Cotter for not following the "intent" of its regulations because it had mixed the waste with soil. But a few months later, in November 1974,

Cotter requested and received Atomic Energy Commission approval to terminate its license for the radioactive material at Latty Avenue . At the end of the year, the AEC, which had faced years of criticism for being too cozy with industry, was dissolved and its duties handed to the new Nuclear Regulatory Commission. This chain of events, pieced together from reports and documents from the AEC and NRC, is raising questions about the federal government's knowledge of, and liability for, the long-contaminated West Lake Landfill. It turns out there was no "St. Louis County sanitary landfill area No. 1." The barium sulfate, mixed with nearly 40,000 tons of soil from the contaminated Latty Avenue site, was dumped in West Lake Landfill.

But despite the nonexistent landfill, the company that retains Cotter Corp.'s liability said it did nothing illegal. The AEC knew Cotter's contractor, B&K Construction Co. , dumped material in a St. Louis County landfill. Yet the government never cited Cotter, and it ultimately released it from its license. "This whole thing was done under the watchful eye of the Atomic Energy Commission," said Craig Nesbit, a spokesman for Exelon Corp., the Chicago power company that retains Cotter's liability for West Lake because its Commonwealth Edison utility used to own Cotter. You cannot have a nuclear material license terminated if something is amiss, Nesbit said. "It's like trying to sell a house with a lien on it. You can't do that."

Others say the U.S. Department of Energy, or DOE, which retains the AEC's liability for the West Lake contamination, has been quiet for too long. Not enough people realize the federal government's complicity, they say, in contaminating a landfill that is now surrounded by suburbs and frightened residents. "To me, it's very clear that this was a federal responsibility," said Kay Drey , a longtime opponent of nuclear waste who has followed the situation for decades. "Unfortunately, the Atomic Energy Commission and the NRC didn't follow through and pay attention to what was at Latty Avenue and then dumped at West Lake Landfill."

A review of AEC, NRC and DOE documents, spanning the early 1970s through the 1990s, shows that Cotter Corp. was never cited for the disposal of the material from Latty Avenue in West Lake. An NRC inspection in 1977 confirmed that over 43,000 tons of barium sulfate waste mixed with soil from Latty Avenue was dumped at West Lake. Yet it said "neither site presents an immediate radiological health hazard to the public." "No items of noncompliance were identified during this investigation," the NRC found in 1977. However, a subsequent NRC investigation released in 1988 did say dumping the barium sulfate and soil from Latty Avenue in West Lake was "not authorized." In 1989, the NRC released an investigation conducted by researchers from the University of Missouri - Columbia.

"It is not known what levels of contamination were already in the soil before the barium sulfate residues were mixed into it," the report authors wrote. "Disposal in the West Lake Landfill was unauthorized and contrary to the disposal location indicated in the (NRC's) records." Exelon's Nesbit

acknowledged the NRC called Cotter's actions "unauthorized." "But that's 10 years after the fact, and everything that was done was done with the full knowledge of the AEC," Nesbit said. "So I don't know with what validity an agency can come back later and say that wasn't the right thing to do." Public concern about the West Lake Landfill contamination has exploded in recent years after an underground fire was discovered in the adjacent Bridgeton Landfill. Many worry if the underground smoldering spreads to West Lake, it could spread radiation offsite.

Republic Services, the nation's No. 2 waste hauler and owner of the landfill, and the U.S. Environmental Protection Agency, which is overseeing its cleanup, say the fire is not moving toward West Lake. The EPA promises a cleanup plan around the end of 2016, and it said any disagreement over liability among responsible parties won't affect its timeline. It also doesn't matter if contaminating West Lake wasn't technically illegal. "Bottom line: It wasn't the right move for the community, so something has to be done now and that's what we're focused on," said EPA Region 7 spokesman Curtis Carey.

Meanwhile, Exelon has begun suggesting that there could be something more than the Latty Avenue material contaminating the landfill, material that isn't connected to Cotter and B&K's involvement back in the 1970s. That could put more blame on the parties it will split the cleanup tab with: the DOE and Republic Services. Exelon is pursuing additional testing to try and prove it. Nesbit said new testing requested by Exelon is trying to determine whether "radiological material went into that landfill that is not part of the current discussion."

"Nobody really knows the answer to that, and that's what the current boring testing is trying to determine," he said. "There's a lot of stuff that went into that landfill."

That is adding to suspicion that more material is in the landfill than what Cotter dumped from Latty Avenue, said Doug Clemens, who chairs the community advisory group overseeing the EPA cleanup. "The concern in the community and the concern in the research we've been turning up is that there are possibly other contaminants dropped in the West Lake Landfill " beyond barium sulfate and soil from Latty Avenue , he said. "There's this idea that DOE has more at stake in this landfill than just the stuff from Latty Avenue, which Exelon keeps hinting at." Exelon, one of the nation's biggest utility companies with annual revenue exceeding \$27 billion, has long been quiet on the West Lake situation. It's only become more vocal this summer after it says Cotter discovered new documents suggesting material could be in the landfill in locations that haven't been "adequately tested."

The DOE has been even quieter. Many question why West Lake hasn't been added to a special cleanup program for waste generated by the early nuclear weapons program, as other sites in the St. Louis area have. The cleanup program, called the Formerly Utilized Sites Remedial Action Program, or FUSRAP, was first run by the DOE until the corps took it over in the 1990s. The DOE says West

Lake did not meet the criteria for the program, now run by the U.S. Army Corps of Engineers. To be eligible, the program requires the site to be involved in Manhattan Project or early Atomic Energy Commission activities. The region's Congressional delegation has said they believe the DOE did not include West Lake in FUSRAP because the material was owned by a private company and not under the direct control of the department.

In 1990, a DOE agreement with EPA laying out the framework for cleaning up radioactive contamination near Lambert-St. Louis International Airport under FUSRAP specifically excluded West Lake Landfill. Clemens thinks the DOE has done all it could to keep West Lake under EPA jurisdiction rather than the corps. But the federal government should be responsible for cleaning it up, he said. "This was permitted by the federal government and created by the federal government under a weapons program," Clemens said. "It's their waste they're responsible for it." Before being named as a potentially responsible party by the EPA, the DOE maintained it wasn't liable for the West Lake contamination, according to several internal memos.

Asked whether it still maintains that it's not liable, a DOE spokesman did not answer directly. Via email, the department responded that it signed an agreement with EPA in 1993 "under which it committed, along with other parties, to pay for the costs of a remedial investigation and feasibility study to be conducted under the direction of EPA."

A 1993 DOE memo recommended signing the EPA agreement, but it maintained that the department "remains firm in its position that it is not admitting liability for the West Lake Landfill contamination." The memo also says that signing the EPA agreement "is not an admission of liability nor a commitment to do anything more than conduct the Remedial Investigation/Feasibility study." Asked what share the federal government should shoulder for the West Lake contamination, the DOE said it will "begin discussing with other potentially responsible parties an appropriate share of the cleanup costs" after EPA proposes a cleanup plan. The department referred the Post-Dispatch to the NRC when asked whether B&K, Cotter's contractor, had engaged in "illegal" dumping in West Lake. In a 1992 memo, the DOE argued it had no "liability or responsibility" for West Lake, calling the dumping "a license violation" that "would not have been authorized if licensing approval had been sought." Based on his research, Clemens said he suspects the federal government didn't know Cotter was dumping in West Lake while it was going on.

"But they certainly had knowledge after it happened, and the NRC decided not to fine them, not to do anything about it," he said. "It does strike me as a huge mystery as to why DOE doesn't just step up and do the right thing."

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Mike

Michael Weber
Director of Nuclear Regulatory Research
U.S. Nuclear Regulatory Commission

301-415-1902
Mail Stop T-10B16



From: Hayes, John
Sent: Wednesday, October 07, 2015 2:58 PM
To: Pinkston, Karen
Subject: 10062015 input to Lora Region IV PA.docx
Attachments: 10062015 input to Lora Region IV PA.docx

History of Mallinckrodt's Downtown St Louis Site

Mallinckrodt performed both non-licensed (defense) and NRC licensed work at its site in downtown St. Louis. Mallinckrodt performed work for the Manhattan Engineer District (MED) and Atomic Energy Commission (AEC) in support of the atomic weapons program between 1942 and 1958 at its downtown St Louis site. In 1961, Mallinckrodt was also issued an AEC license to extract columbium and tantalum from natural ores and tin slags. The remediation of the MED/AEC residual contamination is being performed by the US Army Corps of Engineers (USACE) under the Formerly Utilized Sites Remedial Action Program (FUSRAP), while the NRC is responsible for the oversight of the remediation of the residual contamination from AEC licensed activities.

History of other FUSRAP Sites in St Louis

Wastes generated as part of the MED/AEC work at Mallinckrodt's facility in downtown St Louis were transferred to some other sites in the St. Louis area. The US Army Corps of Engineers is responsible for the remediation of these properties. See the following link for a good history of these properties:

<http://www.mvs.usace.army.mil/Missions/CentersofExpertise/FormerlyUtilizedSitesRemedialActionProgram.aspx>. As this waste was generated as part of the defense program and was not related to licensed activities, the NRC does not have any role in the oversight of the landfill or its remediation.

This As noted at (<http://pbadupws.nrc.gov/docs/ML0037/ML003703126.pdf>) some of the MED/AEC waste was subsequently transferred to the West Lake Landfill. The NRC deferred to EPA on regulatory oversight for cleanup of the West Lake Landfill site (<http://pbadupws.nrc.gov/docs/ML0037/ML003703126.pdf>). As such, any evaluation of the health and safety risks should come from EPA.

~~As this waste was generated as part of the defense program and was not related to licensed activities, the NRC does not have any role in the remediation of these sites.~~

NRC's Role at the West Lake Landfill Site

~~The NRC deferred to EPA on regulatory oversight for cleanup of the West Lake Landfill site (<http://pbadupws.nrc.gov/docs/ML0037/ML003703126.pdf>). As such, any evaluation of the health and safety risks should come from EPA.~~

Note: The AEC was originally responsible for the commercial licensing of activities associated with radioactive materials, activities associated with nuclear weapons and programs to support the weapons. In 1974, the Energy Reorganization Act resulted in the AEC being split into the Energy Research and Development Administration (ERDA) and the Nuclear Regulatory Commission (NRC). ERDA had the responsibility for weapons activities while the NRC had the responsibility for commercial nuclear power activities. ERDA was combined with the Federal Energy Administration to become the Department of Energy (DOE) in 1977.

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From: Clements, John
Sent: Monday, January 04, 2016 10:01 AM
To: Pinkston, Karen
Subject: From NRC in the News Today

Study Finds Radioactive Waste “Seeping” From St. Louis-Area Landfill. The Wall Street Journal (1/3, Emshwiller, Fields, Subscription Publication, 6.23M) reported that a new study published in the Journal of Environmental Radioactivity this week, conducted by former Energy Department official Robert Alvarez, has indicated that radioactive contamination from the West Lake landfill in the Bridgeton area of St. Louis is seeping off site, though the study also stated that there is no immediate health risk from the contamination. The EPA and the landfill’s owner, Republic Services, stated that their studies have not shown this seepage or any health threats to the public from the landfill. The AP (1/2) added that the EPA has ordered that an isolation barrier consisting of an underground wall be installed at the site.

From: Norato, Michael
Sent: Wednesday, November 04, 2015 10:14 AM
To: Pinkston, Karen
Cc: Hayes, John; Persinko, Andrew
Subject: FW: ACTION - WEST LAKE LANDFILL

If you come across anything in your search regarding "illegal dumping", please let Maureen Conely in OPA know. Thanks!

From: Conley, Maureen
Sent: Wednesday, November 04, 2015 10:10 AM
To: Moore, Scott <Scott.Moore@nrc.gov>; Persinko, Andrew <Andrew.Persinko@nrc.gov>; Norato, Michael <Michael.Norato@nrc.gov>; Henderson, Pamela <Pamela.Henderson@nrc.gov>; Gendelman, Adam <Adam.Gendelman@nrc.gov>; Safford, Carrie <Carrie.Safford@nrc.gov>; Weil, Jenny <Jenny.Weil@nrc.gov>
Cc: Lombard, Mark <Mark.Lombard@nrc.gov>; Mitlyng, Viktoria <Viktoria.Mitlyng@nrc.gov>; Chandrathil, Prema <Prema.Chandrathil@nrc.gov>
Subject: RE: ACTION - WEST LAKE LANDFILL

Thanks all for the heads up and keeping me in the loop going forward. I am cc'g our Region III public affairs officers to bring them into the conversation as well.

One specific line in the news story caught my eye: The department referred the Post-Dispatch to the NRC when asked whether B&K, Cotter's contractor, had engaged in "illegal" dumping in West Lake.

To my knowledge, we have not received any calls from the paper with this question. But if that's what DOE is saying, it's only a matter of time. Given the high profile this story seems to be taking – I would ask that any information that NMSS finds be shared with OPA as it comes in – we don't necessarily need the entire soup-to-nuts right now, but if we have something firm and can say we're continuing to look into it, we're in a better position than if all we can say is that we don't know yet.

Maureen

From: Moore, Scott
Sent: Tuesday, November 03, 2015 4:52 PM
To: Persinko, Andrew <Andrew.Persinko@nrc.gov>; Norato, Michael <Michael.Norato@nrc.gov>; Henderson, Pamela <Pamela.Henderson@nrc.gov>; Gendelman, Adam <Adam.Gendelman@nrc.gov>; Safford, Carrie <Carrie.Safford@nrc.gov>; Conley, Maureen <Maureen.Conley@nrc.gov>; Weil, Jenny <Jenny.Weil@nrc.gov>
Cc: Lombard, Mark <Mark.Lombard@nrc.gov>
Subject: ACTION - WEST LAKE LANDFILL

Drew and Mike: See message from Mike Weber to Glenn further down this e-mail about the West Lake Landfill, especially the article from the St. Louis Post-Dispatch. The article mentions NRC throughout, including a role that NRC had in licensing the site (including terminating the license, and not citing or fining the licensee for "unauthorized" dumping). Please also see Glenn's message to me, below. I've done a cursory look through NRC's search engine and found that West Lake Landfill was a former SDMP site. ACTION: Please have your staff review NRC's documentation on West Lake Landfill (e.g., active, filed, held by OIS), and determine whether NRC has any remaining responsibilities or commitments regarding the site, or whether there are further actions that we should be taking under our regulatory framework (for a former site).

OGC, OPA, and OCA: Note Glenn's request below. Our staff will keep you advised as we proceed.

Everyone: This is just one of a number of articles that are publicly available on the Internet regarding the West Lake Landfill, cancer clusters that may be attributable to AEC work near St. Louis during the Cold War, disposal of AEC material in that area, the fire burning underground near the West Lake Landfill, and other related issues.

Scott

From: Tracy, Glenn

Sent: Tuesday, November 03, 2015 4:15 PM

To: Moore, Scott <Scott.Moore@nrc.gov>

Cc: Lombard, Mark <Mark.Lombard@nrc.gov>; Foster, Jack <Jack.Foster@nrc.gov>; Chen, Yen-Ju <Yen-Ju.Chen@nrc.gov>; Valentin, Andrea <Andrea.Valentin@nrc.gov>; Brown, Frederick <Frederick.Brown@nrc.gov>; Weber, Michael <Michael.Weber@nrc.gov>

Subject: RE: HEADS UP - WEST LAKE LANDFILL

Scott,

Thank you. I discussed this matter further with Mike Weber after the NAAC event. Based on that conversation and the tone and statements made in this press release, I request you determine NRC's status wrt any responsibilities/commitments regarding this site. I would also ask that you share the article with your OGC rep and OPA rep for their awareness, as you determine if there are any open NRC issues or further actions we need to take in this matter. I think we should also help prepare OPA for any possible reach to NRC stemming from this article. Look forward to further discussion when we meet. Best and thank you, again. Glenn

From: Moore, Scott

Sent: Tuesday, November 03, 2015 11:34 AM

To: Tracy, Glenn <Glenn.Tracy@nrc.gov>

Subject: FW: HEADS UP - WEST LAKE LANDFILL

Glenn: If you would like, I can begin to have my staff dig into the "status and extent" of NRC involvement. With regard to my opinion, I could only offer what I've personally read in the press. Mike is correct that there are newly emerging and re-emerging claims about elevated cancers, and cancer clusters, in the media. A quick check indicates that NRC does have some types of info e.g., a quick internal search shows that West Lake Landfill was on the "Site Decommissioning Management Plan" (SDMP); a plan during the 1990's for legacy decommissioning sites, and records are being retained by NRC on that.

Maybe we can discuss when we have our meeting? I'd like to discuss this with you in the context of resources and project AIM.

Scott

From: Weber, Michael

Sent: Tuesday, November 03, 2015 6:38 AM

To: Tracy, Glenn <Glenn.Tracy@nrc.gov>

Cc: Moore, Scott <Scott.Moore@nrc.gov>; Lombard, Mark <Mark.Lombard@nrc.gov>; Chen, Yen-Ju <Yen-Ju.Chen@nrc.gov>; Foster, Jack <Jack.Foster@nrc.gov>

Subject: HEADS UP - WEST LAKE LANDFILL

Good morning, Glenn. Here is a case to put on your radar screen. Would welcome NMSS views on the status and extent of NRC involvement. There have been persistent concerns about potential cancer clusters near the

Westlake Landfill outside of St. Louis for years. Recently, this bubbled up in the news again, with newly emerging (re-emerging) claims about elevated cancers in the media. The landfill itself is slowly burning and the fire is approaching, as I understand the status, the approximate location where the radioactive waste was deposited. As pointed out in the article below, I was not aware that Cotter Corporation was owned by Commonwealth Edison, which became Exelon. Cotter also has a large and contentious uranium mill tailings site that is being remediated under Superfund in Colorado. There are many government parties involved in the case, as discussed in the article. I was not aware that we (NRC) exercised any regulatory control over the site, as the placement of the waste occurred before Congress established the NRC and the remediation of the site, if necessary, was to be conducted under FUSRAP first by DOE and then (now) by the Army Corps of Engineers.

Pointing fingers: Exelon says feds knew radioactive waste was being dumped at landfill

Nov 01 - St. Louis Post-Dispatch (MO)

During three months in 1973, dump trucks carrying more than 40,000 tons of dirt made their way from a site near the airport to a landfill on the western edge of St. Louis County. The truck owners didn't have to pay to dump their loads; what they delivered was billed as clean fill dirt that the landfill operator could use to cover other refuse. But it wasn't clean fill.

The dirt came from Latty Avenue, which was used as a storage site for radioactive materials purchased from the federal government. The materials were owned by a Colorado company, Cotter Corp., which was looking to squeeze what value remained in wastes left behind from uranium processing that supplied the nation's nuclear weapons buildup. Except for what those dump trucks took to the landfill, Cotter shipped much of what was stored at Latty Avenue to its facilities in Colorado, according to official reports. In the spring of 1974, Cotter representatives told the Atomic Energy Commission that the company decided to dispose of some of the radioactive material in "St. Louis County sanitary landfill area No. 1 on Old Bridge Road." The 8,700 tons of leached barium sulfate, which contained several tons of uranium, were mixed with dirt scooped right off the top of the Latty Avenue storage site, company representatives and documents told the AEC.

AEC records show the agency recommended citing Cotter for not following the "intent" of its regulations because it had mixed the waste with soil. But a few months later, in November 1974, Cotter requested and received Atomic Energy Commission approval to terminate its license for the radioactive material at Latty Avenue. At the end of the year, the AEC, which had faced years of criticism for being too cozy with industry, was dissolved and its duties handed to the new Nuclear Regulatory Commission. This chain of events, pieced together from reports and documents from the AEC and NRC, is raising questions about the federal government's knowledge of, and liability for, the long-contaminated West Lake Landfill. It turns out there was no "St. Louis County sanitary landfill area No. 1." The barium sulfate, mixed with nearly 40,000 tons of soil from the contaminated Latty Avenue site, was dumped in West Lake Landfill.

But despite the nonexistent landfill, the company that retains Cotter Corp.'s liability said it did nothing illegal. The AEC knew Cotter's contractor, B&K Construction Co., dumped material in a St. Louis

County landfill. Yet the government never cited Cotter, and it ultimately released it from its license. "This whole thing was done under the watchful eye of the Atomic Energy Commission," said Craig Nesbit, a spokesman for Exelon Corp., the Chicago power company that retains Cotter's liability for West Lake because its Commonwealth Edison utility used to own Cotter. You cannot have a nuclear material license terminated if something is amiss, Nesbit said. "It's like trying to sell a house with a lien on it. You can't do that."

Others say the U.S. Department of Energy, or DOE, which retains the AEC's liability for the West Lake contamination, has been quiet for too long. Not enough people realize the federal government's complicity, they say, in contaminating a landfill that is now surrounded by suburbs and frightened residents. "To me, it's very clear that this was a federal responsibility," said Kay Drey, a longtime opponent of nuclear waste who has followed the situation for decades. "Unfortunately, the Atomic Energy Commission and the NRC didn't follow through and pay attention to what was at Latty Avenue and then dumped at West Lake Landfill."

A review of AEC, NRC and DOE documents, spanning the early 1970s through the 1990s, shows that Cotter Corp. was never cited for the disposal of the material from Latty Avenue in West Lake. An NRC inspection in 1977 confirmed that over 43,000 tons of barium sulfate waste mixed with soil from Latty Avenue was dumped at West Lake. Yet it said "neither site presents an immediate radiological health hazard to the public." "No items of noncompliance were identified during this investigation," the NRC found in 1977. However, a subsequent NRC investigation released in 1988 did say dumping the barium sulfate and soil from Latty Avenue in West Lake was "not authorized." In 1989, the NRC released an investigation conducted by researchers from the University of Missouri - Columbia.

"It is not known what levels of contamination were already in the soil before the barium sulfate residues were mixed into it," the report authors wrote. "Disposal in the West Lake Landfill was unauthorized and contrary to the disposal location indicated in the (NRC's) records." Exelon's Nesbit acknowledged the NRC called Cotter's actions "unauthorized." "But that's 10 years after the fact, and everything that was done was done with the full knowledge of the AEC," Nesbit said. "So I don't know with what validity an agency can come back later and say that wasn't the right thing to do." Public concern about the West Lake Landfill contamination has exploded in recent years after an underground fire was discovered in the adjacent Bridgeton Landfill. Many worry if the underground smoldering spreads to West Lake, it could spread radiation offsite.

Republic Services, the nation's No. 2 waste hauler and owner of the landfill, and the U.S. Environmental Protection Agency, which is overseeing its cleanup, say the fire is not moving toward West Lake. The EPA promises a cleanup plan around the end of 2016, and it said any disagreement over liability among responsible parties won't affect its timeline. It also doesn't matter if contaminating

West Lake wasn't technically illegal. "Bottom line: It wasn't the right move for the community, so something has to be done now and that's what we're focused on," said EPA Region 7 spokesman Curtis Carey.

Meanwhile, Exelon has begun suggesting that there could be something more than the Latty Avenue material contaminating the landfill, material that isn't connected to Cotter and B&K's involvement back in the 1970s. That could put more blame on the parties it will split the cleanup tab with: the DOE and Republic Services. Exelon is pursuing additional testing to try and prove it. Nesbit said new testing requested by Exelon is trying to determine whether "radiological material went into that landfill that is not part of the current discussion."

"Nobody really knows the answer to that, and that's what the current boring testing is trying to determine," he said. "There's a lot of stuff that went into that landfill."

That is adding to suspicion that more material is in the landfill than what Cotter dumped from Latty Avenue, said Doug Clemens, who chairs the community advisory group overseeing the EPA cleanup. "The concern in the community and the concern in the research we've been turning up is that there are possibly other contaminants dropped in the West Lake Landfill " beyond barium sulfate and soil from Latty Avenue , he said. "There's this idea that DOE has more at stake in this landfill than just the stuff from Latty Avenue, which Exelon keeps hinting at." Exelon, one of the nation's biggest utility companies with annual revenue exceeding \$27 billion, has long been quiet on the West Lake situation. It's only become more vocal this summer after it says Cotter discovered new documents suggesting material could be in the landfill in locations that haven't been "adequately tested."

The DOE has been even quieter. Many question why West Lake hasn't been added to a special cleanup program for waste generated by the early nuclear weapons program, as other sites in the St. Louis area have. The cleanup program, called the Formerly Utilized Sites Remedial Action Program, or FUSRAP, was first run by the DOE until the corps took it over in the 1990s. The DOE says West Lake did not meet the criteria for the program, now run by the U.S. Army Corps of Engineers. To be eligible, the program requires the site to be involved in Manhattan Project or early Atomic Energy Commission activities. The region's Congressional delegation has said they believe the DOE did not include West Lake in FUSRAP because the material was owned by a private company and not under the direct control of the department.

In 1990, a DOE agreement with EPA laying out the framework for cleaning up radioactive contamination near Lambert-St. Louis International Airport under FUSRAP specifically excluded West Lake Landfill. Clemens thinks the DOE has done all it could to keep West Lake under EPA jurisdiction rather than the corps. But the federal government should be responsible for cleaning it up, he said. "This was permitted by the federal government and created by the federal government

under a weapons program," Clemens said. "It's their waste they're responsible for it." Before being named as a potentially responsible party by the EPA, the DOE maintained it wasn't liable for the West Lake contamination, according to several internal memos.

Asked whether it still maintains that it's not liable, a DOE spokesman did not answer directly. Via email, the department responded that it signed an agreement with EPA in 1993 "under which it committed, along with other parties, to pay for the costs of a remedial investigation and feasibility study to be conducted under the direction of EPA."

A 1993 DOE memo recommended signing the EPA agreement, but it maintained that the department "remains firm in its position that it is not admitting liability for the West Lake Landfill contamination." The memo also says that signing the EPA agreement "is not an admission of liability nor a commitment to do anything more than conduct the Remedial Investigation/Feasibility study." Asked what share the federal government should shoulder for the West Lake contamination, the DOE said it will "begin discussing with other potentially responsible parties an appropriate share of the cleanup costs" after EPA proposes a cleanup plan. The department referred the Post-Dispatch to the NRC when asked whether B&K, Cotter's contractor, had engaged in "illegal" dumping in West Lake. In a 1992 memo, the DOE argued it had no "liability or responsibility" for West Lake, calling the dumping "a license violation" that "would not have been authorized if licensing approval had been sought." Based on his research, Clemens said he suspects the federal government didn't know Cotter was dumping in West Lake while it was going on.

"But they certainly had knowledge after it happened, and the NRC decided not to fine them, not to do anything about it," he said. "It does strike me as a huge mystery as to why DOE doesn't just step up and do the right thing."

Jacob Barker -- 314-340-8291

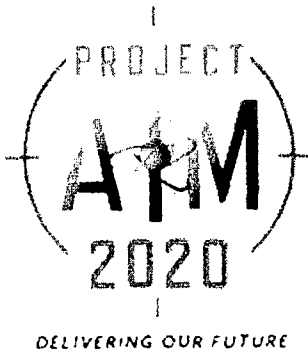
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U.S. Nuclear Regulatory Commission

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Mail Stop T-10B16



From: Pinkston, Karen
Sent: Tuesday, December 15, 2015 12:58 PM
To: Achten, Sarah
Subject: FW: West Lake Summary
Attachments: West Lake Landfill Summary.docx

This is the summary that I wrote for our management. It may be useful to you.

From: Pinkston, Karen
Sent: Thursday, November 05, 2015 1:33 PM
To: McKenney, Christopher <Christopher.McKenney@nrc.gov>; Norato, Michael <Michael.Norato@nrc.gov>; Persinko, Andrew <Andrew.Persinko@nrc.gov>
Cc: Wong, Melanie <Melanie.Wong@nrc.gov>; Orlando, Dominick <Dominick.Orlando@nrc.gov>
Subject: West Lake Summary

Revised version of the summary to incorporate Chris's comments.

Summary of NRC's Role at West Lake Landfill

Main Message

AEC discovered that radioactive material was disposed of in the West Lake Landfill in 1974. The NRC was working with the responsible party to ensure that the site was remediated, when in 1995, by mutual agreement with the EPA, responsibility for the site was transferred to the EPA for remediation under CERCLA.

Timeline in brief

- In 1974, AEC discovered Cotter Corporation had inappropriately disposed of waste in a local landfill in 1973
- As a result of allegations from MDNR in 1976, NRC conducted an investigation and determined that 43,000 tons of material had been disposed of at the West Lake Landfill
- Between 1980 and 1986, the NRC sponsored studies to determine the radiological status of the landfill
- From 1989-1990, the NRC discussed licensing the West Lake Landfill with the Cotter Corp. and informed Cotter that they were responsible for remediation of the West Lake Landfill
- In 1990, the NRC identified the West Lake Landfill for inclusion in the NRC's SDMP
- In 1990, the West Lake Landfill was included in the CERCLA NPL by the EPA
- In 1995, the NRC deferred regulatory oversight of the West Lake Landfill to the EPA

Background

The West Lake Landfill property is located on the outskirts of St. Louis and contains both hazardous and radioactive waste. Radioactively contaminated soil from the Cotter Corporation's Latty Avenue site was disposed of in the unregulated landfill in 1973. Two areas on the site have a layer of radioactively contaminated soil, mostly covered with 3 to 20 feet of other waste. The contamination originated from residues from the extraction of uranium and radium from very rich uranium ores for the former Atomic Energy Commission (AEC). This landfill has recently been receiving public attention because of a smoldering fire in an adjacent disposal area.

License History for Latty Avenue Site

Ore residues and uranium- and radium-bearing process wastes were generated at the Mallinckrodt plant in St. Louis from 1942 through the late 1950s under contracts with the Manhattan Engineer District (MED) and AEC in support of the atomic weapons program. This material was subsequently stored at the St. Louis Airport Project Site (SLAPS) prior to its transfer to the Latty Avenue site. In early 1966, the wastes were purchased by the Continental Mining and Milling Company and moved to a storage site on Latty Avenue. Continental Mining and Milling possessed AEC license SMA-862 for this program. In January 1967, the Commercial Discount Corporation (CDC) took possession of the material and license SMC-907 was issued to CDC allowing possession of the residues, removal of moisture, and shipment to the Cotter Corporation facilities in Colorado. In 1969, the remaining material was sold to Cotter,

who obtained license SUB-1022 from the AEC that authorized drying of the material and shipping it to Colorado. On November 13, 1974, the AEC terminated license SUB-1022.

AEC/NRC Evaluations of Disposal of Material at the West Lake Landfill

In April 1974, an AEC inspection of the Latty Avenue site found that soil from the Latty Avenue site was disposed of at a local landfill in 1973 (ML13008A246). Note that the inspection report stated that the landfill in question was "St. Louis County sanitary area No. 1 on Old Bridge Road". The inspection report stated that the licensee was in violation of 10 CFR 20.301 in that the licensed material was disposed of in a manner not authorized by AEC regulations. On November 1, 1974, two weeks before the license was terminated, the AEC sent a letter to Cotter Corporation (ML13008A249) describing the inspection findings and stating that "the disposal does not appear to be within the intent of the Commission's regulation, 10 CFR Part 40, to allow alteration of the physical nature of source material (i.e., dilution of solids with nonradioactive source material) in order to obtain a physical mixture which would no longer be subjected to licensing by the Commission." Note the difference between the inspection report and the AEC letter. It is not known why the letter and the IR are inconsistent.

The NRC received a letter dated June 2, 1976 from the Missouri Department of Natural Resources (MDNR) that forwarded newspaper articles from the St. Louis Post-Dispatch containing allegations regarding the disposal of uranium ore residues. The NRC conducted an investigation (ML13008A244) and found that 43,000 tons of waste and soil were removed from the Latty Avenue site and were dumped at the West Lake Landfill and that this material is covered by about three feet of soil. It was also found that the identification and location of the landfill in the inspection report from 1974 was inaccurate as a result of a miscommunication.

The NRC conducted a number of surveys and evaluations of the West Lake Landfill during the 1980s. The surveys and evaluations are documented in NUREG/CR-2722, "Radiological Survey of the West Lake Landfill, St. Louis County, Missouri", and NUREG-1308, "Radioactive Material in the West Lake Landfill".

On October 25, 1989, the NRC sent a letter to Cotter Corporation that concluded that Cotter Corporation is responsible for the presence of the radioactive material in the West Lake Landfill and is responsible for the consequent environmental and radiation health problems that may result from the material (ML13007A487). As is documented in a letter from the NRC to Congressman Mike Synar on May 23, 1991, meetings were held between the NRC and the Cotter Corporation in 1990 to discuss licensing (ML051701550).

Inclusion of West Lake Landfill in Site Management Decommissioning Program

In 1990, the NRC staff developed the Site Decommissioning Management Program (SDMP) (SECY-90-121, NUREG-1444). The West Lake Landfill was identified as a site for inclusion in the SDMP. On August 30, 1990 the Environmental Protection Agency (EPA) listed the site on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), National Priorities List (NPL) for Uncontrolled Hazardous Waste Sites, making the site eligible for remediation under CERCLA. On March 9, 1995, the NRC staff transmitted

SECY-95-056 (ML051820481) to the Commission requesting approval for the staff to defer to the EPA for the oversight of the remediation activities at the West Lake Landfill. The commission approved the staff's proposal on April 28, 1995 (ML003756957). A letter was sent to the EPA on June 16, 1995 informing the EPA of the deferral of regulatory oversight for the site to the EPA.

Responsibility for Remediation of Latty Avenue, SLAPS, and Mallinckrodt sites

As described above, the Latty Avenue, SLAPS, and Mallinckrodt sites were involved with the material prior to its improper disposal at West Lake Landfill. The US Army Corps of Engineers (USACE) is responsible for the remediation of the Latty Avenue and SLAPS sites under its Formerly Utilized Sites Remedial Action Program (FUSRAP). Additionally, a portion of Mallinckrodt's downtown St. Louis site is also being remediated by USACE under FUSRAP. The NRC is responsible for the oversight of the remediation of the residual contamination from licensed activities at the Mallinckrodt site. Mallinckrodt has completed remediation of portions of the site contaminated with licensed material and provided the NRC with Final Status Survey (FSS) characterization data. NRC staff is finalizing its review of Mallinckrodt's FSS and intends to terminate Mallinckrodt's license in the next few months.

From: Pinkston, Karen
Sent: Friday, December 04, 2015 12:51 PM
To: Norato, Michael
Subject: NUREG-CR-2722 (part 1)
Attachments: NUREG-CR-2722_Part1.pdf

Note: NUREG/CR-2722 is publicly available as part of ML13211A422 (which is a response to FOIA-2013-0169).

See attached for NUREG/CR-2722 (Radiological Survey of the West Lake Landfill St. Louis County, Missouri). I am sending this in three parts due to file size.

From: Pinkston, Karen
Sent: Friday, December 04, 2015 12:49 PM
To: Norato, Michael
Subject: NUREG 1308
Attachments: NUREG-1308.pdf

NUREG-1308 (Rev1), published in 1988, is publicly available at
<http://www.osti.gov/scitech/servlets/purl/7016008>.

See attached for NUREG-1308 (Radioactive Material in the West Lake Landfill).

From: Hayes, John
Sent: Wednesday, October 07, 2015 3:05 PM
To: Pinkston, Karen
Subject: RE: 10062015 input to Lora Region IV PA.docx

agree

From: Pinkston, Karen
Sent: Wednesday, October 07, 2015 3:02 PM
To: Hayes, John <John.Hayes@nrc.gov>
Subject: RE: 10062015 input to Lora Region IV PA.docx

I have three editorial comments:

- delete "**NRC's Role at the West Lake Landfill Site**"
- add a return between the two paragraphs in the "History of other FUSRAP sites" section
- consider deleting the second reference to the NRC press release

From: Hayes, John
Sent: Wednesday, October 07, 2015 2:58 PM
To: Pinkston, Karen <Karen.Pinkston@nrc.gov>
Subject: 10062015 input to Lora Region IV PA.docx

From: Hayes, John
Sent: Wednesday, October 07, 2015 3:05 PM
To: Pinkston, Karen
Subject: RE: 10062015 input to Lora Region IV PA.docx

thanks

From: Pinkston, Karen
Sent: Wednesday, October 07, 2015 3:02 PM
To: Hayes, John <John.Hayes@nrc.gov>
Subject: RE: 10062015 input to Lora Region IV PA.docx

I have three editorial comments:

- delete "**NRC's Role at the West Lake Landfill Site**"
- add a return between the two paragraphs in the "History of other FUSRAP sites" section
- consider deleting the second reference to the NRC press release

From: Hayes, John
Sent: Wednesday, October 07, 2015 2:58 PM
To: Pinkston, Karen <Karen.Pinkston@nrc.gov>
Subject: 10062015 input to Lora Region IV PA.docx

From: Norato, Michael
Sent: Thursday, November 05, 2015 8:34 AM
To: Pinkston, Karen; McKenney, Christopher; Orlando, Dominick
Cc: Hayes, John; Persinko, Andrew
Subject: Re: ACTION - WEST LAKE LANDFILL

That's great! I didn't know Nick had been involved. Thanks!

From: Pinkston, Karen
Sent: Thursday, November 05, 2015 08:31 AM
To: McKenney, Christopher; Norato, Michael; Orlando, Dominick
Cc: Hayes, John; Persinko, Andrew
Subject: RE: ACTION - WEST LAKE LANDFILL

I should have it finished up by the afternoon at the latest.

Thanks. Nick stopped by yesterday with a lot of useful information. I actually did find the letter to EPA in microfiche. I did not find the response.

From: McKenney, Christopher
Sent: Thursday, November 05, 2015 7:50 AM
To: Norato, Michael <Michael.Norato@nrc.gov>; Pinkston, Karen <Karen.Pinkston@nrc.gov>; Orlando, Dominick <Dominick.Orlando@nrc.gov>
Cc: Hayes, John <John.Hayes@nrc.gov>; Persinko, Andrew <Andrew.Persinko@nrc.gov>
Subject: RE: ACTION - WEST LAKE LANDFILL

Karen,

Nick was SDMP Manager and dropped some stuff on your chair on WL Landfill. NRC made a conscious decision to transfer the site to EPA for management under FUSRAP/CERCLA. Please work with Nick. To flesh out the one-pager. The two key documents still not found are the actual letter to EPA transferring the site and any response letter from EPA.

Chris

From: Norato, Michael
Sent: Thursday, November 05, 2015 6:05 AM
To: Pinkston, Karen <Karen.Pinkston@nrc.gov>
Cc: McKenney, Christopher <Christopher.McKenney@nrc.gov>; Hayes, John <John.Hayes@nrc.gov>; Persinko, Andrew <Andrew.Persinko@nrc.gov>
Subject: FW: ACTION - WEST LAKE LANDFILL

Karen,

How are we doing on the one-pager? I think at this point, we should send up what we know now about licensing status, etc.. We can then run down additional questions as they come up. I received a call from OGC yesterday. There is a DOE attorney waiting to talk with me. I'm out until tomorrow, but I'd like to have something to tell him on Friday AM. Before I do that, I need to make sure that our management has the info. Thanks, much!

mike

From: Moore, Scott

Sent: Wednesday, November 04, 2015 7:33 PM

To: Conley, Maureen; Persinko, Andrew; Norato, Michael; Henderson, Pamela; Gendelman, Adam; Safford, Carrie; Weil, Jenny

Cc: Lombard, Mark; Mitlyng, Viktoria; Chandrathil, Prema

Subject: RE: ACTION - WEST LAKE LANDFILL

Maureen: By this e-mail, I'm asking Drew and staff to share info with OPA as it is received. Thanks.

Scott

From: Orlando, Dominick
Sent: Thursday, November 05, 2015 8:37 AM
To: McKenney, Christopher; Norato, Michael; Pinkston, Karen
Cc: Hayes, John; Persinko, Andrew
Subject: RE: ACTION - WEST LAKE LANDFILL

I have some additional info including NUREG-1308 which was a report we did on the landfill that might be useful

From: McKenney, Christopher
Sent: Thursday, November 05, 2015 7:50 AM
To: Norato, Michael <Michael.Norato@nrc.gov>; Pinkston, Karen <Karen.Pinkston@nrc.gov>; Orlando, Dominick <Dominick.Orlando@nrc.gov>
Cc: Hayes, John <John.Hayes@nrc.gov>; Persinko, Andrew <Andrew.Persinko@nrc.gov>
Subject: RE: ACTION - WEST LAKE LANDFILL

Karen,

Nick was SDMP Manager and dropped some stuff on your chair on WL Landfill. NRC made a conscious decision to transfer the site to EPA for management under FUSRAP/CERCLA. Please work with Nick. To flesh out the one-pager. The two key documents still not found are the actual letter to EPA transferring the site and any response letter from EPA.

Chris

From: Norato, Michael
Sent: Thursday, November 05, 2015 6:05 AM
To: Pinkston, Karen <Karen.Pinkston@nrc.gov>
Cc: McKenney, Christopher <Christopher.McKenney@nrc.gov>; Hayes, John <John.Hayes@nrc.gov>; Persinko, Andrew <Andrew.Persinko@nrc.gov>
Subject: FW: ACTION - WEST LAKE LANDFILL

Karen,

How are we doing on the one-pager? I think at this point, we should send up what we know now about licensing status, etc.. We can then run down additional questions as they come up. I received a call from OGC yesterday. There is a DOE attorney waiting to talk with me. I'm out until tomorrow, but I'd like to have something to tell him on Friday AM. Before I do that, I need to make sure that our management has the info. Thanks, much!

mike

From: Moore, Scott
Sent: Wednesday, November 04, 2015 7:33 PM
To: Conley, Maureen; Persinko, Andrew; Norato, Michael; Henderson, Pamela; Gendelman, Adam; Safford, Carrie; Weil, Jenny
Cc: Lombard, Mark; Mitlyng, Viktoria; Chandrathil, Prema
Subject: RE: ACTION - WEST LAKE LANDFILL

Maureen: By this e-mail, I'm asking Drew and staff to share info with OPA as it is received. Thanks.

Scott

From: Pinkston, Karen
Sent: Wednesday, November 04, 2015 10:16 AM
To: Norato, Michael
Cc: Hayes, John; Wong, Melanie; Conway, Kimberly
Subject: RE: ACTION - WEST LAKE LANDFILL

Finding the answers to these questions is more complicated than it seems like it should be. It would probably be easiest for us to discuss how to address Scott's questions in person. Do you have any time available for us to meet to discuss?

In the meantime, I am summarizing the information that is readily available.

From: Norato, Michael
Sent: Wednesday, November 04, 2015 9:23 AM
To: Pinkston, Karen <Karen.Pinkston@nrc.gov>
Cc: Hayes, John <John.Hayes@nrc.gov>; Wong, Melanie <Melanie.Wong@nrc.gov>; Conway, Kimberly <Kimberly.Conway@nrc.gov>
Subject: RE: ACTION - WEST LAKE LANDFILL

Don't spend infinite time. Please keep it at a high level to answer the high level questions.

What is current status of Cotter's license? We believe it was terminated on xx date? EPA/USACE have it now under FUSRAP?

Was the material all AEC materials? We believe so....

Any connection to current NRC licensees? Possible Mallinkrodt connection?

Are we aware of any open items left from licensing?

Do we believe NRC should be taking any action/has any additional responsibilities at this time?

Thanks!

From: Pinkston, Karen
Sent: Wednesday, November 04, 2015 9:18 AM
To: Norato, Michael <Michael.Norato@nrc.gov>
Cc: Hayes, John <John.Hayes@nrc.gov>; Wong, Melanie <Melanie.Wong@nrc.gov>; Conway, Kimberly <Kimberly.Conway@nrc.gov>
Subject: RE: ACTION - WEST LAKE LANDFILL

Mike,

I am working on this now. When do we need to provide a response? We could probably spend an infinite amount of time looking through old records and I am trying to understand how deep we should get into the records.

Kim Conway has a lot of the SDMP information and is helping to search that information.

Karen

From: Norato, Michael
Sent: Wednesday, November 04, 2015 8:26 AM
To: Pinkston, Karen <Karen.Pinkston@nrc.gov>
Cc: Hayes, John <John.Hayes@nrc.gov>; Wong, Melanie <Melanie.Wong@nrc.gov>
Subject: FW: ACTION - WEST LAKE LANDFILL

Karen,

As we suspected, the West Lake Landfill fire is beginning to show up in the news again. You had given me a concise briefing on the situation a few weeks ago that I thought was really good. Could you put a one-pager together from that and also do what you can to follow up on Scott's request highlighted below? Thanks!

mike

From: Moore, Scott
Sent: Tuesday, November 03, 2015 4:52 PM
To: Persinko, Andrew <Andrew.Persinko@nrc.gov>; Norato, Michael <Michael.Norato@nrc.gov>; Henderson, Pamela <Pamela.Henderson@nrc.gov>; Gendelman, Adam <Adam.Gendelman@nrc.gov>; Safford, Carrie <Carrie.Safford@nrc.gov>; Conley, Maureen <Maureen.Conley@nrc.gov>; Weil, Jenny <Jenny.Weil@nrc.gov>
Cc: Lombard, Mark <Mark.Lombard@nrc.gov>
Subject: ACTION - WEST LAKE LANDFILL

Drew and Mike: See message from Mike Weber to Glenn further down this e-mail about the West Lake Landfill, especially the article from the St. Louis Post-Dispatch. The article mentions NRC throughout, including a role that NRC had in licensing the site (including terminating the license, and not citing or fining the licensee for "unauthorized" dumping). Please also see Glenn's message to me, below. I've done a cursory look through NRC's search engine and found that West Lake Landfill was a former SDMP site. ACTION: Please have your staff review NRC's documentation on West Lake Landfill (e.g., active, filed, held by OIS), and determine whether NRC has any remaining responsibilities or commitments regarding the site, or whether there are further actions that we should be taking under our regulatory framework (for a former site).

OGC, OPA, and OCA: Note Glenn's request below. Our staff will keep you advised as we proceed.

Everyone: This is just one of a number of articles that are publicly available on the Internet regarding the West Lake Landfill, cancer clusters that may be attributable to AEC work near St. Louis during the Cold War, disposal of AEC material in that area, the fire burning underground near the West Lake Landfill, and other related issues.

Scott

From: Tracy, Glenn
Sent: Tuesday, November 03, 2015 4:15 PM
To: Moore, Scott <Scott.Moore@nrc.gov>
Cc: Lombard, Mark <Mark.Lombard@nrc.gov>; Foster, Jack <Jack.Foster@nrc.gov>; Chen, Yen-Ju <Yen-Ju.Chen@nrc.gov>; Valentin, Andrea <Andrea.Valentin@nrc.gov>; Brown, Frederick <Frederick.Brown@nrc.gov>; Weber, Michael <Michael.Weber@nrc.gov>
Subject: RE: HEADS UP - WEST LAKE LANDFILL

Scott,

Thank you. I discussed this matter further with Mike Weber after the NAAC event. Based on that conversation and the tone and statements made in this press release, I request you determine NRC's status wrt any responsibilities/commitments regarding this site. I would also ask that you share the article with your OGC rep and OPA rep for their awareness, as you determine if there are any open NRC issues or further actions we need to take in this matter. I think we should also help prepare OPA for any possible reach to NRC stemming from this article. Look forward to further discussion when we meet. Best and thank you, again. Glenn

From: Moore, Scott

Sent: Tuesday, November 03, 2015 11:34 AM

To: Tracy, Glenn <Glenn.Tracy@nrc.gov>

Subject: FW: HEADS UP - WEST LAKE LANDFILL

Glenn: If you would like, I can begin to have my staff dig into the "status and extent" of NRC involvement. With regard to my opinion, I could only offer what I've personally read in the press. Mike is correct that there are newly emerging and re-emerging claims about elevated cancers, and cancer clusters, in the media. A quick check indicates that NRC does have some types of info e.g., a quick internal search shows that West Lake Landfill was on the "Site Decommissioning Management Plan" (SDMP); a plan during the 1990's for legacy decommissioning sites, and records are being retained by NRC on that.

Maybe we can discuss when we have our meeting? I'd like to discuss this with you in the context of resources and project AIM.

Scott

From: Weber, Michael

Sent: Tuesday, November 03, 2015 6:38 AM

To: Tracy, Glenn <Glenn.Tracy@nrc.gov>

Cc: Moore, Scott <Scott.Moore@nrc.gov>; Lombard, Mark <Mark.Lombard@nrc.gov>; Chen, Yen-Ju <Yen-Ju.Chen@nrc.gov>; Foster, Jack <Jack.Foster@nrc.gov>

Subject: HEADS UP - WEST LAKE LANDFILL

Good morning, Glenn. Here is a case to put on your radar screen. Would welcome NMSS views on the status and extent of NRC involvement. There have been persistent concerns about potential cancer clusters near the Westlake Landfill outside of St. Louis for years. Recently, this bubbled up in the news again, with newly emerging (re-emerging) claims about elevated cancers in the media. The landfill itself is slowly burning and the fire is approaching, as I understand the status, the approximate location where the radioactive waste was deposited. As pointed out in the article below, I was not aware that Cotter Corporation was owned by Commonwealth Edison, which became Exelon. Cotter also has a large and contentious uranium mill tailings site that is being remediated under Superfund in Colorado. There are many government parties involved in the case, as discussed in the article. I was not aware that we (NRC) exercised any regulatory control over the site, as the placement of the waste occurred before Congress established the NRC and the remediation of the site, if necessary, was to be conducted under FUSRAP first by DOE and then (now) by the Army Corps of Engineers.

Pointing fingers: Exelon says feds knew radioactive waste was being dumped at landfill

Nov 01 - St. Louis Post-Dispatch (MO)

During three months in 1973, dump trucks carrying more than 40,000 tons of dirt made their way from a site near the airport to a landfill on the western edge of St. Louis County. The truck owners didn't

have to pay to dump their loads; what they delivered was billed as clean fill dirt that the landfill operator could use to cover other refuse. But it wasn't clean fill.

The dirt came from Latty Avenue, which was used as a storage site for radioactive materials purchased from the federal government. The materials were owned by a Colorado company, Cotter Corp. , which was looking to squeeze what value remained in wastes left behind from uranium processing that supplied the nation's nuclear weapons buildup. Except for what those dump trucks took to the landfill, Cotter shipped much of what was stored at Latty Avenue to its facilities in Colorado, according to official reports. In the spring of 1974, Cotter representatives told the Atomic Energy Commission that the company decided to dispose of some of the radioactive material in " St. Louis County sanitary landfill area No. 1 on Old Bridge Road ." The 8,700 tons of leached barium sulfate, which contained several tons of uranium, were mixed with dirt scooped right off the top of the Latty Avenue storage site, company representatives and documents told the AEC.

AEC records show the agency recommended citing Cotter for not following the "intent" of its regulations because it had mixed the waste with soil. But a few months later, in November 1974 , Cotter requested and received Atomic Energy Commission approval to terminate its license for the radioactive material at Latty Avenue . At the end of the year, the AEC, which had faced years of criticism for being too cozy with industry, was dissolved and its duties handed to the new Nuclear Regulatory Commission. This chain of events, pieced together from reports and documents from the AEC and NRC, is raising questions about the federal government's knowledge of, and liability for, the long-contaminated West Lake Landfill. It turns out there was no "St. Louis County sanitary landfill area No. 1." The barium sulfate, mixed with nearly 40,000 tons of soil from the contaminated Latty Avenue site, was dumped in West Lake Landfill.

But despite the nonexistent landfill, the company that retains Cotter Corp.'s liability said it did nothing illegal. The AEC knew Cotter's contractor, B&K Construction Co. , dumped material in a St. Louis County landfill. Yet the government never cited Cotter, and it ultimately released it from its license. "This whole thing was done under the watchful eye of the Atomic Energy Commission," said Craig Nesbit, a spokesman for Exelon Corp. , the Chicago power company that retains Cotter's liability for West Lake because its Commonwealth Edison utility used to own Cotter. You cannot have a nuclear material license terminated if something is amiss, Nesbit said. "It's like trying to sell a house with a lien on it. You can't do that."

Others say the U.S. Department of Energy, or DOE, which retains the AEC's liability for the West Lake contamination, has been quiet for too long. Not enough people realize the federal government's complicity, they say, in contaminating a landfill that is now surrounded by suburbs and frightened residents. "To me, it's very clear that this was a federal responsibility," said Kay Drey , a longtime opponent of nuclear waste who has followed the situation for decades. "Unfortunately, the Atomic

Energy Commission and the NRC didn't follow through and pay attention to what was at Latty Avenue and then dumped at West Lake Landfill."

A review of AEC, NRC and DOE documents, spanning the early 1970s through the 1990s, shows that Cotter Corp. was never cited for the disposal of the material from Latty Avenue in West Lake. An NRC inspection in 1977 confirmed that over 43,000 tons of barium sulfate waste mixed with soil from Latty Avenue was dumped at West Lake. Yet it said "neither site presents an immediate radiological health hazard to the public." "No items of noncompliance were identified during this investigation," the NRC found in 1977. However, a subsequent NRC investigation released in 1988 did say dumping the barium sulfate and soil from Latty Avenue in West Lake was "not authorized." In 1989, the NRC released an investigation conducted by researchers from the University of Missouri - Columbia.

"It is not known what levels of contamination were already in the soil before the barium sulfate residues were mixed into it," the report authors wrote. "Disposal in the West Lake Landfill was unauthorized and contrary to the disposal location indicated in the (NRC's) records." Exelon's Nesbit acknowledged the NRC called Cotter's actions "unauthorized." "But that's 10 years after the fact, and everything that was done was done with the full knowledge of the AEC," Nesbit said. "So I don't know with what validity an agency can come back later and say that wasn't the right thing to do." Public concern about the West Lake Landfill contamination has exploded in recent years after an underground fire was discovered in the adjacent Bridgeton Landfill. Many worry if the underground smoldering spreads to West Lake, it could spread radiation offsite.

Republic Services, the nation's No. 2 waste hauler and owner of the landfill, and the U.S. Environmental Protection Agency, which is overseeing its cleanup, say the fire is not moving toward West Lake. The EPA promises a cleanup plan around the end of 2016, and it said any disagreement over liability among responsible parties won't affect its timeline. It also doesn't matter if contaminating West Lake wasn't technically illegal. "Bottom line: It wasn't the right move for the community, so something has to be done now and that's what we're focused on," said EPA Region 7 spokesman Curtis Carey.

Meanwhile, Exelon has begun suggesting that there could be something more than the Latty Avenue material contaminating the landfill, material that isn't connected to Cotter and B&K's involvement back in the 1970s. That could put more blame on the parties it will split the cleanup tab with: the DOE and Republic Services. Exelon is pursuing additional testing to try and prove it. Nesbit said new testing requested by Exelon is trying to determine whether "radiological material went into that landfill that is not part of the current discussion."

"Nobody really knows the answer to that, and that's what the current boring testing is trying to determine," he said. "There's a lot of stuff that went into that landfill."

That is adding to suspicion that more material is in the landfill than what Cotter dumped from Latty Avenue, said Doug Clemens, who chairs the community advisory group overseeing the EPA cleanup. "The concern in the community and the concern in the research we've been turning up is that there are possibly other contaminants dropped in the West Lake Landfill " beyond barium sulfate and soil from Latty Avenue , he said. "There's this idea that DOE has more at stake in this landfill than just the stuff from Latty Avenue, which Exelon keeps hinting at." Exelon, one of the nation's biggest utility companies with annual revenue exceeding \$27 billion, has long been quiet on the West Lake situation. It's only become more vocal this summer after it says Cotter discovered new documents suggesting material could be in the landfill in locations that haven't been "adequately tested."

The DOE has been even quieter. Many question why West Lake hasn't been added to a special cleanup program for waste generated by the early nuclear weapons program, as other sites in the St. Louis area have. The cleanup program, called the Formerly Utilized Sites Remedial Action Program, or FUSRAP, was first run by the DOE until the corps took it over in the 1990s. The DOE says West Lake did not meet the criteria for the program, now run by the U.S. Army Corps of Engineers. To be eligible, the program requires the site to be involved in Manhattan Project or early Atomic Energy Commission activities. The region's Congressional delegation has said they believe the DOE did not include West Lake in FUSRAP because the material was owned by a private company and not under the direct control of the department.

In 1990, a DOE agreement with EPA laying out the framework for cleaning up radioactive contamination near Lambert-St. Louis International Airport under FUSRAP specifically excluded West Lake Landfill. Clemens thinks the DOE has done all it could to keep West Lake under EPA jurisdiction rather than the corps. But the federal government should be responsible for cleaning it up, he said. "This was permitted by the federal government and created by the federal government under a weapons program," Clemens said. "It's their waste they're responsible for it." Before being named as a potentially responsible party by the EPA, the DOE maintained it wasn't liable for the West Lake contamination, according to several internal memos.

Asked whether it still maintains that it's not liable, a DOE spokesman did not answer directly. Via email, the department responded that it signed an agreement with EPA in 1993 "under which it committed, along with other parties, to pay for the costs of a remedial investigation and feasibility study to be conducted under the direction of EPA."

A 1993 DOE memo recommended signing the EPA agreement, but it maintained that the department "remains firm in its position that it is not admitting liability for the West Lake Landfill contamination." The memo also says that signing the EPA agreement "is not an admission of liability nor a

commitment to do anything more than conduct the Remedial Investigation/Feasibility study." Asked what share the federal government should shoulder for the West Lake contamination, the DOE said it will "begin discussing with other potentially responsible parties an appropriate share of the cleanup costs" after EPA proposes a cleanup plan. The department referred the Post-Dispatch to the NRC when asked whether B&K, Cotter's contractor, had engaged in "illegal" dumping in West Lake. In a 1992 memo, the DOE argued it had no "liability or responsibility" for West Lake, calling the dumping "a license violation" that "would not have been authorized if licensing approval had been sought." Based on his research, Clemens said he suspects the federal government didn't know Cotter was dumping in West Lake while it was going on.

"But they certainly had knowledge after it happened, and the NRC decided not to fine them, not to do anything about it," he said. "It does strike me as a huge mystery as to why DOE doesn't just step up and do the right thing."

Jacob Barker -- 314-340-8291

@jacobbarker on Twitter

jbarker@post-dispatch.com

Mike

Michael Weber
Director of Nuclear Regulatory Research
U.S. Nuclear Regulatory Commission

301-415-1902
Mail Stop T-10B16



From: Uselding, Lara
Sent: Wednesday, October 07, 2015 4:01 PM
To: Pinkston, Karen; Hayes, John
Cc: Norato, Michael
Subject: RE: John see link on our website FW: link

Super helpful, Karen. I wasn't rushing you John ☺, just being sure I hadn't missed you as I wasn't sure who was on the phone. Thank you both for your help!

From: Pinkston, Karen
Sent: Wednesday, October 07, 2015 2:38 PM
To: Hayes, John; Uselding, Lara
Cc: Norato, Michael
Subject: RE: John see link on our website FW: link

After I sent this I realized that one of the sentences was not quite accurate. See below for a correction to what I just sent. Let me know if you have any additional questions.

From: Pinkston, Karen
Sent: Wednesday, October 07, 2015 3:25 PM
To: Hayes, John <John.Hayes@nrc.gov>; Uselding, Lara <Lara.Uselding@nrc.gov>
Cc: Norato, Michael <Michael.Norato@nrc.gov>
Subject: RE: John see link on our website FW: link

See below for our response:

History of Mallinckrodt's Downtown St Louis Site

Mallinckrodt performed both non-licensed (defense) and NRC licensed work at its site in downtown St. Louis. Mallinckrodt performed work for the Manhattan Engineer District (MED) and Atomic Energy Commission (AEC) in support of the atomic weapons program between 1942 and 1958 at its downtown St Louis site. In 1961, Mallinckrodt was also issued an AEC license to extract columbium and tantalum from natural ores and tin slags. The remediation of the MED/AEC residual contamination is being performed by the US Army Corps of Engineers (USACE) under the Formerly Utilized Sites Remedial Action Program (FUSRAP), while the NRC is responsible for the oversight of the remediation of the residual contamination from AEC licensed activities (described in the website you cite below).

History of other FUSRAP Sites in St Louis

Wastes generated as part of the MED/AEC work at Mallinckrodt's facility in downtown St Louis were transferred to some other sites in the St. Louis area. The US Army Corps of Engineers is responsible for the remediation of these properties. See the following link for a good history of these properties: <http://www.mvs.usace.army.mil/Missions/CentersofExpertise/FormerlyUtilizedSitesRemedialActionProgram.aspx>. As this waste was generated as part of the defense program and was not related to licensed activities, the NRC does not have any role in the oversight of these sites or their remediation landfill or its remediation.

As noted at (<http://pbadupws.nrc.gov/docs/ML0037/ML003703126.pdf>) some of the MED/AEC waste was subsequently transferred to the West Lake Landfill. The NRC deferred to EPA on regulatory oversight for cleanup of the West Lake Landfill site. As such, any evaluation of the health and safety risks should come from EPA.

Note: The AEC was originally responsible for the commercial licensing of activities associated with radioactive materials, activities associated with nuclear weapons and programs to support the weapons. In 1974, the Energy Reorganization Act resulted in the AEC being split into the Energy Research and Development Administration (ERDA) and the Nuclear Regulatory Commission (NRC). ERDA had the responsibility for weapons activities while the NRC had the responsibility for commercial nuclear power activities. ERDA was combined with the Federal Energy Administration to become the Department of Energy (DOE) in 1977.

From: Hayes, John
Sent: Wednesday, October 07, 2015 3:18 PM
To: Uselding, Lara <Lara.Uselding@nrc.gov>
Cc: Pinkston, Karen <Karen.Pinkston@nrc.gov>; Norato, Michael <Michael.Norato@nrc.gov>
Subject: RE: John see link on our website FW: link

Patience.

We only talked with you a little over an hour ago.

From: Uselding, Lara
Sent: Wednesday, October 07, 2015 3:16 PM
To: Hayes, John <John.Hayes@nrc.gov>; Pinkston, Karen <Karen.Pinkston@nrc.gov>
Subject: John see link on our website FW: link
Importance: High

Hello: I haven't seen anything from you guys. The reporter has seen the below link and from my perspective, it is not clear that NRC is not still involved in the decommissioning process somehow. Does this need to be updated? Also, it states at the very end that the estimated date for closure is in 2016. Any understanding of this would be helpful

From: Conley, Maureen
Sent: Tuesday, October 06, 2015 3:19 PM
To: Uselding, Lara
Subject: link

<http://www.nrc.gov/info-finder/decommissioning/complex/mallinckrodt-chemical-inc-facility.html>

Maureen Conley
NRC Office of Public Affairs
301-415-8202

From: Wong, Melanie
Sent: Monday, November 16, 2015 9:49 AM
To: Pinkston, Karen
Cc: Cruz, Zahira
Subject: RE: Response requested by Tuesday to Zahira: Accuracy of Info

Great...thanks so much!

From: Pinkston, Karen
Sent: Monday, November 16, 2015 9:45 AM
To: Wong, Melanie <Melanie.Wong@nrc.gov>
Cc: Cruz, Zahira <Zahira.Cruz@nrc.gov>
Subject: RE: Response requested by Tuesday to Zahira: Accuracy of Info

It is mostly good, but the landfill itself was never licensed. An AEC licensee inappropriately disposed of waste there.

How about:

West Lake Landfill (St. Louis, MO) – In the 1970s, the AEC discovered that the Cotter Corporation, an AEC licensee, disposed of radioactive material from its Latty Avenue site at the West Lake Landfill. ~~Site was licensed by the Atomic Energy Commission, and later~~ The landfill was later put on NRC's Site Decommissioning Management Plan (SDMP). In 1990, EPA listed the site as a Superfund (CERCLA) site. In 1995, NRC staff requested Commission approval to defer to the EPA for oversight of remediation activities, the Commission approved, and NRC informed EPA in June 1995.

From: Wong, Melanie
Sent: Friday, November 13, 2015 2:57 PM
To: Pinkston, Karen <Karen.Pinkston@nrc.gov>
Cc: Cruz, Zahira <Zahira.Cruz@nrc.gov>
Subject: Response requested by Tuesday to Zahira: Accuracy of Info

Karen,

While I think it is good, can you review the following paragraph for an update from Scott to Commissioner Ostendorff:

1. West Lake Landfill (St. Louis, MO) – Site was licensed by the Atomic Energy Commission, and later put on NRC's Site Decommissioning Management Plan (SDMP). In 1990, EPA listed the site as a Superfund (CERCLA) site. In 1995, NRC staff requested Commission approval to defer to the EPA for oversight of remediation activities, the Commission approved, and NRC informed EPA in June 1995.

Best regards,
Melanie

From: Pinkston, Karen
Sent: Thursday, January 14, 2016 9:22 AM
To: Chang, Richard
Subject: RE: SECY-95-056

Thanks Richard. I had seen this.

From: Chang, Richard
Sent: Thursday, January 14, 2016 6:42 AM
To: Pinkston, Karen
Cc: Johnson, Robert
Subject: FW: SECY-95-056

Karen,

Since you are kind of the PM of West Lake...

From: Johnson, Robert
Sent: Wednesday, January 13, 2016 6:08 PM
To: Chang, Richard; Misenhimer, David
Subject: SECY-95-056

This is a good SECY about the transfer of West Lake Landfill to EPA. It discusses various criteria, including comingling, as the basis for transfer as was approved for the unlicensed NRC site West Lake Landfill. It not only is another example where we deferred to EPA for this challenging site, but it was also an unlicensed site that we struggled with for years. Even in the 80s it exceeded our dose criteria for the 81 BTP guidance for restricted use source material sites. See link below. Heather Astwood was the author.

http://www3.epa.gov/region07/cleanup/west_lake_landfill/pdf/13WestLake_NRC_Deferral.pdf

From: Wong, Melanie
Sent: Wednesday, November 11, 2015 10:12 AM
To: Pinkston, Karen
Subject: Re: West Lake Summary

A very nice job, Karen! Thank you. If you have time, can you get on my calendar for a short 15 minutes meeting on Monday? Just want to touch base with you on how things are going.

Take care,
Melanie

From: Pinkston, Karen
Sent: Thursday, November 05, 2015 1:33 PM
To: McKenney, Christopher <Christopher.McKenney@nrc.gov>; Norato, Michael <Michael.Norato@nrc.gov>; Persinko, Andrew <Andrew.Persinko@nrc.gov>
Cc: Wong, Melanie <Melanie.Wong@nrc.gov>; Orlando, Dominick <Dominick.Orlando@nrc.gov>
Subject: West Lake Summary

Revised version of the summary to incorporate Chris's comments.

From: Norato, Michael
Sent: Wednesday, December 02, 2015 9:36 AM
To: Pinkston, Karen
Subject: RE: West Lake Summary

Ok. Perhaps we could have them scanned as pdf files?

From: Pinkston, Karen
Sent: Wednesday, December 02, 2015 9:19 AM
To: Norato, Michael <Michael.Norato@nrc.gov>
Subject: RE: West Lake Summary

They are publically available, but I have not come across electronic copies
NUREG-1308 from Nick and I am looking into getting a paper copy of NUREG/CR-2722 from reproduction.

From: Norato, Michael
Sent: Wednesday, December 02, 2015 8:45 AM
To: Pinkston, Karen <Karen.Pinkston@nrc.gov>
Subject: RE: West Lake Summary

Karen –

Are the 2 NUREGS mentioned in the write-up publically available? I want to send them to DOE OGC, but can't seem to find them....

Thanks

From: Pinkston, Karen
Sent: Monday, November 30, 2015 9:15 AM
To: Norato, Michael <Michael.Norato@nrc.gov>
Cc: Wong, Melanie <Melanie.Wong@nrc.gov>
Subject: FW: West Lake Summary

Mike,
Melanie asked me to resend this to you so you would have it readily available.

Let me know if you need any additional information on this.
Karen

From: Pinkston, Karen
Sent: Thursday, November 05, 2015 1:33 PM
To: McKenney, Christopher <Christopher.McKenney@nrc.gov>; Norato, Michael <Michael.Norato@nrc.gov>; Persinko, Andrew <Andrew.Persinko@nrc.gov>
Cc: Wong, Melanie <Melanie.Wong@nrc.gov>; Orlando, Dominick <Dominick.Orlando@nrc.gov>
Subject: West Lake Summary

Revised version of the summary to incorporate Chris's comments.

From: Wong, Melanie
Sent: Monday, November 30, 2015 9:31 AM
To: Pinkston, Karen
Subject: RE: West Lake Summary

Thanks so very much! You are doing a great job!

From: Pinkston, Karen
Sent: Monday, November 30, 2015 9:15 AM
To: Norato, Michael <Michael.Norato@nrc.gov>
Cc: Wong, Melanie <Melanie.Wong@nrc.gov>
Subject: FW: West Lake Summary

Mike,
Melanie asked me to resend this to you so you would have it readily available.

Let me know if you need any additional information on this.
Karen

From: Pinkston, Karen
Sent: Thursday, November 05, 2015 1:33 PM
To: McKenney, Christopher <Christopher.McKenney@nrc.gov>; Norato, Michael <Michael.Norato@nrc.gov>; Persinko, Andrew <Andrew.Persinko@nrc.gov>
Cc: Wong, Melanie <Melanie.Wong@nrc.gov>; Orlando, Dominick <Dominick.Orlando@nrc.gov>
Subject: West Lake Summary

Revised version of the summary to incorporate Chris's comments.

From: Achten, Sarah
Sent: Tuesday, December 15, 2015 1:06 PM
To: Pinkston, Karen
Subject: RE: West Lake Summary

Thanks so much! I don't know how I could do this without you!

From: Pinkston, Karen
Sent: Tuesday, December 15, 2015 12:58 PM
To: Achten, Sarah
Subject: FW: West Lake Summary

This is the summary that I wrote for our management. It may be useful to you.

From: Pinkston, Karen
Sent: Thursday, November 05, 2015 1:33 PM
To: McKenney, Christopher <Christopher.McKenney@nrc.gov>; Norato, Michael <Michael.Norato@nrc.gov>; Persinko, Andrew <Andrew.Persinko@nrc.gov>
Cc: Wong, Melanie <Melanie.Wong@nrc.gov>; Orlando, Dominick <Dominick.Orlando@nrc.gov>
Subject: West Lake Summary

Revised version of the summary to incorporate Chris's comments.

From: McKenney, Christopher
Sent: Thursday, November 05, 2015 1:10 PM
To: Pinkston, Karen; Norato, Michael; Persinko, Andrew
Cc: Wong, Melanie; Orlando, Dominick
Subject: RE: West Lake Summary

One typo –

Inclusion of West Lake Landfill in Site Management Decommissioning Program

In 1990, the NRC staff developed the Site Decommissioning Management Program (SDMP) (SECY-90-121, NUREG-1444). The West Lake Landfill was identified as a site for inclusion in the SDMP. On August 30, 1990 the Environmental Protection Agency (EPA) listed the site on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), National Priorities List (NPL) for Uncontrolled Hazardous Waste Sites, making the site eligible for remediation under CERCLA. On March 9, 1995, the NRC staff transmitted SECY-95-056 (ML051820481) to the Commission requesting approval for the staff to defer to the EPA for the oversight of the remediation activities at the West Lake Landfill. The commission approved the staff's proposal on April 28, 1995 (ML003756957). A letter was sent to the EPA on June 16, 1995 ~~1985~~ informing the EPA of the deferral of regulatory oversight for the site to the EPA.

From: Pinkston, Karen
Sent: Thursday, November 05, 2015 12:45 PM
To: Norato, Michael <Michael.Norato@nrc.gov>; Persinko, Andrew <Andrew.Persinko@nrc.gov>
Cc: McKenney, Christopher <Christopher.McKenney@nrc.gov>; Wong, Melanie <Melanie.Wong@nrc.gov>; Orlando, Dominick <Dominick.Orlando@nrc.gov>
Subject: West Lake Summary

See attached for a summary of the NRC's role at the West Lake Landfill. Please let me know if you have any questions or if any additional information is needed.

Many thanks to Nick for helping to write this and to Jack Parrot, Kim, and Richard for helping to locate documents!

From: Orlando, Dominick
Sent: Thursday, November 05, 2015 10:44 AM
To: Pinkston, Karen
Subject: West Lake Landfill Summary minor noodles and revision, please see if you are OK with them.
Attachments: West Lake Landfill Summary.docx

Summary of NRC's Role at West Lake Landfill

Main Message

NRC discovered that radioactive material was disposed of in the Westlake landfill in 1974 and was working with the responsible party to ensure that the site was remediated, when in 1990, by mutual agreement with the EPA, responsibility for the site was transferred to the EPA for remediation under CERCLA.

Timeline in brief

- In 1974, NRC discovered Cotter Corporation had inappropriately disposed of waste in a local landfill in 1973 (the landfill was not called the West Lake Landfill at that time, but was the landfill where the waste was disposed of)
- As a result of allegations from MDNR in 1976, NRC conducted an investigation and determined that 43,000 tons of material had been disposed of at the West Lake Landfill
- Between 1980 and 1986, the NRC sponsored studies to determine the radiological status of the landfill
- From 1989-1990, the NRC discussed licensing the West Lake Landfill with the Cotter Corp. and informed Cotter that they were responsible for remediation of the West Lake Landfill
- In 1990, the NRC identified the Westlake Landfill for inclusion in the NRC's SDMP
- In 1990, the Westlake Landfill was included in the CERCLA NPL by the EPA
- In 1995, the NRC deferred regulatory oversight of the West Lake Landfill to the EPA

Background

The West Lake Landfill property is located on the outskirts of St. Louis and contains both hazardous and radioactive waste. Radioactively contaminated soil from the Cotter Corporation's Latty Avenue site was disposed of in the unregulated landfill in 1973. Two areas on the site have a layer of radioactively contaminated soil, mostly covered with 3 to 20 feet of other waste. The contamination originated from residues from the extraction of uranium and radium from very rich uranium ores for the former Atomic Energy Commission. This landfill has recently been receiving public attention because of a smoldering fire in an adjacent disposal area.

License History for Latty Avenue Site

Ore residues and uranium- and radium-bearing process wastes were generated at the Mallinckrodt plant in St. Louis from 1942 through the late 1950s under contracts with the Manhattan Engineer District (MED) and Atomic Energy Commission (AEC) in support of the atomic weapons program. This material was subsequently stored at the St. Louis Airport Project Site (SLAPS) prior to its transfer to the Latty Avenue site. In early 1966, the wastes were purchased by the Continental Mining and Milling Company and moved to a storage site on Latty Avenue. Continental Mining and Milling possessed AEC license SMA-862 for this program. In January 1967, the Commercial Discount Corporation (CDC) took possession of the material and license SMC-907 was issued to CDC allowing possession of the residues, removal of moisture, and shipment to the Cotter Corporation facilities in Colorado. In 1969, the

remaining material was sold to Cotter, who obtained license SUB-1022 from the AEC that authorized drying of the material and shipping it to Colorado. On November 13, 1974, the AEC terminated license SUB-1022.

AEC/NRC Evaluations of Disposal of Material at the West Lake Landfill

In April 1974, an AEC inspection of the Latty Avenue site found that soil from the Latty Avenue site was disposed of at a local landfill in 1973. Note that the landfill was not called the West Lake Landfill at that time. The inspection report (ML13008A246) stated that the licensee was in violation of 10 CFR 20.301 in that the licensed material was disposed of in a manner not authorized by NRC regulations. On November 1, 1974, two weeks before the license was terminated, the AEC sent a letter to Cotter Corporation (ML13008A249) describing the inspection findings and stating that "the disposal does not appear to be within the intent of the Commission's regulation, 10 CFR Part 40, to allow alteration of the physical nature of source material (i.e., dilution of solids with nonradioactive source material) in order to obtain a physical mixture which would no longer be subjected to licensing by the Commission." Note the difference between the inspection report and the AEC letter. It is not known why the letter and the IR are inconsistent.

The NRC received a letter dated June 2, 1976 from the Missouri Department of Natural Resources that forwarded newspaper articles from the St. Louis Post-Dispatch containing allegations regarding the disposal of uranium ore residues. The NRC conducted an investigation (ML13008A244) and found that 43,000 tons of waste and soil were removed from the Latty Avenue site and were dumped at the West Lake Landfill and that this material is covered by about three feet of soil. It was also found that the identification and location of the landfill in the inspection report from 1974 was inaccurate as a result of a miscommunication.

The NRC conducted a number of surveys and evaluations of the West Lake Landfill during the 1980s. The surveys and evaluations are documented in NUREG/CR-2722, "Radiological Survey of the West Lake Landfill, St. Louis County, Missouri", and NUREG-1308, "Radioactive Material in the West Lake Landfill".

On October 25, 1989, the NRC sent a letter to Cotter Corporation that concluded that Cotter Corporation is responsible for the presence of the radioactive material in the West Lake Landfill and is responsible for the consequent environmental and radiation health problems that may result from the material (ML13007A487). As is documented in a letter from the NRC to Congressman Mike Synar on May 23, 1991, meetings were held between the NRC and the Cotter Corporation in 1990 to discuss licensing (ML051701550).

Inclusion of West Lake Landfill in Site Management Decommissioning Program

In 1990, the NRC staff developed the Site Decommissioning Management Program (SDMP) (SECY-90-121, NUREG-1444). The West Lake Landfill was identified as a site for inclusion in the SDMP. On August 30, 1990 the Environmental Protection Agency (EPA) listed the site on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), National Priorities List for Uncontrolled Hazardous Waste Sites, making the site

eligible for remediation under CERCLA. On March 9, 1995, the NRC staff transmitted SECY-95-056 (ML051820481) to the Commission requesting approval for the staff to defer to the EPA for the oversight of the remediation activities at the West Lake Landfill. The commission approved the staff's proposal on April 28, 1995 (ML003756957). A letter was sent to the EPA on June 16, 1985 informing the EPA of the deferral of regulatory oversight for the site to the EPA.

Responsibility for Remediation of Latty Avenue, SLAPS, and Mallinckrodt sites

The US Army Corps of Engineers (USACE) is responsible for the remediation of the Latty Avenue and SLAPS sites under its Formerly Utilized Sites Remedial Action Program (FUSRAP). Additionally, a portion of Mallinckrodt's downtown St. Louis site is also being remediated by USACE under FUSRAP. The NRC is responsible for the oversight of the remediation of the residual contamination from licensed activities at the Mallinckrodt site. Mallinckrodt has completed remediation of portions of the site contaminated with licensed material and provided the NRC with Final Status Survey (FSS) characterization data. NRC staff is finalizing its review of Mallinckrodt's FSS and intends to terminate Mallinckrodt's license in the next few months.

From: Pinkston, Karen
Sent: Thursday, November 05, 2015 12:45 PM
To: Norato, Michael; Persinko, Andrew
Cc: McKenney, Christopher; Wong, Melanie; Orlando, Dominick
Subject: West Lake Summary
Attachments: West Lake Landfill Summary.docx

See attached for a summary of the NRC's role at the West Lake Landfill. Please let me know if you have any questions or if any additional information is needed.

Many thanks to Nick for helping to write this and to Jack Parrot, Kim, and Richard for helping to locate documents!

Summary of NRC's Role at West Lake Landfill

Main Message

AEC discovered that radioactive material was disposed of in the West Lake landfill in 1974. The NRC was working with the responsible party to ensure that the site was remediated, when in 1990, by mutual agreement with the EPA, responsibility for the site was transferred to the EPA for remediation under CERCLA.

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- In 1974, AEC discovered Cotter Corporation had inappropriately disposed of waste in a local landfill in 1973
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The West Lake Landfill property is located on the outskirts of St. Louis and contains both hazardous and radioactive waste. Radioactively contaminated soil from the Cotter Corporation's Latty Avenue site was disposed of in the unregulated landfill in 1973. Two areas on the site have a layer of radioactively contaminated soil, mostly covered with 3 to 20 feet of other waste. The contamination originated from residues from the extraction of uranium and radium from very rich uranium ores for the former Atomic Energy Commission (AEC). This landfill has recently been receiving public attention because of a smoldering fire in an adjacent disposal area.

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SECY-95-056 (ML051820481) to the Commission requesting approval for the staff to defer to the EPA for the oversight of the remediation activities at the West Lake Landfill. The commission approved the staff's proposal on April 28, 1995 (ML003756957). A letter was sent to the EPA on June 16, 1985 informing the EPA of the deferral of regulatory oversight for the site to the EPA.

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From: Pinkston, Karen
Sent: Thursday, November 05, 2015 10:15 AM
To: Orlando, Dominick
Subject: West Lake Summary
Attachments: West Lake Landfill Summary.docx

See attached. Let me know of any comments/changes.
Thanks!!!

Summary of NRC's Role at West Lake Landfill

- In 1974, NRC discovered Cotter Corporation had inappropriately disposed of waste in a local landfill in 1973
- In 1976, NRC conducted an investigation as a result of allegations from MDNR and determined that 43,000 tons of material had been dumped at the West Lake Landfill
- Between 1980 to 1986, the NRC sponsored studies to determine the radiological status of the landfill
- In 1989-1990, the NRC informed Cotter they are responsible for remediation of the West Lake Landfill and discussed licensing the site
- In 1990, the NRC identified the Westlake Landfill for inclusion in the NRC SDMP
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- In 1995, the NRC deferred regulatory oversight of the West Lake Landfill to the EPA

Background

The West Lake Landfill property is located on the outskirts of St. Louis and contains both hazardous and radioactive waste. Radioactively contaminated soil from the Cotter Corporation's Latty Avenue site was placed in the landfill in 1973. Two areas on the site have a layer of radioactively contaminated soil, mostly covered with 3 to 20 feet of other waste. The contamination originated with residues from extraction of uranium and radium from very rich uranium ores for the former Atomic Energy Commission. This landfill has recently been receiving public attention because of a smoldering fire in an adjacent disposal area.

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Responsibility for Remediation of Latty Avenue, SLAPS, and Mallinckrodt sites

The US Army Corps of Engineers (USACE) is responsible for the remediation of the Latty Avenue and SLAPS sites under its Formerly Utilized Sites Remedial Action Program (FUSRAP). Additionally, a portion of Mallinckrodt's downtown St. Louis site is also being remediated by USACE under FUSRAP. The NRC is responsible for the oversight of the remediation of the residual contamination from licensed activities at the Mallinckrodt site. Mallinckrodt has completed remediation of portions of the site contaminated with licensed material and provided the NRC with Final Status Survey (FSS) characterization data. NRC staff is finalizing its review of Mallinckrodt's FSS and intends to terminate Mallinckrodt's license in the next few months.

Sent: 12/8/15 6:28 PM
To: Wong, Melanie; Cruz, Zahira
Subject: Re: INPUT NEEDED (COB 12/10): Scott's periodic with Com Ostendorff

From: Pinkston, Karen
Sent: Tuesday, December 08, 2015 6:28 PM
To: Wong, Melanie; Cruz, Zahira
Subject: Re: INPUT NEEDED (COB 12/10): Scott's periodic with Com Ostendorff

I agree. The item below is still accurate. Thanks!

From: Wong, Melanie
Sent: Tuesday, December 8, 2015 11:40 AM
To: Cruz, Zahira
Cc: Pinkston, Karen
Subject: RE: INPUT NEEDED (COB 12/10): Scott's periodic with Com Ostendorff
I don't think we need an update to the West Lake Landfill.

From: Cruz, Zahira
Sent: Tuesday, December 08, 2015 9:34 AM
To: Anderson, Shaun ; Wong, Melanie ; Schwartzman, Adam ; Parrott, Jack
Cc: Chang, Richard ; Pinkston, Karen
Subject: INPUT NEEDED (COB 12/10): Scott's periodic with Com Ostendorff

Hi Everyone,

As mentioned yesterday, Scott Moore is having a periodic meeting with Com Ostendorff next week (they last met on 11/20). Tammy has not provided specific topics of interest for discussion, but we wanted to go ahead and update information provide at last meeting. Below are the topics discussed during the last meeting. Please provide me with updates (if any) by **COB Thursday 12/10**.

Thanks,
Zahira

Non Responsive

Non Responsive

West Lake Landfill (St. Louis, MO) Maybe we don't have updates on this – **Karen Pinkston** provided update last time

- In the 1970s, the AEC discovered that the Cotter Corporation, an AEC licensee, disposed of radioactive material from its Latty Avenue site at the West Lake Landfill. The landfill was later put on NRC's Site Decommissioning Management Plan (SDMP). In 1990, EPA listed the site as a Superfund (CERCLA) site. In 1995, NRC staff requested Commission approval to defer to the EPA for oversight of remediation activities, the Commission approved, and NRC informed EPA in June 1995.

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