

THE
UNIVERSITY
OF RHODE ISLAND

DIVISION OF
ADMINISTRATION
AND FINANCE

THINK BIG  WE DO™

PURCHASING DEPARTMENT
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DATE: 11/10/16

ADDENDUM #2

BID NO.: RFP7069
OPENING: 11/22/16 @ 3:00pm
COMMODITY: Radioactive Waste Disposal , University of Rhode Island

Please note that the Bid opening date has been extended to 11/22/16 @ 3:00pm .

The following is the department's response to questions submitted by the 11/7/16 @12:00pm due date for final questions regarding this RFP7069. Additional questions are not accepted after that date.

Question #1 Attachment A.1 Chemicals (Page 1) and Answers (A:#1)

- Pb and uranyl acetate – is this uranyl acetate contaminated with lead citrate or where does the lead come from? What is the volume of the material? **A:#1** We don't know where the lead come from. Approximately 5 g and dry
- Lead Citrate – is the volume 2 grams total or per flask? **A:#1** Let's assume 2 g per flask to be safe
- Thorium Chloride – what is the volume? **A: #1** Approximately 2g solid on the bottom and 200 ml liquid

Question #2 Attachment A.1 Chemicals (Page 2) and Answers (A:#2)

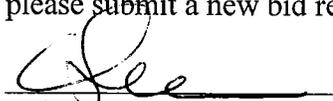
- Uranyl acetate/Pb citrate – what is total volume of first line item? **A: #2** 2g dry
- Uranium Nitrate, Liquid – what is the volume and what percentage of uranium nitrate? Is it mixed with any other RCRA hazardous constituent? **A: #2** No liquid. I assume it dried out. It is in a 10 ml vial and in a tin can.

Question #3 Attachment A.1 Sources and Answer (A:#3)

- Can approximate dimensions be provided for sources other than "button" or "check" sources? **A:#3** I updated information with chemical compound (some chemical compound was removed from the list, they were previously shipped out) and sources.

The attached A.1 Documents for Sources and Chemicals , Addendum -2 are the updated versions of A.1 sections for Chemicals and Sources . These replace the previously provided A.1 pages for these waste types.

If you have already submitted a bid and need to make changes, based on the information within the Addendum, please submit a new bid response and indicate that this submission supersedes the prior.


Debra Lee

Purchasing Department
The University of Rhode Island

A.1 Chemical -Addendum2

Description	Date	Mass (g)	Activity (uCi)	
uranyl acetate		2		flask
U3O8 standard		~ 1mg		NBS, USDOC
Uranyl Acetate		25		Electron Microscopy Science, Cat#22400 Cas#541-09-3
Uranyl Acetate (Brand New!)		25		Electron Microscopy Science, Cat#22400 Cas#541-09-3
Uranyl Acetate		25		Electron Microscopy Science, Cat#22400
0.05% Uranyl Acetate in diH2O (in plastic tub)	Sep-08			2 g solid with 80 ml liquid in 125 ml flask
Uranyl Acetate		2		dried on the bottom in 2 liter beaker
Uranyl Acetate		100		Carbon? Solid form. Black in a glass vial
Uranyl oxide		20 g		
Uranyl Acetate				
Uranyl Acetate	4/1/1998	30 ml		500 ml total 2 plastic bottle in a bag
Uranium				Liquid in 20 ml vial in a ziplock bag

Thorium Nitrate		180 ml		Plastic container
Pb and uranyl acetate		5		pepper jar (glass)
Lead Citrate		2 each		2 flasks in a ziplock bag
Thorium Chloride				original container mixed with liquid, 2g solid, 20 ml liquid
Uranyl Chloride		130		Liquid
uranyl acetate/Pb citrate		200 ml total		container X 4, one in a ziplock bag, others are in a can
uranyl acetate/Pb citrate		2g		125 ml flask
uranium nitrate, liquid		≈2g		model: SL-71-14, Atomic Accessories Inc.
Thorium Nitrate				Johnson Matthey Chemicals Limited, S84225 label missing.
				Brown bottle

Uranium Sulphate, sodium sulphate, uranium nitrate, sodium nitrate, thorium nitrate, sulphur (total 4 kits)

Hubbard, General Kits 3557

Europium Oxide

2 g

3-2 gallon bottles of mixed liquid wastes. Approximately total 5 gallons. Low activity of H-3 and C-14 but mixed with unknown chemical, pH-7

Approximately 10-2 gallon bottles of liquid waste with unknown chemicals. Based on the LSC counts, it indicates low energy region and

expect to be H-3 and C-14 due to the school usage history and they have been stored more than 10 years.

Description A.1 Sources

Reference Sources and Check Sources

Adendum-2	Date	Model/Serial #	Activity (uCi)	Info
C-14			184141	0.01 Nuclear Chicago
C-14	05/16/05		184451	0.1 Nuclear Chicago
Tc-99			1269	0.05 Nuclear Associates
C-14			1/1/1960	0.1 Tracerlab
TI-204		204BDU, B10-51		0.1 Baird Atomic
Bi-210			418	0.018
Pa-234			418	0.013
Cs-137				1 "Check source" on a yellow plastic disc
Cs-137	10/08/80			40 LSC source, 1 pellet
U-238	04/13/64			0.12 Victoreen survey meter source
Bi-210	04/02/80			0.0197
Tc-99	12/01/78		52073	13.9 Isotope Products
Am-241	07/19/66			0.11
U-238	09/28/65			0.06 Possibly survey meter source
Cs-137	08/30/61			1 Stick source
Pu-238	07/03/83	213, 214, 216		0.1 each Plated source, 3 sources
U-238	10/21/64	S713		0.03 Plated source
Bi-210	04/01/62	B40086		0.008 Chemtrac
TI-204	04/01/62	B30070		0.01 Chemtrac
Cs-137	04/25/05			0.03863 Chemtrac
Cs-137	03/10/81			0.25
Na-22	06/14/10	82336-893	120	0.3 Packard
Sr-90	07/24/64			100 E&Z
Pm-147		147BD, B15-01		100
Bi-210	11/21/77			0.1 Baird Atomic
Cl-36	11/21/77			0.025 NEN
Sr-90	12/27/79			0.0214 NEN
Co-60	10/16/79			0.0214 NEN
Pm-147	11/23/77			0.044 NEN
C-14	11/26/77			0.131 NEN
C-14	11/19/52			0.131 NEN
Sr-90		BS60		0.097
TI-204				3 USNC
Co-60				0.9 REAC
TI-204				0.9 REAC
TI-204				0.1 REAC

Cl-36		36BD, B17-16	0.1 Baird Atomic
Pa-234		234BD, B19-46	0.1 Baird Atomic
Tc-99		99BD, B17-06	0.1 Baird Atomic
Sr-90		90BD, B18-58	0.1 Baird Atomic
C-14		14BDU, B14-123	0.1 Baird Atomic
Pa-234		06/06/63 B1148	0.0071 Atomic Accessories
C-14		04/01/62 B10094	0.21 Chemtrac
Cl-36		catalog #: 61-2208, 1269	0.0255 Nuclear Associates, original units: 942 B/sec
Cs-137	02/19/63		0.2 each 3 sources, Nucleonic Corp
Cs-137	02/23/67 62-213		1
Co-60			REAC
Co-60			1 3 sources Canberra
Po-210			0.1 2 sources Canberra
Cs-137			5 3 sources Canberra
Tl-204			1 2 sources Canberra
Sr-90			0.1 3 sources Canberra
Po-210			0.1 2 sources Canberra
Co-60	04/12/63 62-216		0.93
Co-60	04/29/68 62-216		1.14
Cs-137	04/29/68 62-213		1.14
Na-22	04/29/68 62-215		1.36
Na-22	02/16/67 62-215		0.96
Cs-137		137BD, B11-20	0.1 Baird Atomic
Co-60			0.1 "Gamma"
Pb-214			2 Nuclear
Na-22	08/02/88		32.6 Dupont
Na-22	02/05/87		1.1 NEN
Po-210			0.1 "Alpha"
Cs-137	11/22/75		8
Cs-137			10 LSC pellet
RA D&E #1			0.1 Assume to be Pb-210 and Po-210
RA D&E #2			0.1 Assume to be Pb-210 and Po-210
Bi-210		210BD, B13-60	0.1 Baird Atomic
Tc-99	11/21/77		0.042 NEN
Co-60	10/01/52		0.0125
Co-60	04/01/62 B20070		0.014 Chemtrac
Sr-90	11/21/77		0.209 NEN
Co-60		60BD, B12-38	0.1 Baird Atomic
C-14			0.01 Nuclear Chicago
		184141	

Co-60	04/12/05 A-40			0.0002 Chemtrac
Cd-109	07/20/75			0.1 NEN
Cs-137	09/29/75			0.089 NEN
Co-60	09/23/75			0.142 NEN
Ba-133	08/08/75			0.09
Na-22	11/03/75			0.116
Cs-137 and ZN-65	03/01/08		0.5 and 1	Spectrum, 2 mixed sources
Co-57	03/01/08			1 Spectrum, 2 sources
Cd-109	02/01/08			1 Spectrum, 2 sources
Mn-54	02/01/08			1 Spectrum, 2 sources
Na-22	02/01/08			1 Spectrum, 2 sources
Cs-137	05/25/93			21.7763
Beta source				0.005 Assumed to be Tc-99 or other high beta, No gamma
Co-60				0.1 2 sources, Welch
Tl-204				0.1 5 sources, Welch
Bi-210	02/01/52			0.0143 Tracerlab
C-14	05/01/60			0.271
Cs-134				9
Tl-204				9
Uranium 238 (3)	06/04/65			0.06 Survey meter check source
Po-210	04/01/61			0.1 Paper source
Tl-204	01/20/70			50
Ra-226				1 each
C-14	09/66			10 check sources from Victoreen meter
Co-60				0.165 Reference source, NEC
Cs-137				0.03 disk source, Isovolve, Gamma spec results
Pa-234	02/01/53			0.1 Paper source
Bi-210	11/01/52			3.1
Cs-137				96
Cs-137				0.2
Cs-137				0.01
Cs-137	05/23/86	REAC 5474		0.01 2 sources, Tracerlab
Co-60		model R35B		0.025 Tracerlab
Co-60		model R35B		0.1
Co-60	12/13/84			0.1
Co-60	03/14/88			0.1
C-14	03/01/58			1 Tracerlab

Mixed Standard

Mixed Gamma CATT1230
Mixed Gamma 2 inch disk 07/01/93 A1372
1 Co-57, Co-60, Mn-54, Eu-155, Na-22
1 Co-60, Co-57, Eu-155, Am-241, Cs-137, Y-88, Sb-125, Sr-85

Mixed Gamma, 500 ml ma 07/01/93	A3115	1 Co-60, Co-57, Eu-155, Am-241, Cs-137, Y-88, Sb-125, Sr-85
Mixed Gamma, 500 ml ma 07/01/93	A1374	1 Co-60, Co-57, Eu-155, Am-241, Cs-137, Y-88, Sb-125, Sr-85
Mixed Gamma, 2000 ml m 07/01/93	A1375	1 Co-60, Co-57, Eu-155, Am-241, Cs-137, Y-88, Sb-125, Sr-85
Mixed Gamma, 2000 ml m 07/01/93	A1376	1 Co-60, Co-57, Eu-155, Am-241, Cs-137, Y-88, Sb-125, Sr-85
Mixed Gamma, 100 ml pla 10/01/99	58657A-528	2.773 Am-241 and Sr-90
Mixed Gamma, 500 ml ma 10/01/99	58656-528	1.065 Am-241 and Sr-90
Mixed Gamma 2 inch disk 10/01/99	58655-528	1.129 Am-241 and Sr-90
Mixed Gamma 2 inch disk 09/01/77	SRM4215-E	0.26 Cs-137 and Co-60
Mixed Standard	12/28/89	4276C-30
Mixed Gamma, 500 ml ma 02/21/03	MGs-6SPL	NIST, 5 fiber filter with 300 ul each
Mixed Gamma 2 inch disk 02/21/03	MGs-2	1.11 Co-60, Co-57, Eu-155, Am-241, Cs-137, Y-88, Sb-125, Sr-85
Mixed Gamma 2 inch disk 04/01/03	65864-644	0.914 Co-60, Co-57, Eu-155, Am-241, Cs-137, Y-88, Sb-125, Sr-85
Mixed Gamma 20 ml vial 06/09/05	MGs	0.968 Co-60, Co-57, Eu-155, Am-241, Cs-137, Y-88, Sb-125, Sr-85
Mixed Gamma 2 inch disk 01/01/06	72472-644	1 Co-60, Co-57, Eu-155, Am-241, Cs-137, Y-88, Sb-125, Sr-85
Mixed Gamma 2 inch disk 04/01/07	75257-791	0.99 Co-60, Co-57, Eu-155, Am-241, Cs-137, Y-88, Sb-125, Sr-85
Mixed Gamma, 500 ml ma 05/12/08	MGs-6SPL	1 Co-60, Co-57, Eu-155, Am-241, Cs-137, Y-88, Sb-125, Sr-85
Mixed Gamma 2 inch disk 09/01/12	UN 152	0.9
Mixed Gamma, 500 ml ma 01/01/15	MGs, 8501-EG-SD	1 Am-241, Cs-137, Co-60, Cd-109, Y-88
		10 Am-241, Cs-137, Co-60, Cd-109, Y-88, Co-57

Sealed Sources - these can be in a 5 gallon container

Cs-137	02/26/05	LOT 1651, 598860	30 Beckman LSC
Ba-133	04/01/95		18.8 Packard LSC
Cobalt 60, Clear Tubes wh	06/03/05		3 small wires
Co-57 (2)	01/01/02	Co7.1.26.01, MCo7.114/88.01	13.5 0.9 uCi each by analysis 2015, less than an inch each
gold plated thin wire			0.1
roughly little over an inch			1 Cube, less than an inch
Ra-226			2 small cylinder
Ra-226			3 v-60 (on source); 2011-7 (label)
sources, check source	11/29/76	CAN 1412	3 v-199 (on source); 2011-5 (label)
Sr-90	08/29/67	CAN 1412	3 v-60 (on source); 2011-4 (label)
Sr-90	08/29/67	CAN 1473	3 v-60 (on source); 2011-6 (label), Aug 1965 (on back of source)
Sr-90	08/29/67	CAN 1474, Model #301H, S/N 1048	3
Sr-90		CAN 1452	3 JORDAN Electronics
Sr-90	08/01/64	Model AGB S/N 1386	0.04 round metal with silver foil, leaking, Gamma spec results, ina 20 ml vial
Cs-137	03/19/05	Lot 1651, P/N 598860	30 Beckman LSC
Cs-137	09/01/99	K5745, Model: G1223A	ECD
Ni-63	10/13/10	Humphrey 7-5-4	5 Humphrey, about 10 inch long cylinder. Less than 1 inch diameter
Cs-137	01/01/03	Model # G3797A SN U5161	ECD
Ni-63			15 mCi

Ra-226	P-73	20
Cs-137	05/25/93	21.8 Pellet in a plastic vial
Am-241	Smoke detectors	0.9 Total 16 sources
Co-60(Be?)	07/03/15	10 Source found in waste, Be-Co on the source
Ni-63	09/01/90 5890, M2256	ECD
Ni-63	05/09/07 G1223A, K1113	ECD
Co-60	10/26/64	Tracerlab, less than an inch. Comes with about 5 inch long metal stick
Co-60	08/01/63 J346	US Nuclear Corp. less than an inch. Comes with about 5 inch long metal stick

Miscellaneous

Thorium

Thorium lantern sleeves, 10 total