OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL # of pages ▸ 8

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Fax # (3) Mike Dresen	Fax #

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PROJECT: 17523
L MOA LEHR
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FAX TRANSMISSION COVER SHEET

Date: 9/11/96

To: Jim Littlejohn

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Re:

Sender: Brian Oatman

YOU SHOULD RECEIVE [8] PAGE(S), INCLUDING THIS COVER SHEET. IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL 752-1493.

Jim, the following lists of radionuclides and chemicals can be used to define "LEHR Wastes" for the MoA.

DOE LEHR Radionuclide Use

This list contains radionuclides that were used throughout the DOE funded research at LEHR, which lasted into the 1990's. It has been derived from LEHR annual reports, analysis of DOE sludge, DOE waste inventories, and campus Radiation Use Authorizations.
This list of radionuclides may not be all-inclusive.

Ag-110
Am-241
Bi-203
Bi-205
Bi-206
Bi-212
C-14
Ca-49
Cd-115
Cl-36
Co-55
Co-60
Cr-51
Cs-137
Eu-152
Fe-52
Fe-59
H-3
Hg-203
Ho-166
I-125
I-127
I-129
I-131
K-40
Kr-85
N-13
P-32
Pb-203
Pb-210
Pb-212
Pu-239
Pu-241
Ra-226
Rb-86
Rn-222
S-35
S-38
Sn-113
Sr-89
Sr-90
Th-228
Th-230
Th-232
U-232
V-48
Y-90
Zn-65

Thorium 232 daughters:
Ra-228
Ac-228
Th-228
Ra-224
Rn-220
Po-216
Pb-212
Bi-212
Po-212
Tl-208
Pb-208

Radium-226 daughters:
Rn-222
Po-218
Pb-214
Bi-214
Po-214
Tl-210
Pb-210
Bi-210
Po-210
Pb-204

DOERAD.LST

DOE CHEMICALS AT LEHR

This list contains chemicals that were used during DOE funded research at LEHR. It is derived from an inventory of chemicals performed at the conclusion of the LEHR project. This list may not be all-inclusive of chemicals used at LEHR in the past.

1-Amino-2-Napthol-4-Sulfonic Acid
2-4 Dinitrophe
2-octanol
2,3 dihydroxyquinoxaline
8-Hydroxyquinolyn
1,5-diphenylcarbohydrazide
2,2-Bipyridine
2,3-Butane Dione Monoxime
2,5-dichloro-3,6-dihydroxy parabenzoquinone
2,9-dimethyl, 1-10 Phenanthroline Monohydrochloride
5,5-Dithiobis 2-nitro Benzoic Acid
1,10-Phenanthroline Monohydrate
2,4,6-tripyridil-s triazine
7113-cetyltrimethyl Ammonium Bromide
Acacia
Acetamide
Acetone
Acetic Anhydride
Acid Alumina
Acid Dinitro Salicylic
Acid Green L Extra
Acid Oxalic
Activated Charcoal
Acrosol A103
Agar
Alirarin
Alizarine
Alizarine Red S
Alizarine Yellow R
Alum
Alumina
Aluminon Practical
Aluminum Chloride
Aluminum Metal
Aluminum Nitrate
Aluminum Oxide Neutral
Aluminum Potassium Sulfate
Aluminum Sulfate
Amino Methyl Fluorescein
Ammonium 1-Pyrrolidinecarbodithioate
Ammonium Bromide
Ammonium Carbonate
Ammonium Meta Vanadate
Ammonium Molybdate
Ammonium Molybdate 4-Hydrate
Ammonium Nitrate
Ammonium Oxalate
Ammonium Phosphate

Ammonium Poyrrolidine
Ammonium Sulfamate
Ammonium Sulfate
Ammonium Sulfide
Anthrone
Antimony Trioxide
Arsenic Pentoxide
Arsenic Trioxide
Ascarite
Azomethine H Boron Reagent
B-alanine
B-Glycerol Phosphoric Acid Disodium Salt
Barium Acetate
Barium Carbonate
Barium Chloride
Barium Hydroxide
Barium Oxide
Barium Sulfate
BBOS
Bentonite
Benzair Acid (No Salt)
Benzoic Acid (No Salt)
Beryllium Oxide
Bismuth Nitrate
Bismuth Nitrate Merck
Black Stamp Pad Ink
Boiling Stones
Boric Acid
Boric Acid Merck
Borox
Bovine Albumine (BSA)
Bromanil Crystal
Bromopyrogallol Red
Bromscresol Green
Bromscresol Purple
Bromthymol Blue
Caccodlyic Acid
Cadmium Carbonate
Cadmium Chloride
Cadmium Chloride Anhydrous
Cadmium Metal
Cadmium Nitrate
Cadmium Nitrate Merck
Cadmium Oxide
Cadmium Powder
Cadmium Rod
Caffeine
Calcein
Calcium Carbonate
Calcium Chloride Anhydrous
Calcium Fluoride
Calcium Hydroxide
Calcium Nitrate 4-hydrate
Calcium Oxalate

Calcium Phosphate
Calcium Phosphate dibasic
Calcium Phosphate tribasic
Calcon
Cao-5-Polymer Grade L-8136
Carbazole
Carbon Tetrachloride
Catechol
Celite
Cellobiose
Ceric Ammonium Nitrate
Cerium Oxylate
Cesium Chloride
Cesium Nitrate
Chloramine-T
Chromium Chloride
Chromium Potassium Sulfate
Chromium Trioxide
Citric Acid
Cobalt Chloride
Cobalt Metal
Cobalt Nitrate
Cobalt Oxide
Copper Powder
Cresol Red
Cupric Acetate
Cupric Chloride
Cupric Nitrate
Cupric Oxide Powder
Cupric Sulfate
Cupric Sulfate Anhydrous
Cuprous Chloride
Cysteine Hydrochloride
Desicote
Deuterium Oxide
Devarda Alloy
Di-2-ethylhexyl Phosphoric Acid
Diehylene Triamine Pentaacetic Acid
Dimethyl Glyoxime
Dimethyl Sulfoxide
Diphenyl
Diphenyl Thiocarbazone
Dipotassium Ethylenediamine Tetracetate
Disodium Dihydrogen EDTA Dihydrate
Disodium Ethylene Diamine Tetracetate
DL-Alanine
Drierite
Elon
Eosin B
Erbium
Erio Chrom Black T
Ethyl Stearate
Ethylene Dinitrilo Tetra Acetic Acid 2K+
Farmvar

Ferric Chloride
Ferric Chloride Anhydrous
Ferric Citrate
Ferric Nitrate
Ferric Sulfate
Ferrous Sulfate
Ferrous Ammonium Sulfate
Ficin
Gallirm
Gelatin
Germanium Metal
Glucose
Glycerol
Glycine
Gum Arabic
Gum Ghatti
Hamic Acid
HEPES
Hexadecyltrimethyl Ammonium Bromide
Hexamethylene Tetramine
Histidine
Histidine Mono Hydrochloride
Hydrated Barium Perchlorate
Hydrazine Sulfate
Hydroquinone
Hydroxylamine hydrochloride
Hydrozin Dihydrochloride
Iceland Spar 1 Calcite Crystal
Imminodiacetic Acid
Iodine
Iodobenzoic Acid
Iron Metal Powder
Iron Metal Wire
Jack Bean Meal
Kaolin
L-Arginine Monohydrochloride
L-Ascorbic Acid
L-Glutamine
Lactose
Lanthanum Chloride
Lanthanum Oxise
Lauric Acid
Lead Acetate
Lead Chloride
Lead Nitrate
Lead Sulfate
Lithium Chloride
Lithium Hydroxide
Lithium Sulfate
Lloyd Reagent
Lyamine
Lyclopentanone
Lysine Monohydrochloride
Magnesium Chloride

Manganese Dioxide
Mercaptoacetic Acid
Merck Index #3490
Mercury
Meta-a-terge
N,N-Dimethylparaphenylenediamine Monohydrochloride
N,N-Ethylene Diamine Diacetic Acid
n-1-Naphthyl Ethylene Diamine Dihydrochloride
N-2 Hydroxy Ethylim Diacetic Acid
Naphthol
Nitro-Ferrion
O-Amino Phenol
Orcinol
P-Bromo-Aniline
P-Bromophnyl Hydrazine Hydrochloride
P-Dimethyl Amino Benzealdehyde
p-rosaniline Hydrochloride
Palladium Black
Pan
Papaine
Paraformaldehyde
Penta Sodium Salt
Peptonium Siecum
Periodic Acid
Permutit
Phenol
Phenol Phthaleir in Methanol
Phenol Red
Phenol Salicylate
Phenolphthalein
Phenolsulfonphthalein
Phenyl Mercuric Acetate
Phenylenem Diamine
Phosphorus Pentoxide
Potassium Acetate
Potassium Acid Phthalate
Potassium Antimony Tartrate
Potassium Bicarbonate
Potassium Biphthalate
Potassium Bromide
Potassium Carbonate
Potassium Dichromate
Potassium Ferrocyanide
Potassium Iodate
Potassium Tetraborate
PPO
S-diphenylcarbazone
Santoflex
Sodium Acetate
Sodium Bicarbonate
Sodium Bichromate
Sodium Bisulfate
Sodium Borate
Sodium Borohydride

Sodium Cacodylate
Sodium Carbonate
Sodium Chloranilate
Sodium Chloride
Sodium Chromate
Sodium Citrate
Sodium Diethyl Dithiocarbamate
Sodium Dithionite
Sodium Fluoride
Sodium Hypochlorite
Sodium Iodine
Sodium Nitrate
Sodium Sulfite Hydrous
Starch
Stearic Acid
Strontium Carbonate
Strontium Acetate
Sucrose
Tolnidine Blue
Trichloroethylene
Trihydrochloride
Uranyl Acetate