From:	Matt Norton
To:	Chang, Richard
Cc:	Jackson, Todd; Kauffman, Laurie; Powell, Raymond; Koenick, Stephen; thirst@newoppinc.org; Schwartzman, Adam; Chapman, Gregory; Nelson, Robert; Grossman, Christopher; Gary Nadeau; Ryan Fahey
Subject:	[External_Sender] RE: RE: NRC staff review of the New Opportunities Cleanup Plan
Date:	Tuesday, February 12, 2019 1:50:13 PM

All

DDES is providing further clarification for questions 1 and 2 as follows:

1. DDES will incorporate surface efficiencies consistent with the recommendations of Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) in NUREG-1575 for total activity measurements.
2. Demonstration that the remaining surfaces meet the established DCGLs and effluent limits are below those stated in 10 CFR 20 Appendix B shall be sufficient information to release radiological controls of remediated areas.

Sincerely

Matt Norton CIH, CSP
Principal
Work: 978.278.3399 Ext. 101
Fax: 978.278.3397
Cell: 978.844.0565

From: Matt Norton
Sent: Tuesday, February 12, 2019 12:41 PM
To: Chang, Richard <Richard.Chang@nrc.gov>
Cc: Jackson, Todd <Todd.Jackson@nrc.gov>; Kauffman, Laurie <Laurie.Kauffman@nrc.gov>; Powell, Raymond <Raymond.Powell@nrc.gov>; Koenick, Stephen <Stephen.Koenick@nrc.gov>; thirst@newoppinc.org; Schwartzman, Adam <Adam.Schwartzman@nrc.gov>; Chapman, Gregory <Gregory.Chapman@nrc.gov>; Nelson, Robert <Robert.Nelson@nrc.gov>; Grossman, Christopher <Christopher.Grossman@nrc.gov>; Gary Nadeau <gsnadeau@ddesllc.com>; Ryan Fahey <rfahey@ddesllc.com>
Subject: RE: RE: NRC staff review of the New Opportunities Cleanup Plan

Mr. Chang

For simplicity we have restated the RAIs with our responses following:

RAIs for NOW Clean Up Plan

1) Section 8.3 of the Cleanup Plan discusses instrumentation. Please clarify the instruments that will be used (e.g., 100 cm2 alpha/beta dual phosphor probes) and how the instruments will be calibrated for the variety of radioactive emissions anticipated. This is needed for staff to ensure the survey instruments will be appropriate to detect the type of contamination expected.

   Response: DDES proposes to use a Ludlum Model 2224 coupled with a Ludlum 100cm2 43-93 alpha/beta scintillator calibrated to Th-230 source for alpha and a Tc-99 source for beta, both calibrated for 4pi and 2pi emissions. DDES also proposes to use a Ludlum 2221 coupled with a Ludlum 44-10 2" NaI probe calibrated to Cs-137 source. DDES proposes to use a Ludlum Model 19 dose rate meter calibrated to Cs-137. All survey instruments shall have an annual calibration by a 3rd party NAVLAP approved calibration service (Energy Solutions).

2) Section 8.2 of the Cleanup Plan discusses the Contamination Control Program. Please explain how areas will be assessed to have controls released. Staff anticipate surveys to release controls on the areas being remediated likely on a daily frequency. This is needed for NRC staff to ensure that the public dose limit of 100 millirem per year will not be exceeded and to prevent cross contamination.

   Response: DDES shall perform gross wipe test surveys of areas where work is performed. Surveys of CRZ zones shall be performed on a daily frequency. The work areas will be isolated to prevent unauthorized personnel from accessing the area. The work area will be controlled until the NRC concurs the cleanup goals have been achieved and the space can re-occupied. This will ensure compliance with the public dose limit.

3) Section 9.0 of the Cleanup Plan discusses environmental monitoring. Please explain the means used to assess the emissions from the HEPA units and applicable action limits that will be in place. This should include how public exposure will be assessed, if needed. This is needed for NRC staff to ensure that the public dose limit of 100 millirem per year will not be exceeded and to prevent the release of radioactive materials.

   Response: DDES shall use 2,000 CFM HEPA units with exhaust points outside the work area but within a secondary containment area within the building envelope. Personal and perimeter air sampling shall be performed in aforementioned areas to demonstrate the potential dose to the public is below 100 millirem per year.

4) Section 5.0 of the Cleanup Plan discusses the proposed use of Derived Concentration Guideline Levels (DCGLs) as the method for assessing whether cleanup activities result in doses that are below the regulatory limits for the average member of the critical group (25 mrem/yr for the NRC; 19 mrem/yr for the State of Connecticut). The basis for the use of these proposed site-specific DCGL values for this particular site should be provided. This information is needed for NRC staff to assess the acceptability of the compliance values being used when evaluating any remaining doses associated with the cleanup of the site which, once established, can be used as the compliance point for determining whether or not the site has been remediated sufficiently.

   Response: The NRC has published default screening values (DSVs) in NUREG 1757, Volume 1, Appendix B for commonly used radionuclides. These default screening values are based on 25 mrem/year. However, a DSV was not published for Ra-226. NRC DandD code ver. 2.4 was used to calculate the DSV for Ra-226. Furthermore, the State of Connecticut regulations require facilities meet a TEDE of 19 mrem for unrestricted use. Based on 19 mrem per year, the DCGL for Total Contamination was calculated to be 819 dpm/100cm^2. This was based on the Average Member of the Critical Group (AMCG).

Please let us know if more information is required to answer the RAIs completely.

Sincerely

Matt Norton CIH, CSP
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From: Chang, Richard <Richard.Chang@nrc.gov>
Sent: Friday, February 1, 2019 10:40 AM
To: Matt Norton <mdnorton@ddesllc.com>
Cc: Jackson, Todd <Todd.Jackson@nrc.gov>; Kauffman, Laurie <Laurie.Kauffman@nrc.gov>; Powell, Raymond <Raymond.Powell@nrc.gov>; Koenick, Stephen <Stephen.Koenick@nrc.gov>;

thirst@newoppinc.org; Schwartzman, Adam <Adam.Schwartzman@nrc.gov>; Chapman, Gregory <Gregory.Chapman@nrc.gov>; Nelson, Robert <Robert.Nelson@nrc.gov>; Grossman, Christopher <Christopher.Grossman@nrc.gov>
Subject: NRC staff review of the New Opportunities Cleanup Plan

Mr. Norton,

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the New Opportunities Cleanup Plan, which we received on June 27, 2018, and the NRC staff had the following Requests for Additional Information (RAIs).

Would you be available for a discussion with the NRC staff to clarify these RAIs next week? After our clarification call, NRC staff would consider an email response to these RAIs adequate for us to move forward.

It is NRC staff's understanding from a 9/28/18 email from Ms. Hirst, that NRC staff can directly speak with DDES on the Cleanup Plan.

Regards,
Richard Chang
Project Manager
US NRC
301-415-5888

RAIs for NOW Clean Up Plan

1) Section 8.3 of the Cleanup Plan discusses instrumentation. Please clarify the instruments that will be used (e.g., 100 cm2 alpha/beta dual phosphor probes) and how the instruments will be calibrated for the variety of radioactive emissions anticipated. This is needed for staff to ensure the survey instruments will be appropriate to detect the type of contamination expected.
2) Section 8.2 of the Cleanup Plan discusses the Contamination Control Program. Please explain how areas will be assessed to have controls released. Staff anticipate surveys to release controls on the areas being remediated likely on a daily frequency. This is needed for NRC staff to ensure that the public dose limit of 100 millirem per year will not be exceeded and to prevent cross contamination.
3) Section 9.0 of the Cleanup Plan discusses environmental monitoring. Please explain the means used to assess the emissions from the HEPA units and applicable action limits that will be in place. This should include how public exposure will be assessed, if needed. This is needed for NRC staff to ensure that the public dose limit of 100 millirem per year will not be exceeded and to prevent the release of radioactive materials.
4) Section 5.0 of the Cleanup Plan discusses the proposed use of Derived Concentration Guideline Levels (DCGLs) as the method for assessing whether cleanup activities result in doses that are below the regulatory limits for the average member of the critical group (25 mrem/yr for the NRC; 19 mrem/yr for the State of Connecticut). The basis for the use of these proposed site-specific DCGL values for this particular site should be provided. This information is needed for NRC staff to assess the acceptability of the compliance values being used when evaluating any remaining doses associated with the cleanup of the site which, once established, can be used as the compliance point for determining whether or not the site has been remediated sufficiently.