LOW-LEVEL RADIOACTIVE WASTE (LLRW) MANIFEST

Radioactive material, low specific activity (LSA-II), 7, UN3321
University of Michigan, Occupational Safety and Environmental Health (OSEH)
North Campus Transfer Facility, 1655 Dean Road, Ann Arbor, MI 48109-2159, (734)763-4568

MANIFEST # R 12345

SECTION A — SOLIDS (Attach Container Label to decal on the side of the drum)

[SD = 7.5 gal., LD = 28 gal.]

RQ	# on Drum	Size gallon (Circle)	Isotope	Activity (kBq)	Activity (uCi)	Isotope	Activity (kBq)	Activity (uCi)	Isotope	Activity (kBq)	Activity (uCi)
		7.5 28			( )			( )			( )
		7.5 28			( )			( )			( )
		7.5 28			( )			( )			( )

SECTION B — LIQUIDS (Place label around handle)

RQ	Jug #	Vol (L)	Isotope	Activity (kBq)	Activity (uCi)	Isotope	Activity (kBq)	Activity (uCi)	If chemical(s) present enter number code from back & concentration: Code	% by vol	Code	% by vol	Code	% by vol	Code	% by vol
	1				( )			( )								
	2				( )			( )								
	3				( )			( )								
	4				( )			( )								
	5				( )			( )								
	6				( )			( )								
	7				( )			( )								
	8				( )			( )								

SECTION C — SCINTILLATION VIALS (Indicate on the box whether the vials are plastic or glass)

RQ	Box #	Isotope	Activity (kBq)	Activity (uCi)	Isotope	Activity (kBq)	Activity (uCi)	Isotope	Activity (kBq)	Activity (uCi)	Plastic or Glass	Identify Scintillation Cocktail
	1			( )			( )			( )	P G	
	2			( )			( )			( )	P G	
	3			( )			( )			( )	P G	
	4			( )			( )			( )	P G	
	5			( )			( )			( )	P G	

SECTION D

RQ	Pkg. #	Sharps (✓)	Stock Vials (✓)	Other	Isotope	Activity (kBq)	Activity (uCi)	Isotope	Activity (kBq)	Activity (uCi)	Isotope	Activity (kBq)	Activity (uCi)	PIGS (✓) LEAD	PIGS (✓) BARIUM
	1						( )			( )					
	2						( )			( )					
	3						( )			( )					
	4						( )			( )					

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PLEASE PRINT

Authorized User:_____ Phone:_____

Room#/Building:_____ Date(mo/day/yr):_____

Completed By:_____ *Signature:_____

***Signature indicates that each container has been swiped for external contamination (staple a copy of survey results to manifest).**

IN CASE OF EMERGENCY CONTACT
PUBLIC SAFETY (24 HOURS) AT (734) 763-1131

DOC	mR/hr	Initials
OSEH Use Only		

LSA-II
Exclusive Use Shipment

INSTRUCTIONS TO IDENTIFY CHEMICALS IN LIQUIDS

1 If chemical is listed below, please enter corresponding number code and approximate chemical concentration in % by volum in section B on the front side of the manifest.

2 If chemical constituents are not listed below, Please enter number code 99 and approximate concentration in % by volume in section B on the front side of the manifest, and list chemical name(s) and concentration(s) in Section E below.

00 - Aqueous (water based with no added chemicals)
01 - acetamide
02 - acetic acid
100- acetic anhydride
03 - acetone
04 - acetonitrile
05 - acrylamide
06 - aflatoxin
07 - ammonium compounds: (specify below)
08 - arsenic compounds: (specify below)
09 - barium compounds: (specify below)
10 - benzene
11 - benzo(a)pyrene
95 - blood
88 - boric acid
101- bovine albumin
102- bromophenol blue dye
12 - butanol
13 - cadmium compounds: (specify below)
103- calcium chloride
104- calcium sulfate
14 - carbon tetrachloride
15 - chloroamines
16 - chlorobenzene
17 - chloroform
18 - chlorophenol
105- choline chloride
19 - chromium compounds:
106- citric acid
107- coomassie blue dye
20 - copper compounds:
96 - culture medium
21 - cyanide compounds: (specify below)
22 - cyclohexane
23 - DDD/DDT
108- dextran sulfate
24 - dichlorobenzene
109- DMEM media
25 - dimethylsulfoxide (DMSO)
32 - ethylene diamine (EDTA)
33 - ethylene glycol-bis(B-amino ethyl ether)-tetraacetic acid (EGTA)
26 - epinephrine
29 - ethidium bromide (EtBr)
27 - ethanol
28 - ether
30 - ethyl acetate
34 - ethyl ether
31 - ethylbenzene
35 - ethylphenol
36 - formaldehyde
37 - formalin
38 - formamide
39 - formic acid
40 - glutaraldehyde
110- glycine
111- hams F12 media
112- HEPES buffer
41 - heptane
113- hexane
42 - HPLC Gels
43 - hydrochloric acid (HCl)
44 - hydroxybenzene
114- isoamyl alcohol
45 - isobutane
46 - isobutanol
47 - isopropanol
48 - lead compounds: (specify below)
115- magnesium chloride
97 - magnesium phosphate
116- magnesium sulfate
49 - mercaptoethanol
50 - mercury compounds: (specify below)
51 - methanol
117- methoxyethanol
52 - methyl benzene
53 - methyl bromide
55 - methyl ethyl ketone
56 - methyl iodide
57 - methyl phenol
54 - methylene chloride
58 - naphthalene
59 - nitric acid
60 - nitrobenzene
61 - osmium compounds: (specify below)
118- perchloric acid
62 - periflour
63 - phenol
64 - phosphoric acid
65 - phthalates
91 - potassium chloride
66 - potassium permanganate
119- potassium phosphate
67 - propanoic acid
68 - pyridine
94 - saline sodium citrate (SSC)
69 - scintillation fluid: (specify below)
70 - selenium compounds: (specify below)
71 - silver compounds: (specify below)
120- sodium acetate
72 - sodium azide
121- sodium bicarbonate
122- sodium carbonate
89 - sodium chloride
90 - sodium citrate
93 - sodium docecyl sulfate (SDS)
73 - sodium hydroxide
74 - sodium hypochlorite
123- sodium iodide
124- sodium lauryl sulfate (SLS)
92 - sodium phosphate
125- sodium phosphate
126- sucrose
75 - sulfuric acid
127- taurine
79 - tricloroacetic acid (TCA)
76 - tetrachlorobenzene
77 - tetrachloroethene
128- tetrahydrofuran
78 - toluene
80 - trichloroethylene
129- trifluoracetic acid
87 - TRIS buffer
81 - uranyl acetate
82 - uranyl nitrate
83 - urea
84 - vinyl chloride
85 - xylene
130- xylene cyanol
86 - zinc compounds: (specify below)
99 - OTHER: (SEE INSTRUCTIONS ABOVE)

S E C D

Jug #	CODE 99 CHEMICAL NAMES(S), % BY VOL.
1	
2	
3	
4	
5	
6	
7	
8	