

Aptuit, LLC
10245 Hickman Mills Rd., Suite B-2
Kansas City, Mo 64137

October 3, 2013

UNITED STATES NUCLEAR REGULATORY COMMISSION
REGION III Materials Licensing Branch
2443 WARRENVILLE ROAD STE 210
LISLE, ILLINOIS 60532-4352
Attn: Jennifer Dalzell-Bishop

Re: Justification for license activity reduction and changes to financial assurance.

Dear Mrs. Dalzell-Bishop:

Aptuit would like to make the following changes to Radioactive Material license No. 24-15595-01.

Isotope	Activity
C-14	8 Ci
H-3	3 Ci
S-35	Remove from license
I-125	Remove from license

Aptuit believes that it is appropriate to request a change in our authorized radionuclides and in our possession limits based on the potential activity remaining at the site during decommissioning activities. We have evaluated the locations and quantities of residual material remaining. These locations have been previously identified to the NRC via the Final Status Survey Report (FSSR) for Clinical Trials Supplies (CTS), (submitted to the NRC in February 2012), the Decommissioning Plan (DP) for Aptuit Scientific Operations (SO), Revision 1 (ADAMS Accession No. ML13053A398), and in the response to a NRC Request for Additional Information (ADAMS Accession No. ML13137A522, dated May 16, 2013). In addition Aptuit provided the NRC with an evaluation of residual activity in the CTS facilities in a letter dated July 26, 2012 (ADAMS Accession No. ML12209A411). As detailed in the CTS FSSR and in the SO DP, the only remaining contaminants of concern are H-3 and C-14, therefore S-35 and I-125 can be removed from the license.

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The table below provides an estimate of activity potentially remaining onsite pending completion of decommissioning activities.

Maximum Activity Potentially Remaining at Aptuit Prior to Completion of Decommissioning

Source	H-3 curies	C-14 curies
CTS building surfaces	3E-4	3E-4
Exhaust system (ducts & HEPA)	1	5.7E-1
SO building surfaces	3E-2	1.1E-1
Solid rad waste	1	2
Liquid rad waste	1E-2	1E-2
Mixed waste	1E-2	1E-2
API Drain lines	1E-5	3.5E-5
Total	2.04	2.67

As discussed in the CTS FSSR, all final status survey results were below the derived concentration guideline level (DCGL) and, with one exception, below the MDC of the survey instrument. The highest single measurement result (1841 dpm/100 cm²) was less than 5 percent of the DCGL. This result was multiplied by the total impacted area for the CTS facilities (3558 m²) to give a very conservative estimate of less than 3E-4 curies for both H-3 and C-14 remaining in CTS facilities. An investigation of the exhaust system and drains in the CTS facilities demonstrated that there were no radiological impacts to these systems from CTS operations (i.e. all investigation results met unrestricted release criteria).

The residual activity in the exhaust system is the total activity released during operations in the API area since operations began in 2008. For residual activity calculations the total activity is conservatively assumed to remain in the exhaust system (i.e. was not discharged from the stack). This total activity is taken from evaluations of emissions for the annual demonstration of compliance to dose-to-public limits and is based on mass balance calculations. The exhaust system includes the ducts, HEPA system, and the stack.

The SO building surface activity was generated by using the highest readings measured during scoping surveys multiplied by the surface area of the SO impacted areas (including the Waste Storage Building).

The activities assigned to radioactive wastes (solid, liquid, and mixed) are estimates based on historical operations and contamination levels calculated in exhaust systems and on building surfaces as described above.


The activity remaining in the API drain lines was estimated using the maximum H-3 and C-14 values lines (2016 dpm/100 cm² H-3 and 7001 dpm/100 cm² C-14) measured during the sewerage system investigation. Since the contamination levels were based on removable contamination data they were increased by a factor of 10 to estimate the total source term (i.e. assume 10% is the removable fraction). These values were then multiplied by the total volume of the drain lines coming from the impacted area. The total activity was calculated using a

rectangular volume source of 10m x 0.23m x 0.15 cm for a total volume of 345,000 cm³. The total activity estimated to be remaining in the embedded drain lines is 10 microcuries H-3 and 35 microcuries C-14.

The total activity estimated above is also conservative in that the activity in the exhaust system and on building surfaces is accounted for in the solid and liquid radioactive waste estimation. Actual disposal activity should be lower. The activity estimated in the table above is well below the requested license limits and will allow some cushion between what we expect to generate and our license limit.

Please contact me if you have any additional questions. I can be reached on my cell phone at (816) 769-4382,

Sincerely,

A handwritten signature in cursive script, appearing to read "Clinton Gregg".

Clinton Gregg
Radiation Safety Officer
Aptuit Scientific Operations, LLC

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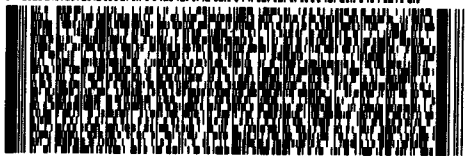
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ERIC THOMPSON
APTUIT INC.
1701 VINE ST.
HARRISONVILLE, MO 64701
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SHIP DATE: 03OCT13
ACTWST: 120 LB MAN
CAD: 806800/CAFE2704
BILL SENDER

TO JENNIFER DALZELL - BISHOP
UNITED STATES NRC
2443 WARRENVILLE ROAD
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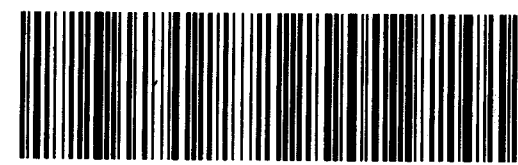
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