

**From:** Malkin, Elon  
**To:** [Smith, James](#)  
**Subject:** [External\_Sender] Final FSS Report  
**Date:** Friday, August 17, 2018 11:33:31 AM  
**Attachments:** [FinalFSSReport.pdf](#)

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Hi Jim,

See attached Final Status Survey Report

I was wondering if you had any timelines (preferably hard dates) on the items my management is interested in

1. NRC letter of intent
2. Visit from Oak Ridge Labs
3. Final NRC release letter

Let me know if you need anything else or have any questions

Thanks in advance and have a great weekend.

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**From:** Smith, James [mailto:James.Smith@nrc.gov]  
**Sent:** Monday, August 13, 2018 5:43 PM  
**To:** Malkin, Elon <Elon.Malkin@fda.hhs.gov>  
**Subject:** Re: Remediation Completion Letter

Thanks Elon

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On: 13 August 2018 16:40,  
"Malkin, Elon" <[Elon.Malkin@fda.hhs.gov](mailto:Elon.Malkin@fda.hhs.gov)> wrote:

Hi Jim,

Attached is the remediation completion letter and draft copy of ratification for \$94K for NRC services.

You should have a final copy of the FSS Report by tomorrow PM or Wed.

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**From:** Malkin, Elon

**Sent:** Monday, August 13, 2018 12:37 PM

**To:** 'Smith, James' <[James.Smith@nrc.gov](mailto:James.Smith@nrc.gov)>

**Subject:** FW: RE: NRC license #20-08361-01 - Pending MARSSIM Submission for Site Excavation and New Construction

Hi Jim,

I should get you the final status survey draft to you in the next couple of days as well as cover letter stating that we don't intend on any conducting any further remediation.

I have also attached a 1995 Report that shows potential burial areas on our site (see page 39).

I'm not sure of the story behind this report. It was compiled for DOE's hazardous Waste Remedial Actions Program

See email chain below directing us toward the Decommissioning process. This probably would have been the best time to change paths to another cleanup mechanism. This email chain in November resulted us in writing the partial site release request in the attached letter.

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**From:** Malkin, Elon

**Sent:** Monday, November 21, 2016 10:24 AM

**To:** Ullrich, Elizabeth <[Elizabeth.Ullrich@nrc.gov](mailto:Elizabeth.Ullrich@nrc.gov)>

**Cc:** Baker, Brian <[Brian.Baker@fda.hhs.gov](mailto:Brian.Baker@fda.hhs.gov)>

**Subject:** RE: RE: NRC license #20-08361-01 - Pending MARSSIM Submission for Site Excavation and New Construction

Hi Betsy,

Brian and I are available 11AM (EST) on Tuesday 11/22/2016. Will this work for you?

I have attached 2 of our original licenses issued by the AEC. I am hoping there are other documents out there (not included in the list below) that hint to the locations and depth of burial.

Best

Elon

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**From:** Ullrich, Elizabeth [<mailto:Elizabeth.Ullrich@nrc.gov>]

**Sent:** Monday, November 21, 2016 7:33 AM

**To:** Malkin, Elon

**Cc:** Baker, Brian

**Subject:** RE: RE: NRC license #20-08361-01 - Pending MARSSIM Submission for Site Excavation and

New Construction

I am available to chat Monday and Tuesday. I have a 9-10 am meeting on Tuesday. Wednesday I will be leaving around noon. I am working Friday.

We should be able to find old documents for you, although I may have to check to see if a FOIA request is required or not. Files that old are in our hard copy archives and would have to be retrieved. I can check the hard copy of the current license to look for old license numbers and old information.

Betsy

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**From:** Malkin, Elon [<mailto:Elon.Malkin@fda.hhs.gov>]  
**Sent:** Friday, November 18, 2016 11:27 AM  
**To:** Ullrich, Elizabeth <[Elizabeth.Ullrich@nrc.gov](mailto:Elizabeth.Ullrich@nrc.gov)>  
**Cc:** Baker, Brian <[Brian.Baker@fda.hhs.gov](mailto:Brian.Baker@fda.hhs.gov)>  
**Subject:** [External\_Sender] RE: NRC license #20-08361-01 - Pending MARSSIM Submission for Site Excavation and New Construction

Hi Betsy,

As Brian mentioned, we are in the process of contracting out “the aggressive remediation activities” to a firm that specializes in radiological decontamination and decommissioning. The contract specifically calls for MARSSIM characterization and final status surveys with the caveat that we will have to investigate the depth of contamination and use ground penetrating radar to identify any buried barrels of waste.

Our historical site assessment included reviewing (partial list):

1. FUSRAP Elimination reports (publically available)
2. Our original Licenses from the early 1960's issued by AEC
3. Internal radiation safety committee minutes, surveys, etc.
4. Hazardous Waste Remedial Action Program Report (1995) including Radiological Status Report, Preliminary Decommissioning Plan and Decommissioning Funding Plan
5. MA Department of Transportation Arial photographs from 1954 and 1969
6. Congressional Committee Documents from 1959 referencing the site (public document)

The review of these documents allowed us to decide where to look for potential contamination and designate initial MARSSIM Classes.

Based on our historical site assessment, the levels of activity in the soils, and locations of the hotspots, **we suspect the sources of contamination is from a previous owner (AEC).**

We were wondering if you could us help access any confidential AEC documents which might specify locations of more hotspots, depth of burial, etc. Depth to bedrock in this area ranges from zero feet to twenty feet

May we schedule a conference call for next week or after Thanksgiving?

Very Respectfully,

Elon

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**From:** Baker, Brian  
**Sent:** Thursday, November 17, 2016 4:01 PM  
**To:** Ullrich, Elizabeth  
**Cc:** Malkin, Elon  
**Subject:** RE: NRC license #20-08361-01 - Pending MARSSIM Submission for Site Excavation and New Construction

Thanks Betsy, we're engaging [Trinitek Services, Inc](#) [another licensee who is authorized for more aggressive remediation activities] out of New Mexico to survey, remediate, and file MARSSIM which we believe, will clear the way to build a new federal lab on this federal property.

brian

Brian L. Baker P.E. | Director, Winchester Engineering & Analytical Center | ORA | FDA | p 781.756.9701 | c 617.957.4640

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**From:** Ullrich, Elizabeth [<mailto:Elizabeth.Ullrich@nrc.gov>]  
**Sent:** Thursday, November 17, 2016 9:52 AM  
**To:** Malkin, Elon  
**Cc:** Baker, Brian  
**Subject:** RE: NRC license #20-08361-01 - Pending MARSSIM Submission for Site Excavation and New Construction

Elon,

I really don't know enough about the source of the soil contamination at your facility; if it is not from FDA activities, is it natural or is it from a previous owner?

Part of the 1757 and MARSSIM procedures is to do the historical site assessment and any preliminary scoping surveys necessary to understand the scope of your potential contamination. In some cases, that may require outside assistance from an HP profession or even a firm that specializes in radiological decontamination and decommissioning.

Please understand that, if such surveys and remediation activities are outside the scope of your current authorized activities, you may need to either amend your license, or have the work performed by another licensee who is authorized for more aggressive remediation activities than is typical at an R&D facility.

Betsy



Betsy Ullrich, Senior Health Physicist  
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[Elizabeth.ullrich@nrc.gov](mailto:Elizabeth.ullrich@nrc.gov)

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**From:** Malkin, Elon [<mailto:Elon.Malkin@fda.hhs.gov>]  
**Sent:** Wednesday, November 16, 2016 4:29 PM  
**To:** Ullrich, Elizabeth <[Elizabeth.Ullrich@nrc.gov](mailto:Elizabeth.Ullrich@nrc.gov)>  
**Cc:** Baker, Brian <[Brian.Baker@fda.hhs.gov](mailto:Brian.Baker@fda.hhs.gov)>  
**Subject:** [External\_Sender] NRC license #20-08361-01 - Pending MARSSIM Submission for Site Excavation and New Construction

Hello Betsy,

my name is Elon Malkin, and I am currently acting as Assistant Radiation Safety officer at WEAC.

As you know from Brian, we are preparing for the construction of our new building.

A preliminary survey of soils in the expected excavation area revealed Uranium-238 and Radium-226 (preliminary data indicates they are in equilibrium) at concentrations greater than three times the screening values (above background) listed in NUREG 1757 Vol 2.

These "hot spots" are localized, with concentration decreasing precipitously a few feet away from the highest point of activity.

Our initial plan moving forward is to contract a health physics firm to sample these hotspots at multiple depths (1ft, 2ft, 3ft), remove contaminated soils and resample according to procedures described in the MARSSIM and NUREG 1757 documents with the addition of sampling at multiple depths.

The contamination that we found is not from FDA operations, and therefore we do not know the depth of contamination (which could violate MARSSIM assumptions).

We would appreciate your guidance on how to dispose of these soils. We would also like to know if our approach is acceptable.

Very Respectfully

Elon Malkin

Elon M. Malkin  
Chemist, ARSO

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