

START

9713515-1894

BOOB77-SAI

59

0046173



Science Applications International Corporation
An Employee-Owned Company

December 5, 1990

Westinghouse Hanford Company
2355 Stevens Drive
Richland, WA 99352
Attn: R. A. Bechtold



Reference: Contract No. MPB-SVV-069146

Dear Ms. Bechtold:

Enclosed is the sample delivery group No. *BOOB77* and SOW No. *300-FF-1 Remedial Investigation, Task 5b Vegetation Analysis for CY 1990*. The following samples were received on October 19, 1990:

<i>WHC Sample No.</i>	<i>SAIC Sample No.</i>
BOOB77	19743
BOOCH6	19744
BOOCK0	19745
BOOCH9	19746
BOOCJ4	19747
BOO9V6	19748
BOO9V5	19749
BOO9V3	19750
BOO9V4	19752
BOO9Q7	19753
BOO9Q9	19754
BOO9R0	19755
BOO9R2	19756
BOO9V7	19757
BOO9V8	19758
BOO9R4	19759
B009R7	19760

3 Choke Cherry Road, Rockville, Maryland 20850 (301) 977-4480

Other SAIC Offices: Albuquerque, Boston, Colorado Springs, Dayton, Huntsville, Las Vegas, Los Angeles, McLean, Oak Ridge, Orlando, Palo Alto, San Diego, Seattle, Tucson

December 5, 1990
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<i>WHC Sample No.</i>	<i>SAIC Sample No.</i>
BOO9S6	19762
BOO9S9	19763
BOO9V9	19764
BOO9W0	19765
BOO9S0	19766
BOO9S1	19767

Data is also included for the blanks, replicates, spikes, and lab control samples. Samples were as follows:

<i>Type of Sample</i>	<i>SAIC Sample Numbers</i>
Duplicate	19751
Duplicate	19761
Blank	Blank 1
Blank	Blank 5
Blank	Blank 6
Reference Standard	Spike 2
Reference Standard	Spike 3
Reference Standard	Spike 4

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I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Very truly yours,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

A handwritten signature in black ink, written in a cursive style. The signature appears to read "Farideh Moghadami" and includes a large, sweeping flourish at the end.

Farideh Moghadami
Laboratory Manager

cc: QA Officer

SAIC
Analytical Laboratory
3 Choke Cherry Road
Rockville, MD 20850-4087

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Westinghouse Hanford
Case Narrative
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CASE NARRATIVE

Sample Delivery Group No. BOOB77 was analyzed in accordance with SAIC's standard operating procedures and the quality assurance program. This group was received on October 19, 1990 and included the following samples:

<i>WHC Sample No.</i>	<i>SAIC Sample No.</i>	<i>Sample Date</i>	<i>Sample Type</i>
BOOB77	19743	05/14/90	Asparagus
BOOCH6	19744	06/20/90	CHNA
BOOCK0	19745	06/20/90	POSA
BOOCH9	19746	06/20/90	CHNA
BOOCJ4	19747	06/20/90	POSA
BOO9V6	19748	05/07/90	Asparagus
BOO9V5	19749	05/07/90	Asparagus
BOO9V3	19750	05/07/90	Asparagus
BOO9V4	19752	05/07/90	Asparagus
BOO9Q7	19753	04/24/90	Asparagus
BOO9Q9	19754	04/24/90	Asparagus
BOO9R0	19755	04/24/90	Asparagus
BOO9R2	19756	04/24/90	Asparagus
BOO9V7	19757	05/08/90	Asparagus
BOO9V8	19758	05/08/90	Asparagus
BOO9R4	19759	04/25/90	Asparagus
B009R7	19760	04/25/90	Asparagus
BOO9S6	19762	04/25/90	Asparagus
BOO9S9	19763	04/25/90	Asparagus
BOO9V9	19764	05/08/90	Asparagus
BOO9W0	19765	05/08/90	Asparagus
BOO9S0	19766	04/25/90	Asparagus
BOO9S1	19767	04/25/90	Asparagus

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No abnormalities, problems, or deviations from accepted procedures were identified except those noted as follows:

<i>Issue</i>	<i>Reason</i>
Detection limit of 1.2 pCi/g on samples 19744, 19745, 19746	The laboratory was unable to achieve the detection limit of 1.0 pCi/g on these samples due to the amount of sample available. Five (5) grams of sample was supplied, and ten (10) grams of this sample type are necessary to meet this detection limit. The lab generally allocates 50% of sample received for chemical separations and archives 50% to allow for any problems that may arise or for a requested reanalysis.
Recount of sample 19765	The original count of this sample was slightly above background and the lab recounted the sample. The recount value was at background levels.
Redissolve and recount of samples 19748, 19758, 19765	These samples indicated three to four times background levels of activity. The samples were redissolved and precipitated a second time and counted for beta activity. The second count indicated no significant level of beta activity. Technetium is precipitated as tetraphenylarsonium perrehenate. This is a very large and bulky molecule and can

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Issue

Reason

(continued from previous page)

sometimes capture naturally occurring potassium 40 inside the lattice of the compound. The original count probably reflected activity from potassium 40. Dissolving the sample in ethanol and re-precipitating probably removed the interfering ions.



CHAIN OF CUSTODY

CAB 035

Company Contact: CHARLES A. BRANDT Telephone: 376-5345
 Samples Collected by: NA Date: _____ Time: _____
 Sample Location: NA
 Ice Chest No.: NA Field Logbook Page No.: _____
 Remarks: 99Tc splits

Method of Shipment: Hand Carry

<u>New Number</u>	<u>Old Number</u> (Parent)	<u>Sample Identification</u>	<u>New Number</u>	<u>Parent Number</u>
X/B002B77	B009B9	X/B009R2		ASPG028
X/B00CH6	B009P9	X/B009V7		B00989
X/B00C60	B009Q0	X/B009V8		B00990
X/B00CH9	B009G1	X/B009R4		ASPG030
X/B00CI4	B009G2	X/B009R7		ASPG033
X/B009V6	B00988	X/B009S6		ASPG042
X/B009V5	B00987	X/B009S9		ASPG045
X/B009V3	B00985	X/B009V9		B00991
X/B009V4	B00986	X/B009W0		B00992
X/B009Q7	ASPG023	X/B009S0		ASPG036
X/B009Q9	ASPG025	X/B009S1		ASPG037
X/B009R0	ASPG026			

Chain of Possession

Relinquished by:

R. J. Fellows
Relinquished by:

Received by:

Gordon Bennett
Received by:

Date/Time:

11:50 AM 10/17/90
Date/Time:

Relinquished by:

A. Rich SAIC
Received by:

10/18/90 - 1030
Date/Time:

Relinquished by:

Received by:

Date/Time:

9713515.1901



Westinghouse Hanford Company

Westinghouse Hanford Company
A subsidiary of Westinghouse Electric Corporation
P.O. Box 1970 Richland, Wa. 99352

RELEASE TO SHIP

41440

MO	DAY	YR
10	12	90

DATE SHIPPED		
MO	DAY	YR

VENDOR CODE	PURCHASE ORDER REF
55922	MPB-SVY-069146

SHIP TO
SCIENCE APPLICATIONS INTERNATIONAL CORP.
LABORATORY SERVICES DIVISION
3 CHOKE CHERRY ROAD
ROCKVILLE MD 20850-4087
ATTN: RADWASTE SAMPLE COORDINATOR

FOR ACCOUNT OF
WESTINGHOUSE HANFORD COMPANY
PO BOX 1970
RICHLAND WA 99352

F.O.B.	CAR INITIALS AND NO.	FRT. CHGS. 1. VENDOR 2. WESTINGHOUSE HANFORD	BUYER CODE	BUYER NAME	PHONE
ROCKVILLE MD		2	PR	P. D. BRAUN	6-5762

B/L	B/L WEIGHT	ROUTING	RETURN DUE DATE	REQUISITION NO.
	5.111/177#	AIRBORNE OR FEDERAL EXPRESS	TBD	069146

P/O ITEM	QUANTITY	U M	DESCRIPTION	AMOUNT
	5	EA	BOXES COOLERS OF VEGETATION SAMPLES	

Pick 10/18/90

REDISTRIBUTE COST	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	SPECIAL PACKAGING REQUIRED	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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REASON FOR SHIPMENT	<input checked="" type="checkbox"/> F	A. RETURN FOR CREDIT	E. RETURN OVERSHIMENTS	J. SHIP MATERIAL OR EQUIPMENT FOR REPAIR OR REBUILD
		B. RETURN FOR REPLACEMENT	F. RETURN SAMPLE	K. SHIP MATERIAL OR EQUIPMENT FOR REPAIR ESTIMATE
		C. RETURN FOR REPAIR	G. RETURN VENDOR-OWNED MATERIAL OR EQUIPMENT	L. SHIP GOVERNMENT-OWNED RETURNABLE CONTAINER
		D. RETURN VENDOR-OWNED RETURNABLE CONTAINER	H. SHIP GOVERNMENT-OWNED TOOLS, JIGS, AND FIXTURES	M. SHIP GOVERNMENT-OWNED MATERIAL FOR USE IN FABRICATION
			I. SHIP EXCHANGE UNITS (CORE)	N. MISCELLANEOUS-

HAZARDOUS MATERIAL	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	IF YES, HAZARDOUS MATERIAL FORM IS REQUIRED TO ACCOMPANY MATERIAL.
--------------------	---	--

LOCATION OF MATERIAL	TOTAL PIECES	RM CLEARANCE FOR PUBLIC SALE	SURVEY NO.
TO BE DELIVERED TO SHIPPING	5		

CUSTODIAN			R. A. BECHTOLD		PHONE	3-3448	DATE AVAILABLE FOR SHIPMENT	10-16-90
ITEM	CO ID	COST CENTER	MC	COST ELEMENT	CHARGE CODE	% OF COST	AUTHORIZED BY	DATE
	M	16500		210	EC32Y	100	P. D. BRAUN	10-12-90
							FOR DOE	DATE
							FOR SHIPPING OPERATOR	DATE

1-ACCOUNTS PAYABLE COPY
3-PROPERTY MANAGEMENT COPY
5-PACKING LIST COPY
7-CUSTODIAN COPY-2

2-BUYER'S COPY
4-SHIPING COPY
6-CUSTODIAN COPY 1
8-PURCHASING COPY

5
5-2

*** SAMPLE ANALYSIS REQUEST SHEET ***

Please Follow Instructions On Back

Purchase Order MPB-SVV-069146

Turnaround 14 day 30 day X 45 day

Plant Sample ID	<u>see attached sheets</u>			
Unit #	<u> </u>			
Sample Type	<u>special</u>			
Sample Sub-Type	<u>Solid</u>			
Reference Date	<u>see attached sheets</u>			
Filter Volume	<u> </u>			

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509
373-3992

Gamma Isotopic				
Gross Alpha				
Gross Beta				
H-3				
C-14				
P-32				
Fe-55				
Ni-59				
Ni-63				
Sr-89/90				
Nb-94				
Tc-99	<u>X</u>			
I-129				
Transuranics				
Ce-144				
Pu-241				
U-234/235/238				

Return Container X Yes No

Scaling Factors Yes X No

Mixed Waste Yes X No

Contact Person R.A. Bechtold

Telephone (509) 373-3448

Comments _____

<i>99Tc #</i>	<i>Parent #</i>	<i>Stratum</i>	<i>Sample Date</i>	<i>Sample Type</i>
B00B87	B009C8	300 Downriver	05/21/90	Asparagus
B00B86	B009C7	300 Downriver	05/21/90	Asparagus
B00B85	B009C6	300 Downriver	05/21/90	Asparagus
B00B88	B009C9	300 Downriver	05/21/90	Asparagus
B00B84	B009C5	300 Downriver	05/21/90	Asparagus
B00B89	B009D0	300 Downriver	05/25/90	Asparagus
B009V2	B00984	Downriver	05/07/90	Asparagus
B009V1	B00983	Downriver	05/07/90	Asparagus
B009V0	B00982	Downriver	05/07/90	Asparagus
B009T9	B00981	Downriver	05/07/90	Asparagus
B009T8	B00980	Downriver	05/07/90	Asparagus
B009T7	B00979	Downriver	05/07/90	Asparagus
B00B83	B009C4	Downriver	05/21/90	Asparagus
B00B81	B009C2	Operable Unit	05/14/90	Asparagus
B00B82	B009C3	Operable Unit	05/14/90	Asparagus
B00B94	B009D5	Operable Unit	05/25/90	Asparagus
B00B93	B009D4	Operable Unit	05/25/90	Asparagus
B00B92	B009D3	Operable Unit	05/25/90	Asparagus
B00B91	B009D2	Operable Unit	05/25/90	Asparagus
B00B90	B009D1	Operable Unit	05/25/90	Asparagus
B00CJ2	B009P7	Operable Unit	06/19/90	CHNA
B00CJ5	B009P8	Operable Unit	06/19/90	POSA
B00CJ0	B009P5	Operable Unit	06/19/90	CHNA
B00CJ3	B009P6	Operable Unit	06/19/90	POSA
B00CJ1	B009P3	Operable Unit	06/19/90	CHNA
B00CJ6	B009P4	Operable Unit	06/19/90	POSA
B00CH5	B009P1	Operable Unit	06/19/90	CHNA
B00CJ8	B009P2	Operable Unit	06/19/90	POSA
B00CH8	B009N9	Operable Unit	06/19/90	CHNA
B00CJ9	B009P0	Operable Unit	06/19/90	POSA
B00CH7	B009N7	Operable Unit	06/19/90	CHNA
B00CJ7	B009N8	Operable Unit	06/19/90	POSA
B009Q4	ASPG020	South Plateau	04/20/90	Asparagus
B009Q6	ASPG022	South Plateau	04/20/90	Asparagus
B009Q3	ASPG019	South Plateau	04/20/90	Asparagus
B009Q5	ASPG021	South Plateau	04/20/90	Asparagus
B009T1	ASPG047	South Plateau	04/26/90	Asparagus

99 Ic #	Parent #	Stratum	Sample Date	Sample Type
B009T2	ASPG048	South Plateau	04/26/90	Asparagus
B009T3	B00975	Upriver	05/03/90	Asparagus
B009T4	B00976	Upriver	05/03/90	Asparagus
B009T6	B00978	Upriver	05/03/90	Asparagus
B009T5	B00977	Upriver	05/03/90	Asparagus
B00B79	B009C1	Upriver	05/14/90	Asparagus
B00B78	B009C0	Upriver	05/14/90	Asparagus
B00B77	B009B9	Upriver	05/14/90	Asparagus
B00CH6	B009P9	Upriver	06/20/90	CHNA
B00CK0	B009Q0	Upriver	06/20/90	POSA
B00CH9	B009Q1	Upriver	06/20/90	CHNA
B00CJ4	B009Q2	Upriver	06/20/90	POSA
B009V6	B00988	West	05/07/90	Asparagus
B009V5	B00987	West	05/07/90	Asparagus
B009V3	B00985	West	05/07/90	Asparagus
B009V4	B00986	West	05/07/90	Asparagus

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B009P7	ASPG023	Hanford Tracts	04/24/90	Asparagus
B009P9	ASPG025	Hanford Tracts	04/24/90	Asparagus
B009R0	ASPG026	Hanford Tracts	04/24/90	Asparagus
B009R2	ASPG028	Hanford Tracts	04/24/90	Asparagus
B009V7	B00989	Sunny Side	05/08/90	Asparagus } dup
B009V8	B00990	Sunny Side	05/08/90	Asparagus } dup
B009R4	ASPG030	Taylor Flats	04/25/90	Asparagus } dup
B009R7	ASPG033	Taylor Flats	04/25/90	Asparagus } dup
B009S6	ASPG042	Taylor Flats	04/25/90	Asparagus } dup
B009S9	ASPG045	Taylor Flats	04/25/90	Asparagus } dup
B009V9	B00991	Tobacco	05/08/90	Asparagus } dup
B009W0	B00992	Tobacco	05/08/90	Asparagus } dup
B009S0	ASPG036	Taylor Flats	04/25/90	Asparagus } dup
B009S1	ASPG037	Taylor Flats	04/25/90	Asparagus } dup

9713515.1905

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 05/14/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19743
Plant Sample ID : U#B00B77
Volume/Weight : 7.0284E+00 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	-1.12E-07	256	<4.9E-07

Project Manager

Laboratory Manager

The data contained in this report were produced and documented in accordance with approved quality control and quality assurance procedures. All of the results are decay corrected to the reference date listed above. Indicated errors are two (2) standard deviations based on counting statistics only.

9713515.1906

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 06/19/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19744
Plant Sample ID : U#B00CH6
Volume/Weight : 5.2954E+00 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

<u>Nuclide</u>	<u>Value</u>	<u>% Unc.</u>	<u>MDL</u>
99-Tc	6.77E-07	159	<1.7E-06

Project Manager

Laboratory Manager

The data contained in this report were produced and documented in accordance with approved quality control and quality assurance procedures. All of the results are decay corrected to the reference date listed above. Indicated errors are two (2) standard deviations based on counting statistics only.

9713515.1907

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 06/20/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19745
Plant Sample ID : U# B00CK0
Volume/Weight : 4.2545E+00 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration

Nuclide	(uCi/g (dry)) Value	% Unc.	MDL
99-Tc	1.06E-06	79	<1.3E-06

Project Manager

Laboratory Manager

The data contained in this report were produced and documented in accordance with approved quality control and quality assurance procedures. All of the results are decay corrected to the reference date listed above. Indicated errors are two (2) standard deviations based on counting statistics only.

9713515.1908

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 06/20/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19746
Plant Sample ID : U# B00CH9
Volume/Weight : 4.1139E+00 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
-----	-----	-----	---
99-Tc	-1.06E-06	60	<1.2E-06

Project Manager

Laboratory Manager

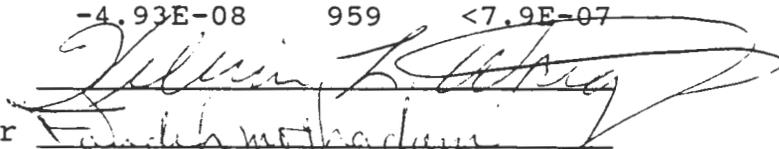
The data contained in this report were produced and documented in accordance with approved quality control and quality assurance procedures. All of the results are decay corrected to the reference date listed above. Indicated errors are two (2) standard deviations based on counting statistics only.

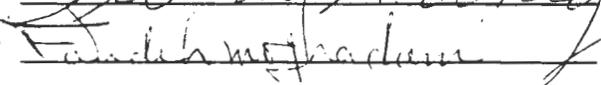
Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
 Sample Type : Special, Solid
 Reference Date/Time : 06/20/90 12:00
 Receipt Date : 10/19/90
 Reporting Date : 12/06/90
 SAIC Sample Number : 19747
 Plant Sample ID : #U B00CJ4
 Volume/Weight : 4.1139E+00 g (dry)
 Purchase Order Number : MPB-SVV-069146
 SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
-----	-----	-----	---
99-Tc	-4.93E-08	959	<7.9E-07

Project Manager 

Laboratory Manager 

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Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
 Sample Type : Special, Solid
 Reference Date/Time : 05/07/90 12:00
 Receipt Date : 10/19/90
 Reporting Date : 12/07/90
 SAIC Sample Number : 19748
 Plant Sample ID : U# B009V6
 Volume/Weight : 1.0180E+01 g (dry)
 Purchase Order Number : MPB-SVV-069146
 SAIC Project Number : 1-139-05-656

Measured Concentration

Nuclide	Value	% Unc.	MDL
99-Tc	-4.03E-07	. 52	<4.0E-07

Project Manager

Laboratory Manager

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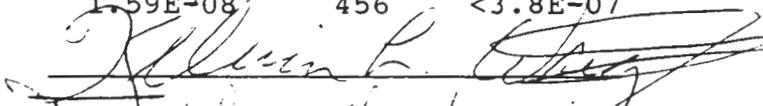
9713515.1911

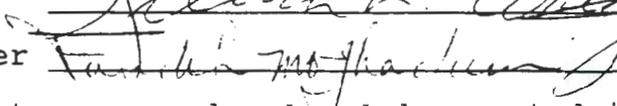
Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 05/07/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19749
Plant Sample ID : U# B009V5
Volume/Weight : 1.0672E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration

Nuclide	Value (uCi/g (dry))	% Unc.	MDL
99-Tc	1.59E-08	456	<3.8E-07

Project Manager 

Laboratory Manager 

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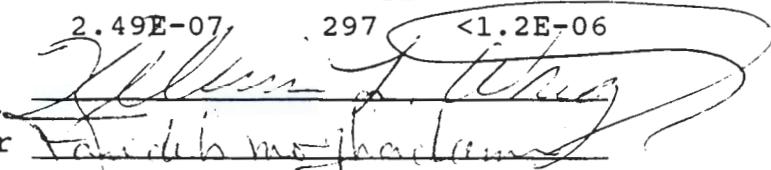
9713515.1912

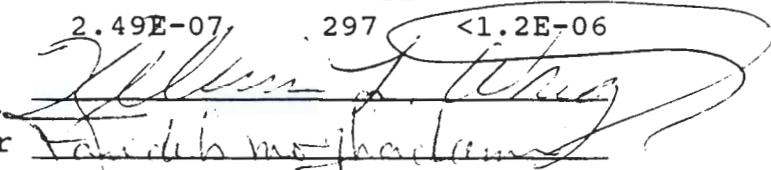
Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 05/07/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19750
Plant Sample ID : U# B009V3
Volume/Weight : 8.0459E+00 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration

Nuclide	(uCi/g (dry)) Value	% Unc.	MDL
99-Tc	2.49E-07	.297	<1.2E-06

Project Manager 

Laboratory Manager 

The data contained in this report were produced and documented in accordance with approved quality control and quality assurance procedures. All of the results are decay corrected to the reference date listed above. Indicated errors are two (2) standard deviations based on counting statistics only.

9713515.1913

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 04/24/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/07/90
SAIC Sample Number : 19751
Plant Sample ID : DUPLICATE 19754, U# B009Q9
Volume/Weight : 1.0546E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	-6.67E-07	59	7.3E-07

Project Manager

Laboratory Manager

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9713515.1914

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 05/07/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19752
Plant Sample ID : U# B009V4
Volume/Weight : 1.0441E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	-2.72E-07	125	<5.9E-07

Project Manager

Laboratory Manager

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9713515.1915

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 04/24/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19753
Plant Sample ID : U# B00907
Volume/Weight : 1.1363E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	3.26E-07	177	<9.2E-07

Project Manager

Laboratory Manager

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9713515.1916

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 04/24/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19754
Plant Sample ID : U# B009Q9
Volume/Weight : 1.0546E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	-6.47E-07	86	<1.0E-06

Project Manager

Laboratory Manager

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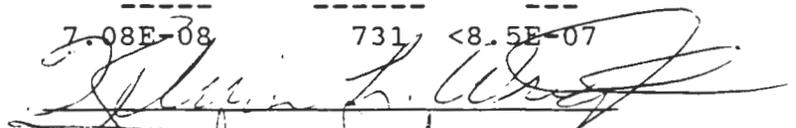
9713515.1917

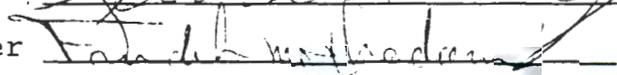
Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 04/24/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19755
Plant Sample ID : U# B009R0
Volume/Weight : 1.0533E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

<u>Nuclide</u>	<u>Value</u>	<u>% Unc.</u>	<u>MDL</u>
99-Tc	7.08E-08	731	<8.5E-07

Project Manager 

Laboratory Manager 

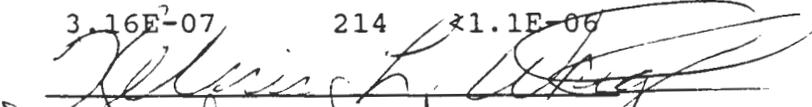
The data contained in this report were produced and documented in accordance with approved quality control and quality assurance procedures. All of the results are decay corrected to the reference date listed above. Indicated errors are two (2) standard deviations based on counting statistics only.

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
 Sample Type : Special, Solid
 Reference Date/Time : 04/24/90 12:00
 Receipt Date : 10/19/90
 Reporting Date : 12/06/90
 SAIC Sample Number : 19756
 Plant Sample ID : U# B009R2
 Volume/Weight : 1.0401E+01 g (dry)
 Purchase Order Number : MPB-SVV-069146
 SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	3.16E-07	214	1.1E-06

Project Manager 

Laboratory Manager 

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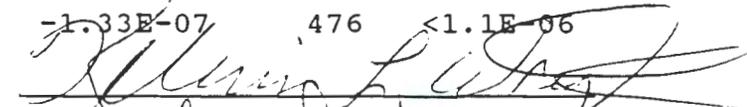
9713515.1919

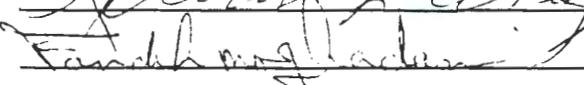
Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 05/08/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19757
Plant Sample ID : U# B009V7
Volume/Weight : 1.0190E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	-1.33E-07	476	<1.1E-06

Project Manager 

Laboratory Manager 

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9713515.1920

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 05/08/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19758
Plant Sample ID : U# B009V8
Volume/Weight : 1.0200E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
----- 99-Tc	-3.74E-07	62	<4.3E-07

Project Manager

Laboratory Manager

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9713515.1981

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 04/25/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19759
Plant Sample ID : U# B009R4
Volume/Weight : 1.0623E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	9.76E-09	905	<4.7E-07

Project Manager

Laboratory Manager

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9713515.1922

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 04/25/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/06/90
SAIC Sample Number : 19760
Plant Sample ID : U# B009R7
Volume/Weight : 1.0309E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	-5.57E-07	83	<8.3E-07

Project Manager

Laboratory Manager

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9713515.1903

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 04/25/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/07/90
SAIC Sample Number : 19761
Plant Sample ID : DUPLICATE 19763, U# BO09S9
Volume/Weight : 1.0638E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	2.15E-07	246	<9.0E-07

Project Manager

Laboratory Manager

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9713515.1924

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 04/25/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/07/90
SAIC Sample Number : 19762
Plant Sample ID : U# B00956
Volume/Weight : 1.0178E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	-1.45E-07	256	<6.3E-07

Project Manager

Laboratory Manager

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9715515.1925

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 04/25/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/07/90
SAIC Sample Number : 19763
Plant Sample ID : U# B00959
Volume/Weight : 1.0638E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	-4.20E-07	71	<5.4E-07

Project Manager

Laboratory Manager

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9713515.1926

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 05/08/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/07/90
SAIC Sample Number : 19764
Plant Sample ID : U# B009V9
Volume/Weight : 1.0640E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
----- 99-Tc	4.22E-07	114	<7.5E-07

Project Manager *[Signature]*
Laboratory Manager *[Signature]*

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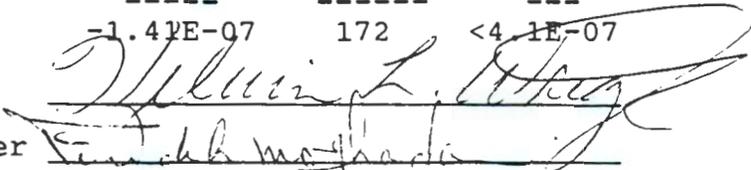
9713515.1927

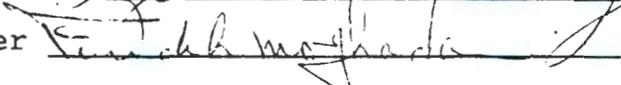
Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 05/08/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/07/90
SAIC Sample Number : 19765
Plant Sample ID : U# B009W0
Volume/Weight : 1.1104E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	-1.41E-07	172	<4.1E-07

Project Manager 

Laboratory Manager 

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9713515.1928

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 04/25/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/07/90
SAIC Sample Number : 19766
Plant Sample ID : U# B009S0
Volume/Weight : 1.1084E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	-2.59E-07	102	<4.6E-07

Project Manager

Laboratory Manager

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9713515.1929

Science Applications International Corporation
Radioactive Sample Analysis Report

Plant Name : Hanford
Sample Type : Special, Solid
Reference Date/Time : 05/25/90 12:00
Receipt Date : 10/19/90
Reporting Date : 12/07/90
SAIC Sample Number : 19767
Plant Sample ID : U# B00951
Volume/Weight : 1.0557E+01 g (dry)
Purchase Order Number : MPB-SVV-069146
SAIC Project Number : 1-139-05-656

Measured Concentration
(uCi/g (dry))

Nuclide	Value	% Unc.	MDL
99-Tc	-3.61E-07	76	<4.9E-07

Project Manager

Laboratory Manager

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SAMPLE RECEIPT LOG

SAIC ID	Customer ID	Receipt Date	Customer	Receipt Date	Type	Sub Type	Vol / Weight	Comments
19728	Discharge Tank	10/19/90	Quinn O'Neil	8/20/90	White Water	N/A	1078.6 ml	
19729	U# BOOBNA	10/19/90	Washing Machine (W)	5/14/90	Special	Solid	10.1493 g	42mg
19730	U# BOOBNS	10/19/90	W.H.	5/14/90	Special	Solid	10.3597 g	42mg
19731	Duplicate 19730	10/19/90	W.H.	5/14/90	Special	Solid	10.3597 g	
19732	U# BOOBP2 U# BOOBP3	10/19/90	W.H.	6/19/90	Special	Solid	10.0450 g	
19733	U# BOOBP3 U# BOOBM9	10/19/90	W.H.	4/25/90 6/19/90	Special	Solid	10.9281 g	
19734	U# BOOBM9 U# BOOBNO	10/19/90	W.H.	4/25/90	Special	Solid	10.2221 g	
19735	U# BOOBNO U# BOOBMB	10/19/90	W.H.	5/11/90 4/25/90	Special	Solid	10.1387 g	
19736	U# BOOBMB U# BOOBM7	10/19/90	W.H.	5/11/90	Special	Solid	10.7774 g	
19737	U# BOOBM7 U# BOOBMB	10/19/90	W.H.	5/11/90	Special	Solid	10.2197 g	
19738	U# BOOBMB U# BOOBNS	10/19/90	W.H.	5/14/90 5/14/90	Special	Solid	10.3025 g	
19739	U# BOOBNS U# BOOBNS	10/19/90	W.H.	5/14/90	Special	Solid	10.2586 g	
19740	U# BOOBNS	10/19/90	W.H.	5/14/90	Special	Solid	10.2354 g	
19741	Duplicate 19740	10/19/90	W.H.	5/14/90	Special	Solid	10.2354 g	
19742	U# BOOBP2	10/19/90	W.H.	6/19/90	Special	Solid	10.2379 g	
19743	U# BOOB77	10/19/90	W.H.	5/14/90	Special	Solid	7.2840 g	
19744	U# BOOBH6	10/19/90	W.H.	6/19/90	Special	Solid	5.2954 g	

9713515.1930

SAIC
Employee-Owned Company

SAIC
ANALYTICAL LABORATORY
3 CHOCLETERRY ROAD
ROCKVILLE, MD 20850-4087

SAIC #	Customer ID	Int	Receipt Date	Customer	Reference Date	Sample Type	Sub Type	Vol/Wt	Comments
19745	U# B00C.K0	ZR	10/19/90	Washington	4/20/90	Special	Solid	4.2585 g	
19746	U# B00C.H9	ZR	10/19/90	W. H.	4/20/90	Special	Solid	5.7860 g	
19747	U# B00C.J4	ZR	10/19/90	W. H.	4/20/90	Special	Solid	4.1139 g	
19748	U# B009V6	ZR	10/19/90	W. H.	5/7/90	Special	Solid	10.1801 g	
19749	U# B009V5	ZR	10/19/90	W. H.	5/7/90	Special	Solid	10.6724 g	
19750	U# B0093	ZR	10/19/90	W. H.	5/7/90	Special	Solid	8.0459 g	
19751	Duplicate ^{Lab. # 19750} B009Q9	ZR	10/19/90	W. H.	4/24/90 5/7/90	Special	Solid	10.5461 10.5461 g	Lab. # 4294 Changed duplicate prior to issuance. AK
19752	U# B009V4	ZR	10/19/90	W. H.	5/7/90	Special	Solid	10.4411 g	
19753	U# B009Q7	ZR	10/19/90	W. H.	4/24/90	Special	Solid	11.3629 g	
19754	U# ^{Lab. # 19753} B009Q9 B009Q9	ZR	10/19/90	W. H.	4/24/90	Special	Solid	10.5461 g	
19755	U# B009R0	ZR	10/19/90	W. H.	4/24/90	Special	Solid	10.5333 g	
19756	U# B009R2	ZR	10/19/90	W. H.	4/24/90	Special	Solid	10.4010 g	
19757	U# B009V7	ZR	10/19/90	W. H.	5/8/90	Special	Solid	10.1897 g	
19758	U# B009V8	ZR	10/19/90	W. H.	5/8/90	Special	Solid	10.1997 g	
19759	U# B009R4	ZR	10/19/90	W. H.	4/25/90	Special	Solid	10.6231 g	
19760	U# B009R7	ZR	10/19/90	W. H.	4/25/90	Special	Solid	10.3089 g	
19761	Duplicate ^{Lab. # 19760} B009S9	ZR	10/19/90	W. H.	4/25/90	Special	Solid	10.6377 10.6377 g	Lab. # 4294 Changed duplicate prior to issuance. AK

2-2

9713515.19311

SAIC
 ANALYTICAL LABORATORY
 3 CHOKE CHERRY ROAD
 ROCKVILLE, MD 20850-4087
 (301) 977-1000

9713515.1912

SAIC #	Customer ID	ID	Receipt Date	Customer	Reference Date	Sample	Type	Subtype	Vol/Wt.
19762	U# B00956	AR	10/19/90	Westinghouse Nuclear (U.S.)	4/25/90	Special	Solid		10.1775g
19763	U# B00959 ³ ^{to} U# B00959	AR	10/19/90	W.H.	4/25/90	Special	Solid		10.6377g
19764	U# B00959	AR	10/19/90	W.H.	5/8/90	Special	Solid		10.6403g
19765	U# B00960	AR	10/19/90	W.H.	5/8/90	Special	Solid		11.1043g
19766	U# B00950 ² ^{to} U# B00950	AR	10/19/90	W.H.	4/25/90	Special	Solid		11.0843g
19767	U# B00951 ² ^{to} U# B00951	AR	10/19/90	W.H.	4/25/90	Special	Solid		10.5565g
19768	U# B00881	AR	10/19/90	W.H.	5/21/90	Special	Solid		8.6540g
19769	U# B00886	AR	10/19/90	W.H.	5/21/90	Special	Solid		9.351g
19770	U# B00885	AR	10/19/90	W.H.	5/21/90	Special	Solid		8.9842g
19771	Duplicate U# B00887 ¹² ^{to} B00887, 19770	AR	10/19/90	W.H.	5/21/90 4/26/90	Special	Solid		8.9842g 4.2545g
19772	U# B00888	AR	10/19/90	W.H.	5/21/90	Special	Solid		10.0023g
19773	U# B00884	AR	10/19/90	W.H.	5/21/90	Special	Solid		8.5956g
19774	U# B00889	AR	10/19/90	W.H.	5/25/90	Special	Solid		8.3858g
19775	U# B00912	AR	10/19/90	W.H.	5/7/90	Special	Solid		9.6225g
19777	U# B00914 ² ^{to} U# B00914	AR	10/19/90	W.H.	5/7/90	Special	Solid		8.4336g
19776	U# B00914 ² ^{to} U# B00914	AR	10/19/90	W.H.	5/7/90	Special	Solid		7.9310g
19777	U# B00910	AR	10/19/90	W.H.	5/7/90	Special	Solid		8.9111g
19778	U# B00919	AR	10/19/90	W.H.	5/7/90	Special	Solid		8.8682g
19779	U# B00918	AR	10/19/90	W.H.	5/7/90	Special	Solid		8.8682g

Changed duplicate pin to uranium, AR

5-8

SAIC
ANALYTICAL LABORATORY
3 CHOKE CHERRY ROAD
ROCKVILLE, MD 20850-4087
(301) 917-4430

9713515.1993

WORK ORDER/INVOICE AUTHORIZATION

Plant:	HANFORD	Project No.:	1-139-05-656
SAIC Sample Nos.:	19743-19767	P. O. No.:	MPB-SVV-069146
Date Received:	10/19/90	Date Results Due:	12/03/90
Logged By:	LAURENT RICKS	Log Date:	10/19/90

<input checked="" type="checkbox"/> Quantity	Description	Unit Price	Total
23	Tc-99		\$
			\$
			\$
			\$
			\$
			\$
			\$
			\$
			\$
			\$
			\$
			\$
			\$
		Basic value	\$
		Shipping charges (if any)	\$
		Surcharges/late penalties	\$
		Total amount due this invoice	\$

Check at left if item subcontracted to another lab

Comments:

Sample Delivery Group No. B00B77

Subcontractor (if any):

Date sent out:

Date received:

Date due back:

Total cost:\$
(items checked)