DRAFT

CLOSURE OF LAUNDRY WATER TANKS
BUILDING 732

CLOSURE PLAN FOR BUILDING 732:

1. Laundry waste from Building 778 drains from the washing machines to floor trenches. From the floor trenches, the waste is collected in drains and flows though double-contained underground piping to Building 732. In 1980, Building 732, a waste transfer station containing one 2,000-gallon free standing Derakane Resin tank (T-4) was installed in a concrete below-grade enclosure. In Building 732, the waste is automatically pumped through coarse filters to Building 374 via Valve Vault 9. The filters remove lint, mop strings and other solid material from the laundry waste.

   The tank has a volume control system consisting of a high level switch, set at approximately 90 percent of full capacity, which activates a high-level alarm in the Building 776 Utility Control Room, Room 231. Two high-level switches and a low-level switch activate pumps P-3A and P-3B, routing waste to Valve Vault No. 9. The primary pump is activated when the tank is about 25 percent full and the secondary pump is set to activate at about 75 percent of full capacity. Tank T-4 does not have a pressure and temperature control system because the tank is operated at atmospheric pressure and room temperature.

   Secondary containment for Tank T-4 is provided by the concrete below-grade pit. The concrete pit measures 12 feet x 27.8 feet x 10 feet deep. Total containment capacity of the room, up to the height of the first step (9 inches), is approximately 1,734 gallons. The walls, floor and sump in Building 732 are constructed of concrete which is free of cracks or gaps and is coated with epoxy paint. Leak detection in the secondary containment area is provided by a high level sensor in the sump which activates an alarm in Room 231 of Building 776, the Utility Control Room.

   Secondary containment for the laundry waste flow between Buildings 778 and 732 consists of outer casing pipes surrounding the two waste transfer lines. Thirty feet of eight-inch diameter casing and thirty feet of 22 inch diameter casing are used to contain any possible leaks in the transfer lines. Leaks would flow toward Building 732 where they would be detected by visual inspection or by the sump alarm.

   In case of a leak or overflow, the waste water is collected and contained inside Building 732. The overflow waste is pumped from the Building 732 secondary containment sump to a concrete sump in Room 104A of Building 778, and ultimately from this sump back into tank T-4 by pump P-4. The laundry drain line containment sump transfers accumulated liquids to the Room 104A sump also.

2. Laundry waste water is generated from 2 to 3 washing machines, operating 24 hours a day, 5 days a week. The waste water is the product of washing surgical caps, booties, socks, underwear, T-shirts, towels and coveralls. Each washing machine holds 260-300 pounds

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of clothing per load, using approximately 300 gallons of water from start to finish. It takes approximately 45 minutes for the wash and rinse cycle to be completed. From Building 732, the waste is automatically pumped to Building 374 every 20-30 minutes depending on the number of washing machines that are operational. On an average day, approximately 12,000 pounds of clothing are processed with 25,000 gallons of water being consumed.

3. Photo to be taken within 30 days of the approval of this closure plan.

4. The analytes which were chosen for the analysis of the laundry water represent all of the known contaminants which could potentially exist on laundry as a result of contact with those solvents (chemicals) used at RFP. (See attachment I)

5. Tank (T-4) has been continuously decontaminated by the normal discharge of wash and rinse water into the tank and subsequent transfer to Building 374. On an average day approximately 350 pounds of detergent, 37.5 pounds of water softener, 37.5 pounds of bleach and 31 pounds of disinfectant are consumed. The following are the detergents, bleach, softener and disinfectant used in the wash process, and the concentration of each per gallon of water.

Detergent	- .187 oz of detergent per gallon of water
Softener	- .020 oz of softener per gallon of water
Bleach	- .020 oz of bleach per gallon of water
Disinfectant	- .017 oz of disinfectant per gallon of water

The above concentrations are for a 300 pound wash load using 300 gallons of water. The Material Safety Data Sheets (MSDS) are attached for each product. (See attachment II)

6. Although the Laundry Water Tank has not undergone specific closure decontamination activities, it has been continually "decontaminated" (washed) by the process outlined above. The analytical data that was collected to support the non-RCRA hazardous recharacterization is believed to be adequate and representative of a rinsate analysis. Please note that all of the contaminants identified in the Colorado Hazardous Waste Regulations, 6 CCR 1007-3, § 261.24 were not detected, or were detected well below the Maximum Concentration of Contaminants for the Toxicity Characteristic.

7. The applicable closure performance standard is found in section VIII-3 of the proposed State RCRA Permit Modification for Mixed Residues, Mod. 8, June 30, 1992.

8. Analytical data from the laundry water testing. (See attachment I)

9. The May 14, 1992, and the July 1, 1992, laundry water letters. (See attachment III & IV)

10. Certification of closure by a registered Professional Engineer will be completed within 30 days of the approval of this closure plan. This activity is included in the Master Task Subcontract for Environmental and Waste Management with two qualified firms available to us at our request.

lab_rpt1 WSRIC Lab Analysis Rep

000005341

Output Title: Waste Water
Waste Stream ID: 732-1-1
Lab Report No.: 92G0111
Analysis Type: Volatile Organics
Sample Type: WSRIC Field Sample
Units: ug/l

Status: 1 - Active Stream
Lab: 881 Lab

CAS NO.	Compound	Concentration	Q	V	C
74-87-3	Chloromethane	10.000	U	V	
74-83-9	Bromomethane	10.000	U	V	
75-01-4	Vinyl Chloride	10.000	U	V	
75-00-3	Chloroethane	10.000	U	V	
75-09-2	Methylene Chloride	5.000	U	V	
67-64-1	Acetone	28.000		JA	CC
75-15-0	Carbon Disulfide	5.000	U	V	
75-35-4	1,1-Dichloroethene	5.000	U	V	
75-34-3	1,1-Dichloroethane	5.000	U	V	
540-59-0	1,2-Dichloroethene (total)	5.000	U	V	
67-66-3	Chloroform	240.000	E	A	CR
107-06-2	1,2-Dichloroethane	5.000	U	V	
78-93-3	2-Butanone	10.000	U	V	
71-55-6	1,1,1-Trichloroethane	5.000	U	V	
56-23-5	Carbon Tetrachloride	5.000	U	V	
75-27-4	Bromodichloromethane	5.000	U	V	
78-87-5	1,2-Dichloropropane	5.000	U	V	
10061-01-5	cis-1,3-Dichloropropene	5.000	U	V	
79-01-6	Trichloroethene	5.000	U	V	
124-48-1	Dibromochloromethane	5.000	U	V	
79-00-5	1,1,2-Trichloroethane	5.000	U	V	
71-43-2	Benzene	5.000	U	JA	HT
10061-02-6	trans-1,3-Dichloropropene	5.000	U	V	
75-25-2	Bromoform	5.000	U	V	
108-10-1	4-Methyl-2-Pentanone	10.000	U	V	
591-78-6	2-Hexanone	10.000	U	V	
127-18-4	Tetrachloroethene	5.000	U	V	
79-34-5	1,1,2,2-Tetrachloroethane	5.000	U	V	
108-88-3	Toluene	5.000	U	JA	HT
108-90-7	Chlorobenzene	5.000	U	JA	HT
100-41-4	Ethylbenzene	5.000	U	JA	HT
100-42-5	Styrene	5.000	U	JA	HT
108-38-3	Xylenes (total)	5.000	U	JA	HT
75-69-4	Trichlorofluoromethane	5.000	U	V	
60-29-7	Ethyl Ether	5.000	U	V	
76-13-1	Trich-trifluoroethane	5.000	U	V	
141-78-6	Ethyl acetate	5.000	U	V	
95-47-6	o-Xylene	5.000	U	JA	HT

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lab_rpt1 WSRIC Lab Analysis Report 01/19/93

Output Title: Waste Water
Waste Stream ID: 732-1-1
Lab Report No.: 92G0111
Analysis Type: Semivolatile Organics
Sample Type: WSRIC Field Sample
Units: ug/l

Status: 1 - Active Stream
Lab: 881 Lab

CAS NO.	Compound	Concentration	Q	V	C
108-95-2	Phenol	10.000	U	V	
111-44-4	bis(2-Chloroethyl)ether	10.000	U	V	
95-57-8	2-Chlorophenol	2.000	J	R	OT
541-73-1	1,3-Dichlorobenzene	10.000	U	V	
106-46-7	1,4-Dichlorobenzene	10.000	U	V	
100-51-6	Benzyl Alcohol	10.000	U	V	
95-50-1	1,2-Dichlorobenzene	10.000	U	V	
95-48-7	2-Methylphenol	10.000	U	V	
108-60-1	bis(2-Chloroisopropyl)ether	10.000	U	V	
106-44-5	4-Methylphenol	10.000	U	V	
621-64-7	n-Nitroso-di-n-propylamine	10.000	U	V	
67-72-1	Hexachloroethane	10.000	U	V	
98-95-3	Nitrobenzene	10.000	U	V	
78-59-1	Isophorone	10.000	U	V	
88-75-5	2-Nitrophenol	10.000	U	V	
105-67-9	2,4-Dimethylphenol	10.000	U	V	
65-85-0	Benzoic Acid	7.000	J	R	OT
111-91-1	bis(2-Chloroethoxy)methane	10.000	U	V	
120-83-2	2,4-Dichlorophenol	10.000	U	V	
120-82-1	1,2,4-Trichlorobenzene	10.000	U	V	
91-20-3	Naphthalene	10.000	U	V	
106-47-8	4-Chloroaniline	10.000	U	V	
87-68-3	Hexachlorobutadiene	10.000	U	V	
59-50-7	4-Chloro-3-Methylphenol	10.000	U	V	
91-57-6	2-Methylnaphthalene	10.000	U	V	
77-47-4	Hexachlorocyclopentadiene	10.000	U	V	
88-06-2	2,4,6-Trichlorophenol	10.000	U	V	
95-95-4	2,4,5-Trichlorophenol	10.000	U	V	
91-58-7	2-Chloronaphthalene	10.000	U	V	
88-74-4	2-Nitroaniline	10.000	U	V	
131-11-3	Dimethylphthalate	10.000	U	V	
208-96-8	Acenaphthylene	10.000	U	V	
606-20-2	2,6-Dinitrotoluene	10.000	U	V	
99-09-2	3-Nitroaniline	10.000	U	V	
83-32-9	Acenaphthene	10.000	U	V	
51-28-5	2,4-Dinitrophenol	50.000	U	V	
100-02-7	4-Nitrophenol	50.000	U	V	
132-64-9	Dibenzofuran	10.000	U	V	
121-14-2	2,4-Dinitrotoluene	10.000	U	V	
84-66-2	Diethylphthalate	3.000	J	A	
7005-72-3	4-Chlorophenyl-phenylether	10.000	U	V	
86-73-7	Fluorene	10.000	U	V	
100-01-6	4-Nitroaniline	10.000	U	V	
534-52-1	4,6-Dinitro-2-Methylphenol	50.000	U	V	

lab_rpt1 WSRIC Lab Analysis Report 01/19/93

Output Title: Waste Water
Waste Stream ID: 732-1-1 Status: 1 - Active Stream
Lab Report No.: 92G0111 Lab: 881 Lab
Analysis Type: Semivolatile Organics
Sample Type: WSRIC Field Sample
Units: ug/l

CAS NO.	Compound	Concentration	Q	V	C
86-30-6	n-Nitrosodiphenylamine	10.000	U	V	
101-55-3	4-Bromophenyl-phenylether	10.000	U	V	
118-74-1	Hexachlorobenzene	10.000	U	V	
87-86-5	Pentachlorophenol	50.000	U	V	
85-01-8	Phenanthrene	10.000	U	V	
120-12-7	Anthracene	10.000	U	V	
84-74-2	Di-n-butylphthalate	2.000	J	A	
206-44-0	Fluoranthene	10.000	U	V	
129-00-0	Pyrene	10.000	U	JA	IS
85-68-7	Butylbenzylphthalate	10.000	U	JA	IS
91-94-1	3,3'-Dichlorobenzidine	20.000	U	JA	IS
56-55-3	Benzo(a)anthracene	10.000	U	JA	IS
218-01-9	Chrysene	10.000	U	JA	IS
117-81-7	bis(2-Ethylhexyl)phthalate	820.000		V	OT
117-84-0	Di-n-octylphthalate	4.000	J	A	
205-99-2	Benzo(b)fluoranthene	10.000	U	V	
207-08-9	Benzo(k)fluoranthene	10.000	U	V	
50-32-8	Benzo(a)pyrene	10.000	U	V	
193-39-5	Indeno(1,2,3-cd)pyrene	10.000	U	V	
53-70-3	Dibenz(a,h)anthracene	10.000	U	V	
191-24-2	Benzo(g,h,i)perylene	10.000	U	V	

lab_rpt1 WSRIC Lab Analysis Report 01/19/93

Output Title: Waste Water
Waste Stream ID: 732-1-1
Lab Report No.: 92G0122
Analysis Type: Volatile Organics
Sample Type: WSRIC Field Sample
Units: ug/l

Status: 1 - Active Stream
Lab: 881 Lab

CAS NO.	Compound	Concentration	Q	V	C
74-87-3	Chloromethane	10.000	U	V	
74-83-9	Bromomethane	10.000	U	V	
75-01-4	Vinyl Chloride	10.000	U	V	
75-00-3	Chloroethane	10.000	U	V	
75-09-2	Methylene Chloride	5.000	U	JA	BL
67-64-1	Acetone	19.000		V	
75-15-0	Carbon Disulfide	5.000	U	V	
75-35-4	1,1-Dichloroethene	5.000	U	V	
75-34-3	1,1-Dichloroethane	5.000	U	V	
540-59-0	1,2-Dichloroethene (total)	5.000	U	V	
67-66-3	Chloroform	150.000		V	
107-06-2	1,2-Dichloroethane	5.000	U	V	
78-93-3	2-Butanone	10.000	U	V	
71-55-6	1,1,1-Trichloroethane	5.000	U	V	
56-23-5	Carbon Tetrachloride	5.000	U	V	
75-27-4	Bromodichloromethane	3.000	J	A	
78-87-5	1,2-Dichloropropane	5.000	U	V	
10061-01-5	cis-1,3-Dichloropropene	5.000	U	V	
79-01-6	Trichloroethene	5.000	U	V	
124-48-1	Dibromochloromethane	5.000	U	V	
79-00-5	1,1,2-Trichloroethane	5.000	U	V	
71-43-2	Benzene	5.000	U	JA	HT
10061-02-6	trans-1,3-Dichloropropene	5.000	U	V	
75-25-2	Bromoform	5.000	U	V	
108-10-1	4-Methyl-2-Pentanone	10.000	U	V	
591-78-6	2-Hexanone	10.000	U	V	
127-18-4	Tetrachloroethene	5.000	U	V	
79-34-5	1,1,2,2-Tetrachloroethane	5.000	U	V	
108-88-3	Toluene	5.000	U	JA	HT
108-90-7	Chlorobenzene	5.000	U	JA	HT
100-41-4	Ethylbenzene	5.000	U	JA	HT
100-42-5	Styrene	5.000	U	JA	HT
1330-20-7	Xylenes (total)	5.000	U	JA	HT

lab_rpt1 WSRIC Lab Analysis Report 01/19/93

Output Title: Waste Water
Waste Stream ID: 732-1-1
Lab Report No.: 92G0141
Analysis Type: Volatile Organics
Sample Type: WSRIC Field Sample
Units: ug/l

Status: 1 - Active Stream
Lab: 881 Lab

CAS NO.	Compound	Concentration	Q	V	C
74-87-3	Chloromethane	10.000	U	JA	HT
74-83-9	Bromomethane	10.000	U	JA	HT
75-01-4	Vinyl Chloride	10.000	U	JA	HT
75-00-3	Chloroethane	10.000	U	JA	HT
75-09-2	Methylene Chloride	5.000	U	JA	BL,HT
67-64-1	Acetone	27.000		JA	HT
75-15-0	Carbon Disulfide	5.000	U	JA	HT
75-35-4	1,1-Dichloroethene	5.000	U	JA	HT
75-34-3	1,1-Dichloroethane	5.000	U	JA	HT
540-59-0	1,2-Dichloroethene (total)	5.000	U	JA	HT
67-66-3	Chloroform	160.000		JA	HT
107-06-2	1,2-Dichloroethane	5.000	U	JA	HT
78-93-3	2-Butanone	10.000	U	JA	HT
71-55-6	1,1,1-Trichloroethane	5.000	U	JA	HT
56-23-5	Carbon Tetrachloride	5.000	U	JA	HT
75-27-4	Bromodichloromethane	5.000	U	JA	HT
78-87-5	1,2-Dichloropropane	5.000	U	JA	HT
10061-01-5	cis-1,3-Dichloropropene	5.000	U	JA	HT
79-01-6	Trichloroethene	5.000	U	JA	HT
124-48-1	Dibromochloromethane	5.000	U	JA	HT
79-00-5	1,1,2-Trichloroethane	5.000	U	JA	HT
71-43-2	Benzene	5.000	U	JA	HT
10061-02-6	trans-1,3-Dichloropropene	5.000	U	JA	HT
75-25-2	Bromoform	5.000	U	JA	HT
108-10-1	4-Methyl-2-Pentanone	10.000	U	JA	HT
591-78-6	2-Hexanone	10.000	U	JA	HT
127-18-4	Tetrachloroethene	5.000	U	JA	HT
79-34-5	1,1,2,2-Tetrachloroethane	5.000	U	JA	HT
108-88-3	Toluene	5.000	U	JA	HT
108-90-7	Chlorobenzene	5.000	U	JA	HT
100-41-4	Ethylbenzene	5.000	U	JA	HT
100-42-5	Styrene	5.000	U	JA	HT
1330-20-7	Xylenes (total)	5.000	U	JA	HT

lab_rpt1 WSRIC Lab Analysis Report 01/19/93

Output Title: Waste Water
Waste Stream ID: 732-1-1
Lab Report No.: 92G0141
Analysis Type: Semivolatile Organics
Sample Type: WSRIC Field Sample
Units: ug/l

Status: 1 - Active Stream
Lab: 881 Lab

CAS NO.	Compound	Concentration	Q	V	C
108-95-2	Phenol	20.000	U	JA	HT
111-44-4	bis(2-Chloroethyl)ether	20.000	U	JA	HT
95-57-8	2-Chlorophenol	20.000	U	JA	HT
541-73-1	1,3-Dichlorobenzene	20.000	U	JA	HT
106-46-7	1,4-Dichlorobenzene	20.000	U	JA	HT
100-51-6	Benzyl Alcohol	20.000	U	JA	HT
95-50-1	1,2-Dichlorobenzene	20.000	U	JA	HT
95-48-7	2-Methylphenol	20.000	U	JA	HT
108-60-1	bis(2-Chloroisopropyl)ether	20.000	U	JA	HT
106-44-5	4-Methylphenol	20.000	U	JA	HT
621-64-7	n-Nitroso-di-n-propylamine	20.000	U	JA	HT
67-72-1	Hexachloroethane	20.000	U	JA	HT
98-95-3	Nitrobenzene	20.000	U	JA	HT
78-59-1	Isophorone	20.000	U	JA	HT
88-75-5	2-Nitrophenol	20.000	U	JA	HT
105-67-9	2,4-Dimethylphenol	20.000	U	JA	HT
65-85-0	Benzoic Acid	100.000	U	JA	HT
111-91-1	bis(2-Chloroethoxy)methane	20.000	U	JA	HT
120-83-2	2,4-Dichlorophenol	20.000	U	JA	HT
120-82-1	1,2,4-Trichlorobenzene	20.000	U	JA	HT
91-20-3	Naphthalene	20.000	U	JA	HT
106-47-8	4-Chloroaniline	20.000	U	JA	HT
87-68-3	Hexachlorobutadiene	20.000	U	JA	HT
59-50-7	4-Chloro-3-Methylphenol	20.000	U	JA	HT
91-57-6	2-Methylnaphthalene	20.000	U	JA	HT
77-47-4	Hexachlorocyclopentadiene	20.000	U	JA	HT
88-06-2	2,4,6-Trichlorophenol	20.000	U	JA	HT
95-95-4	2,4,5-Trichlorophenol	100.000	U	JA	HT
91-58-7	2-Chloronaphthalene	20.000	U	JA	HT
88-74-4	2-Nitroaniline	100.000	U	JA	HT
131-11-3	Dimethylphthalate	20.000	U	JA	HT
208-96-8	Acenaphthylene	20.000	U	JA	HT
606-20-2	2,6-Dinitrotoluene	20.000	U	JA	HT
99-09-2	3-Nitroaniline	100.000	U	JA	HT
83-32-9	Acenaphthene	20.000	U	JA	HT
51-28-5	2,4-Dinitrophenol	100.000	U	JA	HT
132-64-9	Dibenzofuran	20.000	U	JA	HT
121-14-2	2,4-Dinitrotoluene	20.000	U	JA	HT
84-66-2	Diethylphthalate	20.000	U	JA	HT
7005-72-3	4-Chlorophenyl-phenylether	20.000	U	JA	HT
86-73-7	Fluorene	20.000	U	JA	HT
100-01-6	4-Nitroaniline	100.000	U	JA	HT
534-52-1	4,6-Dinitro-2-Methylphenol	100.000	U	JA	HT,CC
86-30-6	n-Nitrosodiphenylamine	20.000	U	JA	HT

lab_rpt1 WSRIC Lab Analysis Report 01/19/93

Output Title: Waste Water
Waste Stream ID: 732-1-1 Status: 1 - Active Stream
Lab Report No.: 92G0141 Lab: 881 Lab
Analysis Type: Semivolatile Organics
Sample Type: WSRIC Field Sample
Units: ug/l

CAS NO.	Compound	Concentration	Q	V	C
101-55-3	4-Bromophenyl-phenylether	20.000	U	JA	HT
118-74-1	Hexachlorobenzene	20.000	U	JA	HT
87-86-5	Pentachlorophenol	100.000	U	JA	HT
85-01-8	Phenanthrene	20.000	U	JA	HT
120-12-7	Anthracene	20.000	U	JA	HT
84-74-2	Di-n-butylphthalate	2.000	J	A	HT
206-44-0	Fluoranthene	20.000	U	JA	HT
129-00-0	Pyrene	20.000	U	JA	HT
85-68-7	Butylbenzylphthalate	20.000	U	JA	HT
91-94-1	3,3'-Dichlorobenzidine	40.000	U	JA	HT
56-55-3	Benzo(a)anthracene	20.000	U	JA	HT
218-01-9	Chrysene	20.000	U	JA	HT
117-81-7	bis(2-Ethylhexyl)phthalate	540.000		JA	HT
117-84-0	Di-n-octylphthalate	5.000	J	A	HT
205-99-2	Benzo(b)fluoranthene	20.000	U	JA	HT
207-08-9	Benzo(k)fluoranthene	20.000	U	JA	HT
50-32-8	Benzo(a)pyrene	20.000	U	JA	HT
193-39-5	Indeno(1,2,3-cd)pyrene	20.000	U	JA	HT
53-70-3	Dibenz(a,h)anthracene	20.000	U	JA	HT
191-24-2	Benzo(g,h,i)perylene	20.000	U	JA	HT
100-02-7	4-Nitrophenol	100.000	U	JA	HT

lab_rpt1 WSRIC Lab Analysis Report 01/19/93

Output Title: Waste Water
Waste Stream ID: 732-1-1
Lab Report No.: 92S0016
Analysis Type: TCLP Metals by AA
Sample Type: WSRIC Field Sample
Units: mg/l

Status: 1 - Active Stream
Lab: 771 Lab

CAS NO.	Compound	Concentration	Q	V	C
7440-39-3	Barium	3.010	B	V	
7440-43-9	Cadmium	0.020	U	V	
7440-47-3	Chromium	0.050	U	V	
7439-92-1	Lead	0.200	U	V	
7440-22-4	Silver	0.020	U	V	

Output Title: Waste Water
Waste Stream ID: 732-1-1
Lab Report No.: 92S0014
Analysis Type: TCLP Metals by AA
Sample Type: WSRIC Field Sample
Units: mg/l

Status: 1 - Active Stream
Lab: 771 Lab

CAS NO.	Compound	Concentration	Q	V	C
7440-39-3	Barium	0.200	U	V	
7440-43-9	Cadmium	0.020	U	V	
7440-47-3	Chromium	0.050	U	V	
7439-92-1	Lead	0.200	U	V	
7440-22-4	Silver	0.030	B	V	

lab_rpt1 WSRIC Lab Analysis Report 01/19/93

Output Title: Waste Water
Waste Stream ID: 732-1-1
Lab Report No.: 92S0015
Analysis Type: TCLP Metals by AA
Sample Type: WSRIC Field Sample
Units: mg/l

Status: 1 - Active Stream
Lab: 771 Lab

CAS NO.	Compound	Concentration	Q	V	C
7440-39-3	Barium	0.650	B	V	
7440-43-9	Cadmium	0.020	U	V	
7440-47-3	Chromium	0.050	U	V	
7439-92-1	Lead	0.200	U	V	
7440-22-4	Silver	0.020	U	V	

Output Title: Waste Water
Waste Stream ID: 732-1-1
Lab Report No.: 92S0016
Analysis Type: TCLP Metals by AA
Sample Type: WSRIC Field Sample
Units: mg/l

Status: 1 - Active Stream
Lab: 771 Lab

CAS NO.	Compound	Concentration	Q	V	C
7440-39-3	Barium	3.010	B	V	
7440-43-9	Cadmium	0.020	U	V	
7440-47-3	Chromium	0.050	U	V	
7439-92-1	Lead	0.200	U	V	
7440-22-4	Silver	0.020	U	V	

Lab Report No.: 92S0013 Lab: 2 - 371 Lab
Analysis Type: 1 - Gross α/ß
Sample Type: WSRIC Field Sample
Sample Units: 1 - pCi/l Uncertainty Units: 1 - pCi/l

CAS No.	Compound	Result	Q	V	C	Comments
α	Gross α	238.00 ± 336.00				

Lab Report No.: 92S0014 Lab: 2 - 371 Lab
Analysis Type: 1 - Gross α/ß
Sample Type: WSRIC Field Sample
Sample Units: 1 - pCi/l Uncertainty Units: 1 - pCi/l

CAS No.	Compound	Result	Q	V	C	Comments
α	Gross α	50.00 ± 394.00	<			

Lab Report No.: 92S0015 Lab: 2 - 371 Lab
Analysis Type: 1 - Gross α/ß
Sample Type: WSRIC Field Sample
Sample Units: 1 - pCi/l Uncertainty Units: 1 - pCi/l

CAS No.	Compound	Result	Q	V	C	Comments
α	Gross α	127.00 ± 312.00				

Lab Report No.: 92S0016 Lab: 2 - 371 Lab
Analysis Type: 1 - Gross α/ß
Sample Type: WSRIC Field Sample
Sample Units: 1 - pCi/l Uncertainty Units: 1 - pCi/l

CAS No.	Compound	Result	Q	V	C	Comments
α	Gross α	40.00 ± 324.00	<			

Lab Report No.: 92S0024 Lab: 2 - 371 Lab
Analysis Type: 1 - Gross α/ß
Sample Type: WSRIC Field Sample
Sample Units: 1 - pCi/l Uncertainty Units: 1 - pCi/l

CAS No.	Compound	Result	Q	V	C	Comments
α	Gross α	40.00 ± 338.00	<			

Lab Report No.: 92S0036 Lab: 2 - 371 Lab
Analysis Type: 1 - Gross α/ß
Sample Type: WSRIC Field Sample
Sample Units: 1 - pCi/l Uncertainty Units: 1 - pCi/l

CAS No.	Compound	Result	Q	V	C	Comments
α	Gross α	108.00 ± 67.00				

RAD_R2.PRG WSRIC Radiochemistry Analysis Report 01/19/93

Lab Report No.: 92S0037 Lab: 2 - 371 Lab
Analysis Type: 1 - Gross α/ß
Sample Type: WSRIC Field Sample
Sample Units: 1 - pCi/l Uncertainty Units: 1 - pCi/l

CAS No.	Compound	Result	Q	V	C	Comments
α	Gross α	126.00 ± 362.00				

RAD_R2.PRG WSRIC Radiochemistry Analysis Report 01/19/93

Lab Report No.: 92S0072 Lab: 2 - 371 Lab
Analysis Type: 1 - Gross α/ß
Sample Type: WSRIC Field Sample
Sample Units: 1 - pCi/l Uncertainty Units: 4 - %

CAS No.	Compound	Result	Q	V	C	Comments
α	Gross α	318.00 ± 40.00%				

MATERIAL SAFETY DA

DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH O

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SECTION I

MANUFACTURER'S NAME: Fabrilife Chemicals, Inc.	TELEPHONE NUMBERS
ADDRESS (Number, Street, City, State, and ZIP Code): 4555 Lake Forest Dr. Cinti., Ohio 45242	Daytime: (513) 769-4200
TRADE NAME AND SYNONYMS: PIERCE II (No Phosphate)	Evening and Weekends: (513) 984-0410
CHEMICAL FAMILY: Laundry detergent	For Transportation Emergencies Call Chemtrec 1-800-424-9300

SECTION II — HAZARDOUS INGREDIENTS

The materials listed in this Data Sheet are classified as ☒ hazardous ☐ nonhazardous in accordance with the definition set forth by the Occupational Safety & Health Administration in 29 CFR 1915.4 (v) and 1910. 1200.

CHEMICAL NAME	COMMON NAME	CAS#	TLV	%
Sodium hydroxide	Caustic soda	1310-73-2	2mg/M^3	15

SECTION III — HEALTH HAZARD DATA

ACUTE EFFECTS OF OVER-EXPOSURE: Eyes & Skin - causes burns. Ingestion - causes burns to mouth, etc. Inhalation - severe irritation.

CHRONIC EFFECTS OF OVER-EXPOSURE: Same as acute effects - constrictive scarring may result

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known

EMERGENCY AND FIRST AID PROCEDURES: Call a PHYSICIAN.

SKIN: Flush all affected areas with large quantities of water.

EYES: Immediately flush eyes with large quantities of water for 15 minutes.

INHALATION: Remove from contaminated atmosphere.

INGESTION: DO NOT Induce vomiting. Immediately give large quantities of water if vomiting occurs give fluids again. Never give anything by mouth to an unconscious person.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN — OSHA: YES ☐ NO ☒

NATIONAL TOXICOLOGY PROGRAM: YES ☐ NO ☒ — I.A.R.C. MONOGRAPHS: YES ☐ NO ☒

OSHA PERMISSIBLE EXPOSURE LIMIT: See Section II

ACGIH THRESHOLD LIMIT VALUE: None has been established.

OTHER EXPOSURE LIMIT USED: None

(Continued on reverse side)

FABRILIFE CHEMICALS, INC. - A SUBSIDIARY OF CHEMED CORPORATION

Prepared by: James A. Swindler Date: 9-22-86

MATERIAL SAFETY DATA SHEET

DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH

SECTION I

MANUFACTURER'S NAME Fabrilife Chemicals, Inc.	TELEPHONE NUMBERS Daytime: (513) 769-4200 Evening and Weekends: (513) 984-0410 For Transportation Emergencies Call Chemtrec 1-800-424-9300
ADDRESS (Number, Street, City, State, and ZIP Code) 4555 Lake Forest Dr., Cinti., Ohio 45242	
TRADE NAME AND SYNONYMS CONCLUDE	
CHEMICAL FAMILY Powdered fabric softener	

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SECTION II — HAZARDOUS INGREDIENTS

The materials listed in this Data Sheet are classified as ☐ hazardous ☒ nonhazardous in accordance with the definition set forth by the Occupational Safety & Health Administration in 29 CFR 1915.4 (v) and 1910. 1200.

CHEMICAL NAME	COMMON NAME	CAS#	TLV	%
None				

SECTION III — HEALTH HAZARD DATA

ACUTE EFFECTS OF OVER-EXPOSURE
Eye - may produce slight but transient eye irritation.

CHRONIC EFFECTS OF OVER-EXPOSURE
None

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
None known

EMERGENCY AND FIRST AID PROCEDURES

SKIN
Immediately flush all affected areas with large amounts of water for 15 minutes.

EYES
Immediately flush the eye with large quantities of running water for 15 minutes.

INHALATION
Remove from contaminated atmosphere.

INGESTION
If swallowed, immediately dilute by giving large quantities of water, then induce vomiting. Continue fluid administration until vomitus is clear. Never give anything by mouth to an unconscious person.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN — OSHA YES ☐ NO ☒
NATIONAL TOXICOLOGY PROGRAM YES ☐ NO ☒ — I.A.R.C. MONOGRAPHS YES ☐ NO ☒

OSHA PERMISSIBLE EXPOSURE LIMIT
None

ACGIH THRESHOLD LIMIT VALUE
None has been established.

OTHER EXPOSURE LIMIT USED
None

(Continued on reverse side)

FABRILIFE CHEMICALS, INC. - A SUBSIDIARY OF CHEMED CORPORATION

Prepared by: James H. Sunday Date: 9-27-85

MATERIAL SAFETY DATA SHEET

DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH

SECTION I

MANUFACTURER'S NAME: Fabrilife Chemicals, Inc.	TELEPHONE NUMBERS
ADDRESS (Number, Street, City, State, and ZIP Code): 4555 Lake Forest Dr., Cinti., Ohio 45242	Daytime: (513) 769-4200
TRADE NAME AND SYNONYMS: SERVANT	Evening and Weekends: (513) 964-0410
CHEMICAL FAMILY: Powdered laundry bleach	For Transportation Emergencies Call Chemtrec 1-800-424-9300

SECTION II — HAZARDOUS INGREDIENTS

The materials listed in this Data Sheet are classified as ☒ hazardous ☐ nonhazardous in accordance with the definition set forth by the Occupational Safety & Health Administration in 29 CFR 1915.4 (v) and 1910.1200.

CHEMICAL NAME	COMMON NAME	CAS#	TLV	%
Dichloro-s-triazine-2,4,6-trione sodium salt	sodium dichloroisocyanurate	2893-78-9	-	35

SECTION III — HEALTH HAZARD DATA

ACUTE EFFECTS OF OVER-EXPOSURE: Eyes and skin - can cause irritation. Inhalation can cause irritation to tissue. Ingestion can burn tissue.

CHRONIC EFFECTS OF OVER-EXPOSURE: Same as above.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Unknown

EMERGENCY AND FIRST AID PROCEDURES: In all cases, call a PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

SKIN: Immediately flush all affected areas with large amounts of water for 15 minutes.

EYES: Immediately flush the eye with large quantities of running water for 15 minutes.

INHALATION: Remove from contaminated atmosphere.

INGESTION: If swallowed, immediately dilute by giving large quantities of water, then induce vomiting. Continue fluid administration until vomitus is clear. Never give anything by mouth to an unconscious person. Call a physician.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN — OSHA YES ☐ NO ☒

NATIONAL TOXICOLOGY PROGRAM YES ☐ NO ☒ — I.A.R.C. MONOGRAPHS YES ☐ NO ☒

OSHA PERMISSIBLE EXPOSURE LIMIT: None

ACGIH THRESHOLD LIMIT VALUE: None has been established

OTHER EXPOSURE LIMIT USED: None

(Continued on reverse side)

FABRILIFE CHEMICALS, INC. - A SUBSIDIARY OF CHEMED CORPORATION

Prepared by: [signature] Date: 9-27-85

MATERIAL SAFETY DATA SHEET

MSDS NUMBER: M1339 SEP 1 1986

MSDS DATE: 06-10-86

PRODUCT NAME. CARBO-BRITE

Diamond Shamrock Chemicals Company

24 HOUR EMERGENCY PHONE. (214) 922-2700

I. PRODUCT IDENTIFICATION

3 HEALTH HAZARD, 0 FIRE HAZARD, & 1 REACTIVITY rating based on NIOSH "Identification System for Occupationally Hazardous Materials" (1974)

MANUFACTURER'S NAME AND ADDRESS: Diamond Shamrock Chemicals Company. Textile Care Industries. 4848 South Cockrell Hill Road. Dallas. Texas 75236

CHEMICAL NAME: N/A CAS NUMBER: N/A
SYNONYMS/COMMON NAMES: Sodium salt of hydrofluosilicic acid
CHEMICAL FORMULA: Na_2SiF_6

DOT PROPER SHIPPING NAME: NA
DOT HAZARD CLASS: NA
DOT I.D. NUMBER: NA HAZARDOUS SUBSTANCE: NA

II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	HAZARD DATA	CAS NUMBER	%
Proprietary mixture	PEL = None established TLV = None established	N/A	100
of inorganic fluoride salts	PEL = 3ppm C as HF ($2.5mg/m^3$) 1984-5 TLV = 3ppm C as HF ($2.5mg/m^3$) 1984-5 PEL = $2.5mg/m^3$ as fluoride TLV = $2.5mg/m^3$ as fluoride	16893-85-9	
and additives	PEL = None established TLV = None established (See Section V)		

This product is listed in the TSCA Inventory.
Not listed as carcinogenic by IARC. NTP. OSHA. ACGIH.

III. PHYSICAL DATA

BOILING POINT @ 760 mm Hg: Decomposes VAPOR DENSITY. (Air = 1): NA

MELTING POINT: Decomposes VAPOR PRESSURE: NA

EVAPORATION RATE (BuAc=1): NA SPECIFIC GRAVITY (H_2O=1): NA

SOLUBILITY IN H_2O % BY WT: Moderate % VOLATILES BY VOL.: NA

DENSITY AT 20°C. (Loose bulk) 80.6 lbs/ft^3

APPEARANCE AND ODOR: Medium-blue powder with no distinct odor

pH. 0.5% solution = 3.4 ± 0.1 @ 25°C

CAS = Chemical Abstract Service Number
PEL = OSHA Permissible Exposure Limit
TLV = TLV®, ACGIH Threshold Limit Value Current

N/A = No relevant information found or not available
NA = Not applicable

Diamond Shamrock Chemicals Company A subsidiary of Diamond Shamrock Corporation

This Material Safety Data Sheet was prepared in accordance with 29 CFR 1910.1200. All information, recommendations and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable. however, it is the user's responsibility to determine the safety, toxicity and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee expressed or implied is made by Diamond Shamrock as to the effects of such use, the results to be obtained or the safety and toxicity of the product nor does Diamond Shamrock assume any liability arising out of use by others of the product referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.