THOMPSON, MANN AND HUTSON
LAW OFFICES

COLUMBIA
GREENSBORO
ATLANTA
WASHINGTON

THE DANIEL BUILDING
GREENVILLE, SOUTH CAROLINA 29602
(803) 242-3200
TELEX 57-0336

CABLE THOMLAW

CONFIDENTIAL

January 16, 1984

James F. Bycott, Esquire
Office of Regional Counsel
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: Medley Site Investigation

Dear Jim:

This letter is in response to EPA's letter of November 23, 1983 to Sylvan Chemical Corporation in regard to the Medley Site. As you know, Sylvan Chemical Corporation's name has changed to Milliken Chemical.

I have been reviewing the records available on transactions between Milliken Chemical and the Medleys. The investigation has progressed slowly since the transactions occurred several years ago and a number of personnel changes have occurred during this period of time. The results of my preliminary investigation are as follows:

1. Milliken Chemical did not have any direct transactions with Mr. and Mrs. Ralph Medley or Mr. Clyde Medley. Milliken records indicate that Milliken transacted business with Medley's Concrete Works during the years of 1974 to 1976.

Payment records to Medley's Concrete Works are as follows:

Date	Amount
5/13/76	$534.00
4/15/76	326.00
3/11/76	501.00
2/12/76	565.00
12/11/75	277.00
11/13/75	265.00
10/23/75	251.00
1975	111.00
1975	652.00
1975	237.00
5/15/75	150.00

10294752

Date	Amount
4/17/75	$354.00
3/13/75	156.00
2/13/75	216.00
12/12/74	507.00
11/24/74	192.00

I have been unable to locate any written contract between Medley's Concrete Works and Milliken Chemical. Two invoices from Medley's Concrete Works to Milliken Chemical are attached for your information. As you can see, the price paid for disposal of 55 gallon barrels was three dollars per barrel. The "buckets" disposed of at one dollar per bucket are 5 gallon safety cans.

2. As you are aware, the Medleys disposed of waste at two or more locations. The South Carolina Department of Health and Environmental Control has confirmed the existence of a permitted waste disposal site that was operated by the Medleys near Love Springs, South Carolina. This facility was operated by the Medleys during the period when the Medley's Concrete Works performed disposal activities for Milliken Chemical.

In your letter of November 23rd, you requested a description and volume calculation on the wastes disposed of by Milliken Chemical. Only a general description of the waste material is possible at this time--it consisted of various nonhazardous and hazardous textile organic chemicals as well as non-hazardous solid wastes. An approximate calculation of the total volumetric amount of waste disposed of by Medley's Concrete Works can be developed by dividing the total invoice amounts paid by the price paid per barrel or bucket. Based on the two sample invoices enclosed, it appears that approximately ten percent of the transactions consist of 5 gallon buckets. Therefore, the volumetric amount of wastes sold to Medley's Concrete Works is calculated as follows:

Total amount of invoices: $5,294

5 gallon buckets sold = 10% x $5,294 x 5 gallons = 2,645 gallons (or equivalent to twenty-four (24) 55 gallon barrels)

55 gallon barrels sold: ($5,294 - $529) ÷ $3 per barrel

= 1,588 barrels

Therefore, the total 55 gallon barrel equivalents sold to Medley's Concrete Works would equal 1,612 barrels.

It should be noted, however, that these calculations do not assume that certain barrels which were sold may have been partially empty or may have contained nonhazardous materials. These calculations also <u>do not</u> reflect Milliken's contribution (if any) to the Medley site or any other waste disposal

site--this calculation represents the total amount of business done with Medley's Concrete Works.

It is my understanding that the EPA has not yet questioned the Medleys or obtained their records of disposal. My investigation into this matter would be aided by information developed during EPA's investigation of the Medleys. I would request that I be kept informed of your investigative efforts in regard to the Medleys.

I hope the enclosed information is helpful to your investigation. Please note that the information provided in this letter is not intended to act as any admission, either express or implied, by Milliken Chemical of any responsibility for conditions at the Medley waste site. I would also request that the contents of this letter be exempt from disclosure under the Freedom of Information Act pursuant to 40 C.F.R. Part 2.118(a)(4),(7) and all other appropriate provisions.

Please let me know if you have any further questions on this matter.

Very truly yours,

THOMPSON, MANN AND HUTSON

James W. Potter

JWP/pm

CONFIDENTIAL

1.5 26

February 1, 1978

M. Milliken Chemical Company
P. O. Box 817
Inman, S. C. 29349

IN ACCOUNT WITH

MEDLEY'S CONCRETE WORKS

INSTALL — REPAIR & CLEAN SEPTIC TANKS

Route 7, Box 189 — Gaffney, S. C. 29340

Phone: 489-4325 — 583-6585

Disposed of 179 drums ($3.00 per drum)	$537.00
Disposed of 28 buckets and	28.00
	$565.00

8589

TERMS (2)
(1)
(1)
(1)
AMT (7)
(7)

CONFIDENTIAL

CODED BY:
APPROVED

CARD CODE	DAT-
1	4
7 5 0	

LOC.	
33	36
0 8 6	

April 1, 197 8

M Milliken Chemical Company
P. O. Box 817
Dunean, S. C. 29349

IN ACCOUNT WITH

MEDLEY'S CONCRETE WORKS

INSTALL — REPAIR & CLEAN SEPTIC TANKS

Route 7, Box 159 — Gaffney, S. C. 29340

Phones: 489-4235 — 583-6585

Disposed of 92 drums ($3.00 per drum)	$276.00
Disposed of 50 buckets	50.00
	$326.00

5126

Paid

0 5 8 0

2 by

105120241	MEDLEY'S CONCRETE WORK	66002750621591203741212 74	086	7462	0	50700	50700	
						50700	50700	775
106006407	TRANSMISSION SUPPLIE	M66002745023440783 7121274	086	8311	0	7335	7335	
						7335	7335	317
			086	83113756		00	00	40
301580809	CITIZENS & SOUTHERN	W8D002776412311201741212 74	086	8318		272	272	
						272	272	85
			086	8331		00	00	11
100744760	BELCHERS AMERICAN	XAT002750621661205741212 74	086	8333	10 1	950	950	
						950	950	18
100744760	BELCHERS AMERICAN	XAT002750621661205741212 74	086	8334	L	1200	1200	
						1200	1200	12
102590727	EARNHARDT ELEC SERVI	XBX002745095750743361212 74	086	8341	0	18233	18233	
						18233	18233	1882
106546561	HRHYNER & LITTLEJOHN	XAR002745332560796 5121274	086	8347	0	92763	92763	
101803123	CRESCENT INDUSTRIAL	IW66002750216091122741212 74	086	8347	L	3999	3999	
						96762	96762	1558
			086	83470804		00	00	
			086	8361		00	00	31
108943362	YOUNG OFFICE SUPPLY	W63002745226860742212 1274	086	8387	12 1	1235	1235	
						1235	1235	244
			086	83874773		00	00	2
			086	8388		00	00	560
			086	8393		00	00	180
			086	8422		00	00	72
204257766	INMAN TELEPHONE CO	W6Y002750290411116741212 74	086	8423	0	31861	31861	
204257766	INMAN TELEPHONE CO	W6Y002750543971116741212 74	066	8423	0	225	225	
204257766	INMAN TELEPHONE CO	W6Y002750290461116741212 74	086	8423	0	1066	1066	
207211201	SOU BELL TEL & TEL	CW66002750290111123741212 74	066	8423	0	880	880	
						34032	34032	680
204257766	INMAN TELEPHONE CO	W6Y002750074581116741212 74	086	8424	0	2254	2254	
204257766	INMAN TELEPHONE CO	W6Y002750074601116741212 74	066	8424	0	3489	3469	
204257766	INMAN TELEPHONE CO	W6Y002750074631116741212 74	086	8424	0	8523	6523	

		086	7341JAJA			00			00	242300
106841287 SAFECO INC	3LT0023170824308063*020775	086	7361	312	1	31500		315-	31185	
100133442 ALLIED SAFETY SUPPLY	3QN0027441737808132*021375	086	7361	52	1	5695		52-	5643	
						37195		367-	36828	42001
		086	7363			00			00	500
100901008 BORG-WARNER CORP	3HH0027500438801277502 1375	086	7366		M	137030			137030	
						137030			137030	137030
		086	7442			00			00	15000
105120241MEDLEY'S CONCRETE WOR	3LW0027506242702017502 1375	086	7662		L	21600			21600	- AMOUNT
						21600			21600	21600
		086	7681			00			00	3000
301580809 CITIZENS & SOUTHERN	3QD0027763067902077502 1375	086	8318			1742			1742	
						1742			1742	1742
		086	8347			00			00	166
108562512WESTERN CAROLINA SCAL	3QQ0027500105201277502 1375	086	8361		L	61913			61913	
						61913			61913	61913
104529766 K-MART	3QN0027446245008007*021375	086	8387	43	1	4497	173-		4324	
						4497	173-		4324	7337
100113921 IVAN ALLEN CO	3LQ0023171439755196*020875	086	8388	14	1	1400			1400	
						1400			1400	2528
57766INMAN TELEPHONE CO	3QN0027502904601167502 1375	086	8423		0	703			703	
257766INMAN TELEPHONE CO	3QN0027505439701167502 1375	086	8423		0	1068			1068	
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204257766INMAN TELEPHONE CO	3QN0027500742701167502 1375	086	8424		0	2171			2171	
204257766INMAN TELEPHONE CO	3QN0027500744101167502 1375	086	8424		0	498			498	
204257766INMAN TELEPHONE CO	3QN0027500746301167502 1375	086	8424		0	5395			5395	
204257766INMAN TELEPHONE CO	3QN0027500745701167502 1375	086	8424		0	2776			2776	
204257766INMAN TELEPHONE CO	3QN0027500745901167502 1375	086	8424		0	400			400	
204257766INMAN TELEPHONE CO	3QN0027500746801167502 1375	086	8424		0	2673			2673	
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204257766INMAN TELEPHONE CO	3QN0027500746401167502 1375	086	8424		0	273			273	
204257766INMAN TELEPHONE CO	3QN0027500742901167502 1375	086	8424		0	2151			2151	
						19471			19471	19471
104798868 I T T WORLD COMMUNIC	3LR0027503348801087502 1375	086	8425		0	4366			4366	
						4366			4366	4366

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100887625BOND TEXTILE MACHINER4DD0023171594408257*033075 08600506681                220                    220
                                                                                     220                    220        220

101378562 CAROLINA CONTROLS CO4C80023176354908188*031775 08601036681                 94                     94
                                                                                      94                     94         94

                                                 086881166876900                     00                     00       3483

                                                 086    6697                         00                     00      36400-

                                                 086    7312                         00                     00     123255

                                                 086    7341                         00                     00       1806

106984967 SHEALY ELEC WHLSE   4C80023171700308237*030575 086    7341FPFI      0     23500        470-      23030
105760518 NORTH BROTHERS INC  3870023171303308217*022775 086    7341FPFI      0     20494        205-      20289
                                                                                    43994        675-      43319     43319

804542428KEARNY INDUSTRIES INCWEK0027450297103172*112874 086    7341GYGP      0     26748                  26748
                                                                                    26748                  26748     26748

804542428KEARNY INDUSTRIES INCWEK0027450297103172*112874 086    7341GYGQ      0     26748                  26748
                                                                                    26748                  26748     26748

104562984KENNEDY SUPPLY CO INC4C7002317041950818 4*022875 086    7341GYGZ      0    222575                 222575
                                                                                   222575                 222575    222575

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                                                                                    53496-                 53496-    53496-

107399162STATE CHEMICAL MFG C03870023179046508191*032775 086    7361        172 1   17925        725-      17200
                                                                                    17925        725-      17200     17200

                                                 086    7442                         00                     00      15000

207428723E L STEPHENS         4DG0027506255003037503137 5 086    7462          L     12500                  12500
105120241HEDLEY'S CONCRETE WOR4C900275062551030175031375 086    7462          L     15600                  15600
                                                                                    28100                  28100     28100

107399162STATE CHEMICAL MFG C03870023179046508191*032775 086    7681                 937                    937
                                                                                     937                    937       937

106450474 BOYCE RANSON FORD IN4D80027500066803037503137 5 086    8347         52 1   10586                  10586
                                                                                    10586                  10586     10586

105223687 MODERN OFFICE MACHIN4DD0023175588608256*031075 086    8348          0     4016         28-       3988
                                                                                     4016         28-       3988      6488

108943362 YOUNG OFFICE SUPPLY 4C900274525154074 22*031375 086    8387          5 1    480                    480
108943362 YOUNG OFFICE SUPPLY 4DG0027452576808107*031375 086    8387          6 1    588                    588
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107348487 SPRAYING SYSTEMS CO 6AM0023172488808380*041175	086	7312	76 1		7989	307-	77-	7605	
104199189INDIAN SPRINGS MFG CO6AR0027502130303317504177 5	086	7312	569 1		57500		575-	56925	
					65489	307-	652-	64530	64530
208010242 TRANSPORT CLEARINGS 48H0027473219903187504097 5	086	7341			1205			1205	
					1205			1205	1205
	086	7341FPFC			00			00	9120
104562984KENNEDY SUPPLY CO INC6AT0023170432908184*041575	086	7341GYGZ		0	12370			12370	
					12370			12370	12370
	086	7341GYHB			00			00	348692
	086	7341GYHC			00			00	348192-
	086	7341HNHC			00			00	346860
	086	7341HNHD			00			00	27500
	086	7341HNHE			00			00	43764
	086	7341JCJA			00			00	42800
	086	7341JCJB			00			00	79600
	086	7361			00			00	2890
105760518 NORTH BROTHERS INC 4730023176212208355*041375	08689	127361		C	44500		445-	44055	
					44500		445-	44055	44055
10[illegible]326983 UNIVERSITY LAWN SHRU4730023176273508318*041275	086	7363		L	20000			20000	
					20000			20000	20000
	086	7366			00			00	20675
	086	7442			00			00	15000
105120241MEDLEY'S CONCRETE WOR47Y0027506274004017504177 5	086	7462		L	35400			35400	
					35400			35400	107050
107348487 SPRAYING SYSTEMS CO 6AM0023172488808380*041175	086	7681			115			115	
					115			115	245
104301463 INTERPACE CORP 6AM0023172154608297*042475	086	8311		0	4210			4210	
					4210			4210	10184
	086	8318			00			00	1163
203483886GULF TRAVEL CARDS 47Y0027500899703317504177 5	086	8333		T	817			817	

	086	7341HPHJ			00		00	11000
	086	7361			00		00	6985
	086	7363			00		00	2676
	086	73634604			00		00	2245
	086	7366			00		00	17600
	086	7442			00		00	15000
105120241HEDLEY'S CONCRETE WOR6RY0027505055405017505 1575	086	7462		L	15000		15000	
107302886SPARTAN ENVIROMENTAL 6RY0027505625904307505 1575	086	7462		L	23500		23500	
					38500		38500	38500
	086	7681			00		00	501
	086	8311			00		00	3385
	086	8347			00		00	15556
108637768WILKINS & MCMILLIN LU6RV0023170481508420*050975	086	8361	148	1	14750		14750	
					14750		14750	14750
108943362YOUNG OFFICE SUPPLY 6UM0023172808208468*050475	086	8387	46	1	4634		4634	
108943362YOUNG OFFICE SUPPLY 6UM0023172808108467*050475	086	8387	26	1	2576		2576	
					7210		7210	19141
105223687MODERN OFFICE MACHINE6RU0023175785877936*050575	086	8388	368	1	36800		36800	
					36800		36800	41694
	086	8423			00		00	37285
	086	8424			00		00	41357
	086	8425			00		00	11995
106674569RYDER TRUCK RENTAL 6UT0027506824104267505 1575	086	8443	104	1	10400		10400	
					10400		10400	26000
106086888PIEDMONT RENTAL SERVI6RY0027500832904247505 1575	086	8447	65	1	6465		6465	
					6465		6465	6465
107329202SPARTANBURG WAREHOUSE6RY0027500021505017505 1575	086	8451		0	18615		18615	
107329202SPARTANBURG WAREHOUSE6RY0027509909904307505 1575	086	8451		0	420		420	
					19035		19035	19035
	086	8461			00		00	176056

VENDOR	VENDOR NAME	INVOICE NUMBER	DISTRIBUTION				PAYABLE AMOUNT		GROSS	ADJUSTMENT	DISCOUNT	NET	PERIOD TO DATE NET
100299529	APPLIED ENGINEERING C	7LP002317740750857 6*060675	086		6365			0	47225			47225	
									47225			47225	66288
			086		6369				00			00	243629
100081787	AIR FILTER SERVICE CO	7KL002317062058569 3*062975	086		6681				126			126	
102725126	ENGINEERING SALES ASS	7NK002317040670855 8*070275	086		6681				174			174	
2750724	EXCEL HOSIERY MILLS	7MJ002317053158708 7*062675	086		6681				156			156	
101378562	CAROLINA CONTROLS	7NK002317679368708 1*062975	086		6681				130			130	
102725126	ENGINEERING SALES ASS	7NK002317040688907 5*070275	086		6681				108			108	
107022522	SHIPPERS SUPPLY INC	7NK002317064668907 9*061375	086		6681				72			72	
101378562	CAROLINA CONTROLS	7QH002317680518708 0*063075	086		6681				202			202	
100299529	APPLIED ENGINEERING C	7LP002317740750857 6*060675	086		6681				198			198	
105118727	MECHANICAL SUPPLIES I	7NK002317376618116 2*061375	086		6681				66			66	
106646883	RUBBAIR DOOR DIV	7NG002745007190843 6*061275	086		6681			F	3052			3052	
106984967	SHEALY ELEC WHLSE	7LH002317265150856 7*061175	086		6681				90			90	
101378562	CAROLINA CONTROLS	7NK002317679250848 9*062975	086		6681				148			148	
207958404	THURSTON MOTOR LINES	7QL002747104390522 5*061075	086		6681				903			903	
202704641	EMERY AIR FREIGHT COR	7LD002747103330521 5*060675	086		6681				3344			3344	
									8769			8769	28093
501580809	CITIZENS & SOUTHERN	7HW002776261330530 7*586662*	086		66870804				1523			1523	
									1523			1523	1523
201528289	CHEMICAL LEAMAN TANK	7LD002747171770528 7*060675	086		6689				975			975	
									975			975	16150
103198324	GARLOCK INC	7MM002744050620815 4*061275	086		68137635			F	440			440	
									440			440	440
107304960	SPARTAN INDUSTRIAL	7KL002317004240817 9*060975	086		7341GYGF			0	5260		53-	5207	
									5260		53-	5207	19270
			086		7341GYGZ				00			00	44660
			086		7361JFJC				00			00	86853
			086		7361				00			00	132858
106646735	ROYSTER CO	7PJ002317043160846 5*062475	086		7363	26	1		2625		53-	2572	
									2625		53-	2572	8092
			086		7363GXGA				00			00	498900
100901008	BORG-WARNER CORP	7P600275027459050 1*061275	086		7366			K	68515			68515	
									68515			68515	128710
			086		7442				00			00	15000
105120241	MEDLEY'S CONCRETE WOR	7PU002750111000601 5*061275	086		7462			0	11100			11100	
									11100			11100	23600

208050562	TURNER TRUCKING CO	9BR0027470537806247507227 5	0R69738668I							6426				6426	
										6426				6426	6426
501581546	C AND S NATIONAL BANK	87RC027492267071475059060*	086881166876900						0	4737				4737	
										4737				4737	4737
105267200	MORELAND CHEMICAL CO	86R0027500190006157507247 5	086	6697					0	23600-				23600-	
105267200	MORELAND CHEMICAL CO	9AQC027500329107017507247 5	086	6697			320-1			32000-				32000-	
105267200	MORELAND CHEMICAL CO	9AX0027500341007017508017 5	086	6697					0	20800-				20800-	
										76400-				76400-	76400-
103001962	FREEMAN MECHANICAL IN	8640027500619406307507247 5	086	7341	HNHD				0	259228				259228	
										259228				259228	L 259228
106068481	PIEDMONT ENGINEERS G	86X0027500158306247507247 5	086	7341	HNHH				0	64273				64273	
										64273				64273	64273
103001962	FREEMAN MECHANICAL IN	86X0027500619206307507247 5	086	7341	HPHH				0	37764				37764	
										37764				37764	37764
103001962	FREEMAN MECHANICAL IN	8640027500619606307507247 5	086	7341	JLJI				0	3166026				3166026	
										3166026				3166026	3166026
102725126	ENGINEERING SALES ASS	8670023170414503497*072775	096	7341	JLJL		161	1		16050				16050	
										16050				16050	16050
105885442	CLNEY PAINT CO	9AP0023171258608722*072675	086	7361			12	1		1257		13-		1244	
103001962	FREEMAN MECHANICAL IN	8640027500619506307507277 5	086	7361					0	206016				206016	
										207273		13-		207260	207260
101694405	COMMERCIAL AIR CONDIT	86X0027500548107097507247 5	086	7366					0	28230				28230	
										28230				28230	28230
120241	MEDLEY'S CONCRETE WOR	86R0027505086707017507247 5	086	7462					0	23700				23700	
										23700				23700	23700
102725126	ENGINEERING SALES ASS	8670023170414503497*072775	086	7681						210				210	
										210				210	210
104257979	INMAN TIRE SERVICE	86R0027505086907027507247 5	086	8334					L	600				600	
										600				600	600
104797442	LIVINGSTON & HAVEN IN	86TC023171458008560*071975	086	8341					0	1061	41-	10-		1010	
										1061	41-	10-		1010	1010
106542531	RHINEHARTS GARAGE	86X0027506321606187507247 5	086	8347			1	I		402				402	
										402				402	402
105897602	ORKIN EXTERMINATING C	86X0027506321707017507247 5	086	8361					L	5400				5400	
										5400				5400	5400

	086	8689116687690 0		00	00	4737
	086	6609		00	00	21725
	086	6697		00	00	76400-
	086	7341HNHD		00	00	259228
	086	7341HNHH		00	00	64923
	086	7341HPHM		00	00	37764
903001962FREEMAN MECHANICAL INAAA0027500619606307507247 5	086	7341JLJI		3166026- 3166026-	3166026- 3166026-	
	086	7341JLJK		00	00	106091
	086	7341JLJL		00	00	113750
	086	7361		00	00	379596
	086	7363GXAA		00	00	101347
	086	7366		00	00	48369
	086	7442		00	00	15000
105120241MEDLEY'S CONCRETE WOR93V0027504339008017508147 5	086	7462	L	65200 65200	65200 65200	215600
	086	7681		00	00	210
	086	8333		00	00	1404
104257979INMAN TIRE SERVICE 93V0027500169007117508147 5	086	8334	L	300 300	300 300	900
	086	8341		00	00	1010
	086	8341GWAS		00	00	80
	086	8347		00	00	402
	086	8361		00	00	22100
	086	8387		00	00	44764
	CR69030387			00	00	5996
108943362YOUNG OFFICE SUPPLY C96J0023173237819268908077 5	086	8388	3 1	280 280	280 280	14101

20I528289CHEMICAL LEAMAN TANK D7R0027470215010087510177 5	086	6689			650			650	
20I528289CHEMICAL LEAMAN TANK D7R0027470125410087510177 5	086	6689			1625			1625	
					29225			29225	33625
	086	6697			00			00	48950-
1 61449FISKE CARTER CONST COD970027500533609307510237 5	086	7341HPHN		C	81966			81966	
					81966			81966	81966
100972169BRILL EQUIPMENT CO INEAW0023171459503508*090875	086	7341JPJA		O	450000			450000	
					450000			450000	450000
	086	7341JLJK			00			00	100909
	086	7341JOJA			00			00	80000
	086	7341JOJB			00			00	311700
	086	7341JOJC			00			00	127200
	086	7341JOJD			00			00	58000
101381130CAROLINA DOOR SPECIALD6D0023172968909957*110275	086	7361	1551	1	155100			155100	
					155100			155100	243400
103313921GILMORE CONSTRUCTION D980027508326510107510237 5	086	7363		C	34800			34800	
					34800			34800	34800
100901008ORG-WARNER CORP D980027506659309307510237 5	086	7366		L	7370			7370	
100901008ORG-WARNER CORP D980027506659909307510237 5	086	7366		L	15600			15600	
					22970			22970	22970
10 0241MEDLEY'S CONCRETE WORD8E0027502399310017510237 5	086	7462		O	25100			25100	
					25100			25100	56600
108943362YOUNG OFFICE SUPPLY CDMR0027450404009124*10237 5	086	8311	1	1	77			77	
104788141LIQUID AIR INC D9T0023172982109204*110575	086	8311	55	1	5500			5500	
301580809CITIZENS & SOUTHERN ECE0027763982910207510237 5	086	8311			1056			1056	
					6633			6633	6633
102935201FISHER SCIENTIFIC CO ECH0027447612509195*110675	086	83110628	7	1	726			726	
					726			726	726
102280965DILLARD PAPER COMPANYD7G0023172743309199*101775	086	8314	45	1	4592		46-	4546	
301580809CITIZENS & SOUTHERN ECE0027763982910207510237 5	086	8314			236			236	
					4828		46-	4782	4782
102920964FIRESTONE STORES DEE0027502462910077510237 5	086	8334	20	1	8302	320-		7982	
					8302	320-		7982	8482

106227244	PURITAN FOOD SERVICES	E6R00274510000089240111375	086	6465		L	22459			22459	
							22459			22459	22459
105118727	MECHANICAL SUPPLIES	E740023174707948214*111375	086	6681			96			96	
107811276	T W MISSION MFG CO	F1W00231702735091064112675	086	6681			298			298	
104562984	KENNEDY SUPPLY CO INCE	9R00231704920482094112675	086	6681			222			222	
630401	EDMAC INCORPORATED -	E630023171358409190*111175	086	6681			400			400	
195527	MINE SAFETY APPLIANCE	EFCR00231727245482064112775	086	6681			84			84	
101378562	CAROLINA CONTROLS	E630023177478645889*112975	086	6681			186			186	
104797442	LIVINGSTON & HAVEN INE	630023173067241053*111075	086	6681			98			98	
102420481	DURAMETALLIC CORP	E9R00231716975354 37*103075	086	6681			89			89	
106595847	ROBERTSHAW CONTROLS CE	9R00231740309300 84*112675	086	6681			96			96	
104797442	LIVINGSTON & HAVEN INE	630023173051038881*110975	086	6681			88			88	
106984967	SHEALY ELEC WHLSE	E630023174162848197*111275	086	6681			78			78	
104562984	KENNEDY SUPPLY CO INCE	9R00231704972392 72*112775	086	6681			86			86	
106984967	SHEALY ELEC WHLSE	E630023174160509264*111275	086	6681			72			72	
102322749	DIXIE RUBBER INC	E740023170354409241*111075	086	6681			280			280	
106564917	RIEKE CORP	E9R00231701188482 20*110675	086	6681			400			400	
203457141	GREYHOUND LINES-EAST	E9G00274713733092475111075	086	6681			430			430	
201741632	CONTINENTAL TRAILWAYSE	9G00274749990090875111075	086	6681			365			365	
208010242	TRANSPORT CLEARINGS	EF8D00274720211102275111175	086	6681			976			976	
208010242	TRANSPORT CLEARINGS	EF6D00274770712102275111175	086	6681			2574			2574	
208010242	TRANSPORT CLEARINGS	EF0D00274721560102275111175	086	6681			1545			1545	
206577920	ROADWAY EXPRESS INC	FAY00274795853103175111075	086	6681			1545			1545	
							10006			10006	10006
201528289	CHEMICAL LEAMAN TANK	FAY00274722880103175111075	086	6689			975			975	
							975			975	975
100004669	A.R.SPRINKLER CO.	FTW00231783307091 83*120975	086	7341	JMJB	C	320000			320000	
							320000			320000	320000
1 4644	NDLAND COMPANY	E9R00231781268609181*110775	086	7361	254	1	25884		518-	25366	
1 J4960	SPARTAN INDUSTRIAL	FAD00231706025092 86*111075	086	7361		0	2113		21-	2092	
							27997		539-	27458	27458
101355847	CHRISTMAN AND PARSONSF	TX00231724147092 09*111575	086	7361	JPJA	C	385000			385000	
							385000			385000	385000
105120241	MEDLEY'S CONCRETE WORE	6500275071965110175111373	086	7462		L	26500			26500	
							26500			26500	26500
102329042	DIXIE TIRE & FUELS INF	AD00231739305092 82*112275	086	8334	20	1	2000			2000	
							2000			2000	2000
106086888	PIEDMONT RENTAL SERVIE	7300275016642103075111375	086	8347	64	1	6375			6375	
104645265	LUKAS EQUIPMENT CO.	FA600275C0006411047 5111375	086	8347		L	3200			3200	
							9575			9575	9575
107849311	TEK JANITORIAL SUPPLYF	AC00231702963093 12*111075	086	8387	13	1	1265		13-	1252	

103001962FREEMAN MECHANICAL INCV	7002750111161127 5121175	086	7341JDJC		C	106831			106831	
						106831			106831	197863
		086	7341JDJD			00			00	74218
		086	7341JFJC			00			00	473201
		086	7341JFJL			00			00	3840
		086	7341JLJC			00			00	46124
		086	7341JLJH			00			00	136300
		086	7341JMJA			00			00	333822
		086	7341JMJB			00			00	320000
		086	7341JTJA			00			00	7500000
		086	7341JZJD			00			00	502604
134845283LUKAS EQUIPMENT CO.	GEF0027450958509350*121175	086	7361	16	1	1622			1622	
106637769HILKINS & MCMILLIN L	GKJ0023170656093 35*120475	086	7361	41	1	4058			4058	
105E65442OLNEY PAINT CO	GHT0023171052109399*120875	086	7361	31	1	3154		32-	3122	
						8834		32-	8802	170073
		086	7361JPJA			00			00	305000
103001962FREEMAN MECHANICAL I	GKG0027501111711267 5121175	086	7361JPJB		C	3494			3494	
						3494			3494	3494
100234980L W BISHOP & SONS	GKG0027500010111207 5121175	086	7363	48	1	4940	190-		4750	
						4940	190-		4750	13780
		086	7366			00			00	238815
		086	7442			00			00	26000
135120241MEDLEY'S CONCRETE W	URGKG0027500641591201 75121175	086	7462		L	27700			27700	
104438121JOHNSON WASTE	GHK0027500039611267 5121175	086	7462		L	18000			18000	
						45700			45700	72200
134845283LUKAS EQUIPMENT CO.	GEF0027450958509350*121175	086	7601		F	78			78	
						78			78	2605
		086	8311			00			00	80521
120234722ASPDEN ASSOCIATES	GKG0027509600011197 5121975	086	8314	215	1	22287	819-		21468	
						22287	819-		21468	21458

208010242	TRANSPORT CLEARINGS	EKPH	0027470921201217	6021076	086	6681					1041				1041		
208935441	YELLOW FREIGHT SYSTEM	KLB	0027475940301157	6020676	086	6681					1544				1544		
											8167				8167		30821
					086	66876900					00				00		570
115282890	CHEMICAL LEAMAN TANK	KEO	0027471594801237	6020576	086	6689					325				325		
											325				325		1125
105267200	MORELAND CHEMICAL CO	KGP	0027500184301087	6021276	086	6697				O	7000-				7000-		
105267200	MORELAND CHEMICAL CO	KEY	0027500195201127	6021276	086	6697				O	25200-				25200-		
											32200-				32200-		32200-
					086	7312					00				00		207
					086	7341	HHHC				00				00		26220
106038883	PFAUDLER SYSTEM CO	C3	9002750510500126	7621276	086	7341	HHHB			O	1188900				1188900		
											1188900				1188900		1188900
					086	7341	HHHD				00				00		61440
100834050	BIRO MACHINE CO INC	KRG	0027501538101307	6021276	086	7341	JLJL		700	1	70000				70000		
											70000				70000		70000
101435647	CAROTEK INC	KF5	0023170621309230	*022776	086	7341	JZJA			O	286700				286700		
											286700				286700		286700
					086	7341	JZJD				00				00		321057
107267207	SOUTHERN PUMP & TANK	KRN	0031730617096774	020976	086	7341	KGKA			O	109600			1096-	108504		
											109600			1096-	108504		108504
590727	EARNHARDT ELEC SERVICE	KGG	0027451100809630	*021276	086	7362				O	17763				17763		
											17763				17763		17763
109901000	BORG-WARNER CORP	KEY	0027500793102017	6021276	086	7366				M	96525				96525		
											96525				96525		118400
106676569	RYDER TRUCK RENTAL	KRG	0027501322201317	6021276	086	7442			260	1	26000				26000		
											26000				26000		26000
105120241	HEDLEY'S CONCRETE WORK	KHA	0027502557502017	6021276	086	7462				L	56500				56500		
											56500				56500		56500
104788141	LIQUID AIR INC	KE3	0023175521409750	*022276	086	8311			55	1	5500				5500		
											5500				5500		17347
206897602	ORKIN EXTERMINATING CO	KGR	0027507239502037	6021276	086	8314				L	1900				1900		
											1900				1900		1900

905267200	MORELAND CHEMICAL CO	AAA0027500	3597021376030475	036	6697			0	34500-			34500-		
905267200	MORELAND CHEMICAL CO	AAA0027500	120001200 030476	086	6697			0	30000-			30000-		
905267200	MORELAND CHEMICAL CO	AAA0027500	120001200 030476	086	6697		300	1	30000			30000		
905267200	MORELAND CHEMICAL CO	AAA0027500	3597021376030476	086	6697		345	1	34500			34500		
105267200	MORELAND CHEMICAL CO	LY70027500	2263021676031676	086	6697			0	33000-			33000-		
105267200	MORELAND CHEMICAL CO	LY70027500	2059021676031676	086	6697			0	33400-			33400-		
									102200-			102200-	166700-	
				086	7312				00			00	56000	
1030 1962	FREEMAN MECHANICAL IN	L8N0027500	0174013176031176	086	7341	HPHO		C	814131			814131		
									814131			814131	814131	
				086	7341	HWMA			00			00	2090500	
				086	7341	KGKA			00			00	485230	
				086	7341	KJKD			00			00	697221	
103445763	GREENVILLE TEXTILE	L8N0027441	0822096009031176	036	7361		768	1	76403		1568-	76835		
									76403		1568-	76835	76835	
103901002	BORG-WARNER CORP	L5S0027500	9081530176031176	086	7363			M	96525			96525		
									96525			96525	96525	
				086	7442				00			00	22220	
105120241	MEDLEY'S CONCRETE WO	L5S0027500	6481703017603 1176	086	7462			L	50100			50100		
									50100			50100	50100	
				086	8311				00			00	16394	
997602048	RIN EXTERMINATING CO	L5S0027500	6481803017603 1176	086	8316			M	1900			1900		
									1900			1900	6417	
106469159	RECYCO	L4R0027500	0139072476031176	086	8318		174	1	17400			17400		
									17400			17400	17400	
103001962	FREEMAN MECHANICAL IN	L8N0027500	3183013176031176	086	8341			C	313320			313320		
									313320			313320	313320	
				086000	08344				00			00	1950	
				086	8341				00			00	3000	
204267983	INTERNATIONAL BUS MAC	LY0027500	3439812176031176	086	8348			M	60752			60752		
									60752			60752	60752	
235902568	OTIS ELEVATOR CO	L5300275007065070176031176		086	8364			J	17203			17203		
									17203			17203	17203	

VENDOR	VENDOR NAME	INVOICE NUMBER	DISTRIBUTION						VALUE			
			086		7341	KIKE			00		00	47112
			086		7341	KIKP			00		00	49460
			086		7341	KJKC			00		00	253368
			086		7341	KJKD			00		00	1925765
			086		7341	KLKD			00		00	9866
			086		7341	KLKP			00		00	13703
102988801	FOXBORO	T8M00274438086099 32*052276	086		7341	KMKF		0	52873		52873	
									52873		52873	151298
			086		7361	KXKA			00		00	24080
208010242	TRANSPORT CLEARINGS	ETCY00274788874042376051176	086		7341	KXMA			1591		1591	
									1591		1591	1591
107304960	SPARTAN INDUSTRIAL	T8L00231706858060 10*051076	086	7341	7341	KLKD	490	1	49500	495-	49005	
									49500	495-	49005	49005
			086	9710	7341	KXKA			00		00	1801
108637768	WILKINS & MCMILLIN LUT	8L00231705446050 55*052676	086		7361		79	1	7920		7920	
105017602	J ROY MARTIN & CO	T8K00275021580 43076051076	086		7361			T	15850		15850	
									23770		23770	23770
104256883	INMAN AUTO PARTS	P8B00231731393050 24*051576	086		7363		39	1	4058	156-	3902	
									4058	156-	3902	3902
667456	RYDER TRUCK RENTAL	T8400275015358043076051376	086		7442			0	32500		32500	
									32500		32500	32500
105120241	MEDLEY'S CONCRETE WORT	CW00275072849050176051176	086		7462				53400		53400	
106227244	PURITAN FOOD SERVICES	P8C00275001554043076051376	086		7462			T	15000		15000	
									68400		68400	68400
102987686	R W FOWLER & ASSOC INT	RLC00231735489050 77*052976	086		7489			0	1880		1880	
102987686	R W FOWLER & ASSOC INT	RLC00231735459050 77*052876	086		7489			0	29878		29878	
									31758		31758	31758
			086		7681				00		00	762
107304960	SPARTAN INDUSTRIAL	P8E00231703231 05045*042476	086		8311		24	1	2385		2385	
									2385		2385	36301
205897602	ORKIN EXTERMINATING CP	8C00275005168050 37051376	086		8314			L	1900		1900	
									1900		1900	1900

IV. RETENTION SCHEDULE - By Sponsoring Department

A. MANAGEMENT INFORMATION SERVICES	Years Retention	Responsible For Filing: Sponsor	Responsible For Filing: Indiv. Loc.
1. General Accounting Department			
a. Accounts Payable			
(1) A/P Distribution Register	10**	X	
(2) A/P Invoices (paper or microfilm)	6**	X	
(3) A/P Invoice Batch Index Records	6**	X	
(4) Receiving Reports: See also e(1)	6**	X	
(5) Freight Bills	6**	X	
(6) Purchase Orders	2	X	
(7) Requisitions on Stores or for Purchase	2		X
(8) Employee Expense Reports	6**	X	
(9) Inventory Reports, Year-End Supply System	6**	X	
b. Accounts Receivable			
(1) Invoice Transaction Register (Wkly)	7	X	
(2) A/R Daily Transaction Register	7**	X	
(3) A/R Year End Trial Balance	6	X	
(4) Customer Check Copy	0		
(5) A/R Customer Account Analysis YE	6	X	
(6) A/R Closed History	7	X	
(7) A/R Interest Trial Balance	4	X	
(8) A/R Business Trial Balance YE	7	X	
(9) A/R G/L Sales Journal Proof Report (Period)	7	X	
c. Fixed Assets & SER's			
(1) Special Expenditure Requests (SER's)	**	X	
(2) SER Year-End Reports	**	X	
(3) F/A YE Schedules and Listings	Permanent	X	
• General Ledger			
• Federal			
• State			
• LIFO			
(4) Fixed Asset Additions Transaction Sheets	Permanent	X	

** And hold until released by Tax Department.

PERSONNEL FORMS RETENTION SCHEDULE

FORM #	NAME OF FORM	RETENTION
MIC 11038(12-77)	Acknowledgement - Personal Responsibility"	Retain form with signature for current year.
MIC 2237 F & B (8-85)	Administrative Associate - Performance Evaluation	Keep the two most recent appraisals.
Georgia - ID 222	Age Certificate for Minors	Retain until 1 year after the minor attains the age of 19. If they are separated before reaching 19, return the certificate to the minor associate.
South Carolina WH-19 (11/74)		Retain until the minor attains the age of 18. If they are separated before reaching 18, return the certificate to the issuing officer.
North Carolina - YE-1 (7/79)		Retain until the minor (for whom the certificate is issued) attains the age of 20.
N/A	Affirmative Action Plans Relating to Race, Color, Sex, National Origin, and Religion	Keep narrative section until notified otherwise; on statistical section, retain forms and backup data (applicant flow logs, activity tables and printouts, etc.) for the current year and the previous year.
N/A	Affirmative Action Plans Relating to Veterans and Handicapped	Keep narrative section until notified otherwise.
MIC 3520 (3-79) MIC 800 (3-79)	Application for Employment Do Not Clip or Staple this form to any other record.	Pre-Hire - One file for each month in the year. Arrange the applications alphabetically. Maintain an active file for 30 days and an inactive file for 11 months. Post-Hire - Keep one for each period of employment. Destroy as noted under Personnel Folder on Page 5.

FORM #	NAME	RETENTION
	Benefit Forms	
MIC 16024	Enrollment Form and Waiver LTD Plan	Permanent
MIC 15373F	Milliken Retirement Plan Designation of Beneficiary - Single Member	Permanent
MIC 13374F	Milliken Retirement Plan Designation of Beneficiary Married Member	Permanent
MIC 16025	Milliken Retirement Plan Election Form for Deferral	Permanent
MIC 16026	Milliken Retirement Plan Investment Election Form	Permanent

Note: When the associate is terminated, retires, dies or becomes disabled any and all forms on file are to be attached to the status change form and sent to the Benefits Department.

F-61137 (9-78)	Claim for Medical Care Benefits on the Insured or Dependent	Keep the last Group Insurance claim only, for each person in the family.
MIC 4288	Clerical Job Description	Keep for three years from last effective date.
Letterhead	Associate Commendation	Keep for three years from the date issued (while active); retain permanently all unpurged forms at separation.
MIC 9700	Associate Performance Record	Keep for three years while active; retain permanently all unpurged forms at separation.
MIC 4284	Associate Reprimand	Keep for three years from the date issued (while active); retain permanently all unpurged forms at separation.

FORM #	NAME	RETENTION
MIC 3937-1 (2-79) MIC 3937-2 (2-79)	Employment Slip Company Rules	Keep one for each period of employment.
EEO-1	Equal Employment Opportunity	Retain the current and the previous years reports (two years only).
MIC 3537 (1-78)	Exit Interview-Exempt	Keep one for each period of employment.
MIC 1642 (3-77)	Exit Interview-Non Exempt	Keep one for each period of employment.
W-4	Federal and State Withholding Certificates	Keep the last one only.
MIC 2085 (2-80)	Grievance Procedure	Keep for three years.
MIC 3535-1 (7-73) MIC 3535-2 (7-73)	Induction Check Form and Employee Evaluation Review	Keep one for each period of employment
MIC 3771	Induction for Exempt Personnel	Keep one for each period of employment.
F-61778 (7-79)	Insurance Enrollment Card	Keep the last one only unless there has been a schedule change in the last twelve months;then keep both of these.
MIC 15815 F & B	Junior Associates Evaluation	Keep all of the completed Junior Associate Evaluation forms until they are promoted to Supervisor or higher level of management and have completed one Performance Planning and Evaluation Plan (Mic 10120 F&B). Then destroy the Junior Associate Evaluation forms and follow the retention for the Performance Planning Evaluation Plan.
Junior Associate	Progress Reports	Keep all reports for MOP, HAT, SAPJAC(Location, Business or Division) weekly or period memos, for 1 year after completing all

FORM #	NAME	RETENTION
Junior Associate	Progress Reports (continued)	orientation and evaluation programs. At this time, destroy every report except the MOP Final Evaluation Memo which you will keep permanently. Junior Associate
Junior Associate	Training and Evaluation Outlines	At the time of promotion to Shift Manager or Staff assignment, give the original to the Associate and destroy all remaining file copies.
MIC 3617 (2-79)	Leave of Absence - Non-Exempt and Production	Keep for six months from the date of issue and always keep the last one issued permanently.
MIC 1012 (2-80)	Leave of Absence - Exempt Salaried	Same Retention as Above.
453	Management Development Review (To be used by Createx only)	Keep for three years.
F-12999 (8-77)	Notice of Conversion Rights Group Insurance	See Personnel Folder Retention
MIC 3780 (2-79)	Payroll Change Recommendation	Keep for three years except Design Center and New York who will retain all of them while active; upon separation, the last one only will be retained.
MIC 10120 F & B (7-85)	Performance Planning and Evaluation Plan	Keep for three years.
MIC 3585	Personnel Change Form	Keep while active; at separation, keep the termination plus all changes for the past six months.
Unnumbered	Personnel Folder	Maintain the folder of all terminees for six years after termination. At that point, for associates considered to be "exposed", put the following documents in a separate file to be retained twenty-four(24) additional years or thirty(30) years in total.

FORM #	NAME	RETENTION
Unnumbered	Personnel Folders	a. Personnel Profile b. Application Form c. Medical Forms or Records - Clinic Day Logs Physical Examination Forms (Preemployment and all subsequent exams) Special reports from a Physician or Surgeon relative to a serious Worker's Compensation Case. After setting up this file, dispose of all the remaining records of an "exposed" associate. All of the records for a "non-exposed" associate can be destroyed.
R-0111-03	Personnel Profile	Keep the current copy; also, a copy of each one where the occupational history or training history rolls off the form.
MIC 4398 (11-76)	Physical Examination & Medical History Questionnaire	See Personnel Folder Retention for Medical Records
MIC 4285	Position Description - Exempt	Keep for three years from last effective date.
MIC 3740 (10-77)	Record of Interview - Reference Check Do not clip or staple this form to any other record.	Pre-Hire - One file for each month in the year. Arrange these records alphabetically. Post-Hire - Remove from every active file at separation. Retain them alphabetically in as many folders as are necessary. Destroy as noted under Personnel Folder on Page 4.
MIC 4286 (9-81) MIC 4096	Refusal of Consideration for Job/Shift Change	Keep permanently.Do not destroy unless our attorneys advise us to do so.

FORM #	NAME	RETENTION
MIC 4544 & Related Documents & Forms	Request for Reimbursement of Relocation Expenses	Keep until May 1 of the year following submittal.
MIC 802 (10-78)	Requisition for Personnel	Keep for twelve(12) months from the date of issue.
MIC 1349 MIC 1350	Secrecy Agreement/Patent and Secrecy Agreement MRC & Directors of Development Employee Invention Agreement	Keep while active; when terminating an Exempt associate, note the date they terminated on each form and forward it to Manpower Services. Retain all forms in the folder for any Administrative or Production associate who terminates.
LP 808 R3 (Liberty Mutual)	Supervisor's Accident Investigation	Keep until claim is closed. Might be necessary to keep longer for case with potential third party involvement. Check with Personnel Services if questionable.
State Form	Unemployment Forms - Request for Determination of Insured Status and Determination by Claims Adjudicator on Claim for Benefits	On a Contested Claim - Keep all papers permanently. On an Uncontested Claim - At termination, keep all papers for the previous year.
State Form (Liberty Mutual)	Worker's Compensation - Employer's First Report of Injury	Keep for five years with your OSHA records.

MILLIKEN
CHEMICALS

DATE: January 12, 1976

TO: Mr. J. F. Deal

cc: Mr. Reade Baxley
Mr. R. Scales

FROM: H. C. Giles

SUBJECT: WASTE LIQUIDS

Attached is letter received by you from Mr. Jackson, Plant Manager of Destructo Chemway Corporation. Mr. Scales checked into using his service with the following determined:

(1) Liquids are incinerated only
(2) No halogens or sulfur containing materials are accepted
(3) No organic acids will be disposed of
(4) Drums must be completely labeled regarding contents and hazards of same. Chemical description must be on drum.
(5) Drums must have bungs.
(6) Liquipaks not accepted although they will take up to 4 maximum with a truck load of chemicals in drums.
(7) Cost - $ 8.25/drum delivered
$ 12.10/drum picked up
or $660.00/968.00 per truckload
(8) Milliken Chemical currently will develop a T/L of waste liquid every 2 periods or $4m to $5.8M yearly.

We continue to use Medley's Concrete Works. Mr. Baxley has requested analysis of samples to meet their needs. We are analyzing the four most routine waste materials produced plus a liquid composite of all materials run by the Q.C. laboratory over a one week period. The cost of this service continues to be $4.50/drum.

Please continue to keep us advised with regard to the latest legal requirements which Mr. Baxley, yourself, and Mr. Storey's group determine. Presently we plan to continue to use Medley. Our truck drivers indicate that our drums lay in the field for long periods of time prior to being covered. I would like to consider the possibility of slowly pouring a few drums into the isolated lagoon.

HCG/jg

TURN HOLD ON MOTYL FRENCH S/T ON MONDAY

**USE VT BLUE FROM VT BLUE S/T

PRODUCTION SCHEDULE FOR WEEK OF 11-27-76 TO 12-5-76 PERIOD 1 WEEK 1

PREPARED BY: RC APPROVED BY PROD. MGR. [illegible] DATE 11-24-76

PROCESS & EQUIPMENT	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	PROD.	TOTAL POUNDS	
1000 Gal. Glass Reactor			600 S/T	1622 PD-75	1623 PD 75	PD-75	PD-75			S101 PD-75	7.6 15.8	9 30
3000 Gal. S/S DMAS RX			3025 CJ-224							CJ-224	20.5	9
MISC.			** VT GREEN 15X	VT PURPLE 10X						BLENDS	11.3	25
Syn Bond Reactor			PREVENTIVE MAINT.									
T-101 PROCESS												
3000 Gal. Glass PHOSCARD R Rx	3829	3830	3831	3832	3833	3834	3835			212-20	147.1	588
5000 Gal. Glass Rx			1247 PL710 1248 PL710		6015 NMA	R-5 FINISH				PL-710 NMA	75.6 35.3	28 36
VERSATINT R Process 1				VT Blue	VT Blue							
VERSATINT R Process II					VT Red	VT Red	VT Red					
Ethylene Oxide 3000 Gal. Rx			1002 T-600	1035 E-324	3031 DG-B	*SYN FAC 600 SYNOWET K-1	(1025) (1076)	3200 107		T-600 E-324 DG-B SF 600 SYNO K-1	5.4 21.5 21.5 19.4 27.5	18 72 31 26 22
Ethylene Oxide 1000 Gal. Rx			1183 SL 109	1205 SL 109	1008 SYN FAC 905	1058 ANIL 200				107 106 SF 905 ANIL 200	22.5 12.3 7.6 10.2	18 20 22 20
Ethylene Oxide 100 Gal. Rx				VT E-411-3								
DDSA Process			2961	2962 2963	2964 2965	2966 2967	2968 2969	2970		DDSA	42.6	140
500 Gal. S/S H3W Rx			877 R-5	878 R-5	879 R-5	880 R-5	CLEAN RX			R-5	13.9	56
200 Gal. Glass Rx				PEP II	PEP II							
Cyanoethylation 500 Gal. Rx												
CYANOETHYLATION 2000 GAL REACTOR	2010 H-1	2004 H-3	2011 H-1	2012 H-1	2005 H-3	2013 H-1	2006 H-3	WASH	2030 CEEA	2031 CEEA	H-1 H-3 CEEA	17.7 45.7 17.6	34 51 52
												603 - 132

M. U.

PRODUCTION SCHEDULE FOR WEEK OF 12-26-76 TO 1-2-77 PERIOD 2 WEEK 1

PREPARED BY: RC APPROVED BY PROD. MGR A Wilson DATE 12-22-76

PROCESS & EQUIPMENT	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	PROD.	TOTAL POUNDS	
1000 Gal. Glass Reactor			1628 PD 75	1629 PD 75	1630 PD 75	1631 PD 75	1041 K-BM	527 SUPRA	1050 SOFOAM K-1	PD-75 K-BM SUPRA SOF K-1	31.5 7.2 4.0 1.7	60 14 28 7
3000 Gal. S/S DMAS RX			1018 CJ-100	1019 C-26	3028 CJ-224					CJ-100 C-26 CJ-224	8.8 8.1 20.5	8 16 17
MISC.			15X Vt GREEN	10X GREEN N-6	5X SYLTINT GREEN					BLENDS	13.5	30
Syn Bond Reactor			2003		2004		2005			SYN BOND	26.5	120
T-101 PROCESS												
3000 Gal. Glass PHOSGARD R Rx			3847	3848	3849	3850	3851			2XC-20	106.5	420
5000 Gal. Glass Rx			5017 N M A	R-5 Finish						NMA	36.3	36
VERSATINT R Process 1			1099 YELLOW	N-6	1079 BLUE N-6					YELLOW N-6 BLUE N-6	4.5 5.9	40 27
VERSATINT R Process II												
Ethylene Oxide 3000 Gal. Rx			PREVENT.	MAINT.	1026 SF 600 1077 SYNOWET K-1	1027 SF 600 1078 SYNOWET K-1	2016 105			SF-600 SOW K-1 105	38.2 55.0 23.0	82 44 18
Ethylene Oxide 1000 Gal. Rx			PREVENT.	MAINT.	1040 TDA-92	1020 9214	1004 LEVELER 280	1015 PEG 300 MOZ		TDA-92 9214 L-280 PEG 300 MOZ	7.6 6.8 23.3 6.4	18 25 23 15
Ethylene Oxide 100 Gal. Rx			PREVENT.	MAINT.								
DDSA Process			2988 2989	2990 2991	2992 2993	2994 2995	2996 2997			DDSA	42.0	140
500 Gal. S/S H3W Rx			892 R-5 893 R-5							R-5	6.9	28
200 Gal. Glass Rx			322 PEP II	323 PEP II	324 PEP II					PEP II	2.8	24
Cyanoethylation 500 Gal. Rx			10DR O-LV							O-LV	3.8	6
CYANOETHYLATION 2000 GAL REACTOR			2038 CEHEA	2034 CEAEA	2035 CEAEA	2036 CEAEA				CEHEA CEAEA	6.3 25.3	50 84
DISTILLATION							PURIFY	PEA →			524.8	1351

PRODUCTION SCHEDULE FOR WEEK OF 12-4-76 TO 12-12-76 PERIOD 1 WEEK 2

PREPARED BY: RC APPROVED BY PROD. MGR. [illegible] DATE 12-2-76

PROCESS & EQUIPMENT	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	PROD.	TOTAL POUNDS
1000 Gal. Glass Reactor	1040 K-BM T	1022 H-101 T ~~EYN~~	T T R-5 FINISH	1019 4x L-89 T	1624 PD 75 T	1625 PD 75 T	1626 PD 75 T			H-101 / L-89 / PD 75	3.9 / 7.6 / 224
3000 Gal. S/S DMAS RX	3024 CJ-224 T										
MISC.	10x BROWN	4x WINE	10x ORANGE	5x BURNT ORANGE	8x GREY N-6					BLENDS	167
Syn Bond Reactor					1986 SYN BOND		x 1987 SYN BONDS T			Syn Bond	8.8
T-101 PROCESS											
3000 Gal. Glass PHOSGARD[R] Rx	[illegible]	3834	3835	3836	3837	3838	3839			2[illegible]-26	149.1
5000 Gal. Glass Rx		O-55 T	T		P.M.	5032 O-STS T	5005 W-11 T			O-STS / W-11	26.8 / [illegible]
VERSATINT[R] Process 1						1078 BLUE N-6 T	VT RED N-6 T			BLUE-6	5.9
VERSATINT[R] Process II	909 RED T	910 RED T	848 YELLOW T	849 YELLOW T	850 YELLOW T VT	911 RED T VT	912 Red T			V.T. RED / V.T. YELLOW	14.0 / 18.9
Ethylene Oxide 3000 Gal. Rx		E-334 T	3031 DG-B T	3051 CRUDE PEAT	3052 CRUDE PEAT	3053 CRUDE PEAT	3054 CRUDE PEAT			D.G.B / CRUDE PEAT	21.5 / 32.0
Ethylene Oxide 1000 Gal. Rx			413 m TOL 100 T	414 m TOL 100 T T-16	1206 T SL 100 T					T-TOL 100 / T-16 / SL 100	23.4 / 13.8
Ethylene Oxide 100 Gal. Rx											
DDSA Process	2960 T 2961 T	2962 T 2963 T	[illegible] T 2965 T	2966 T [illegible] T	[illegible] T [illegible] T	2970 T 2971 T	2972 T 2973 T			DDSA	58.8
500 Gal. S/S H3W Rx	861 R-5 T 862 R-5 T	863 R-5 T 864 R-5 T	865 R-5 T	866 R-5 T 867 R-5 T						R-5	24.5
200 Gal. Glass Rx											
Cyanoethylation 500 Gal. Rx											
CYANOETHYLATION 2000 GAL REACTOR	2030 CEEA T	2031 CEEA T	PREVENTIVE		2032 CEEA T	2032 CEHEA T	2033 CEHEA T	x 2034 CEHEA T		CEEA / CEHEA	26.4 / 12.6
DISTILLATION PROCESS			MAINTENANCE								525

F BATCH OF PEG 300 MO2 WAS NOT MADE ON 12/10/76, RUN TWO BATCHES PEG 300 MO2 THIS WEEK. Supv.

SE SURE TO USE CEHEA INTERMEDIATE BATCH SHEETS

PRODUCTION SCHEDULE FOR WEEK OF 12-11-76 TO 12-19-76 PERIOD 1 WEEK 3

PREPARED BY: Rc APPROVED BY PROD. MGR [illegible] DATE 12-9-76

PROCESS & EQUIPMENT	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	PROD.	TOTAL POUNDS	
1000 Gal. Glass Reactor			1004 5101 / 1626 PD-75	1627 PD-75						PD-75 5101	15.8 7.6	30 9
3000 Gal. S/S DMAS RX			3025 CJ-224	PREVENT.	MAINT.	3026 CJ-224				CJ-224	41.0	34
MISC.	15x GREEN	10x GREEN N-6								Blends	11.3	25
Syn Bond Reactor	1997		1998		1999		2000					
T-101 PROCESS										SYN-BOND	26.5	120
3000 Gal. Glass PHOSGARD[R] Rx	3837	3838	3839	3840	3841	3842	3843			2XC-20	149.1	588
5000 Gal. Glass Rx	1017 CJ-100	1017 C-26	NMA		1061 M-6B-5	PL-710	W-11			CJ-100 C-26 M6B-5	25.7 27.3 37.3	17 16 21
VERSATINT[R] Process 1												
VERSATINT[R] Process II	914 RED	851 YELLOW	852 YELLOW	853 YELLOW	854 YELLOW	1098 YELLOW N-6	1036 RED N-6			RED YELLOW YELLOW N-6 RED N-6	7.0 28.2 4.5 8.0	24 80 40 29
Ethylene Oxide 3000 Gal. Rx			3054 CRUDE PEA	3055 CRUDE PEA	3056 CRUDE PEA	SYN FAC 600 1025 SYN O WET K-1 1076	1037 E-334			CRUDE PEA SF-600 SOW K-1 E-334	25.0 19.1 27.5 21.3	57 26 22 24
Ethylene Oxide 1000 Gal. Rx			1014 PEG 300 MO2	415 m-TOL 100	416 m TOL 100	1021 TAA 90				PEG 300 MO2 m-TOL 100	6.6 23.4	15 32
Ethylene Oxide 100 Gal. Rx										TAA-90	3.5	1-
DDSA Process	2964 2965	2966 2967	2968 2969	2970 2971	2972 2973	2974 2975	2976 2977			DDSA	58.3	19.
500 Gal. S/S H3W Rx	887 R-5 / 888 R-5	889 R-5	890 R-5	891 R-5	892 R-5	893 R-5	894 R-5 / 895 R-5			R-5	31.2	12
200 Gal. Glass Rx												
Cyanoethylation 500 Gal. Rx												
CYANOETHYLATION 2000 GAL REACTOR	2033 CEHEA	2034 CEHEA	2035 CEHEA	2036 CEHEA	2032 CEAEA	2033 CEAEA	2034 CEAEA			CEHEA CEAEA	41.8 25.3	83 8-
DISTILLATION											666.5	17

PRIORITY SHOULD BE GIVEN TO CYANOETHYLATION

MC

PRODUCTION SCHEDULE FOR WEEK OF 12-18-76 TO 12-26-76 PERIOD 1 WEEK 4

PREPARED BY: R APPROVED BY PROD. MGR DATE 12-16-76

PROCESS & EQUIPMENT	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	PROD.	TOTAL POUNDS
1000 Gal. Glass Reactor	1048 SYN O FOAM K-1	240 BH	241 BH	P.M.						SOF K-1 BH	3.4 7 8.1 14
3000 Gal. S/S DMAS RX				3029 CJ-224						CJ-224	20.5 17
MISC.											
Syn Bond Reactor	2000	2001		2002						SYN-BOND	26.5 135
T-101 PROCESS											
3000 Gal. Glass PHOSGARD R Rx	3844	3845	3846	3847	3848					2XC-20	106.5 420
5000 Gal. Glass Rx	1251 PL 710 T	5019 NMA	C-26	SYN-O-FOAM K-1						PL 710 NMA	37.8 14 36.3 36
VERSATINT R Process 1				835 BLUE						BLUE	12.6 23
VERSATINT R Process II	915 RED	916 RED	855 YELLOW	917 VT Red						RED YELLOW	14.0 48 6.3 20
Ethylene Oxide 3000 Gal. Rx			3202 107	3203 107	3204 107	3016 105	3205 107	3206 107		107 105	67.5 54 23.0 18
Ethylene Oxide 1000 Gal. Rx			1033 TEA 97	1013 PMEA	417 M TOL 100	TEA-97				TEA 97 PMEA M TOL 100	7.4 16 6.7 21 11.7 16
Ethylene Oxide 100 Gal. Rx											
DDSA Process	2978 2979	2980 2981	2982 2983	2984 2985	2986 2987	2988				DDSA	46.2 154
500 Gal. S/S H3W Rx	890 R-5				P.M.					R-5	3.5 14
200 Gal. Glass Rx			320 PEP II	321 PEP II	322 PEP II	323 PEP II				PEP II	5.6 48
Cyanoethylation 500 Gal. Rx											
CYANOETHYLATION 2000 GAL REACTOR	2036 CEHEA	2034 CEAEA		2037 CEHEA	2035 CEAEA	2038 CEHEA				CEHEA CEAEA	19.0 150 33.8 56
DISTILLATION											496.4 128

PLANT SHUTDOWN FOR CHRISTMAS

UPICH LOT 527 TO BE COMPLETE 12/31
D-75 LOTS 1630, 1631 TO BE COMPLETE 12/31
9214 LOT 1020 TO BE COMPLETE 12/31
A LOT 2037 TO BE COMPLETE 12/31
CUE N-6 LOT 1079 TO BE COMPLETE 12/31

SYN O WET K-1 LOT 1077 TO BE COMPLETE 12/31
IF YOU HAVE TIME IN EQ BLDG, WE NEED CRUDE PEA + TEA 97

M. Collins

PRODUCTION SCHEDULE FOR WEEK OF 1-2-77 TO 1-8-77

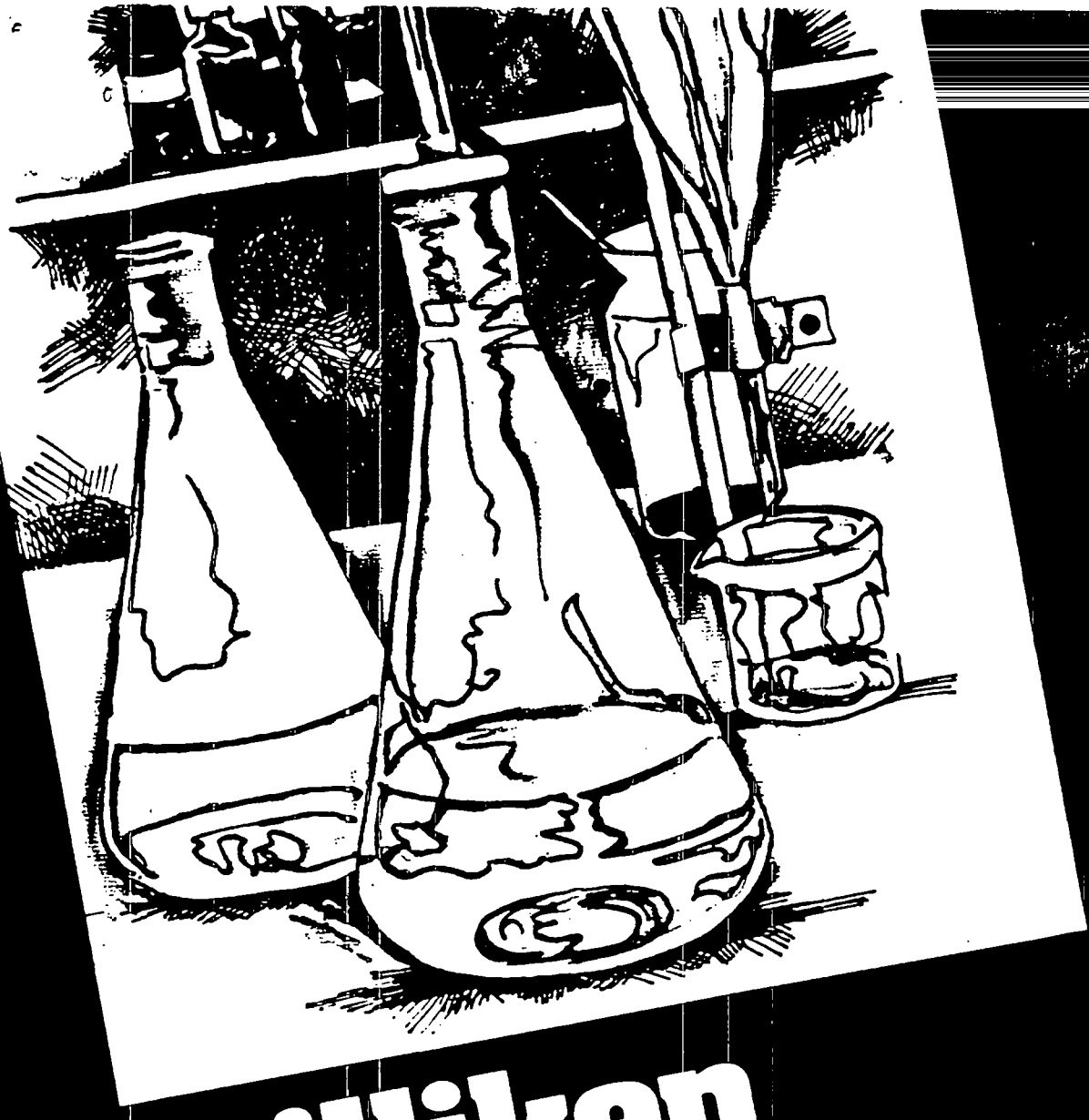
PERIOD 2 WEEK 2

PREPARED BY: L. Camp APPROVED BY PROD. MGR. [signature]

DATE 12-29-76

★ Vt BROWN TO BE CODED FOR FIRESTONE

PROCESS & EQUIPMENT	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	PROD.	TOTAL POUNDS	
1000 Gal. Glass Reactor	1041 K-BM	No RIM →	~~1050~~ SOF K-1				~~LUBE 1028~~			K-BM SOF K-1	7.2 3.4	14 7
3000 Gal. S/S DMAS RX	3029 CJ-224									CJ-224	20.5	17
MISC ★	27x Vt BROWN	8x GREY LF	8x ORANGE N6							VT. BRN GREY LF ORG N6	12.2 3.8 3.6	27 8 8
Syn Bond Reactor	2005		2006		2007		2008			SYN-BOND	26.5	135
T-101 PROCESS												
3000 Gal. Glass PHOSGARD R Rx	3852	3853	3854	3855	3856	3857	3858			PHOSGARD	149.1	67
5000 Gal. Glass Rx	5018 NMA			1252 PL-710	1252 PL-710					NMA PL-710	36.3 37.8	36 1
VERSATINT R Process 1			836 Vt BLUE							VT BLUE	12.6	23
VERSATINT R Process II				856 Vt YELLOW						VT YELLOW T-16 LEV 280	6.3 20 23.8	3 2 2
Ethylene Oxide 3000 Gal. Rx		T ~~129~~ 106	1002 T-16	EMULSIFIER	3032 DG-B	105	3016 SF 600 SYN O WET K-1			TDA 94 E-222 P-222 FA	6.9 7.4 7.6	1 1 1
Ethylene Oxide 1000 Gal. Rx	106	PEG 300 NO	1015 PEG 300 NO2	1004 LEVELER 280	202 TDA 94	1041 E-222 ANHYD.	1007 P-222 FA	1059 ANIL 200		ANIL 200 DG-B 105	11.8 21.5 22.9	21 31 31
Ethylene Oxide 100 Gal. Rx										SOW-R-1 PEG 300 NO2	27.5 6.6	22 15
ODSA Process	2995 2996	2997 2998	2999 3000	3001 3002	3003 3004	3005 3006	3007 3008	3009 3010	3011 3012	SF 600 ODSA	19.1 58.8	26 112
500 Gal. S/S H3W Rx	894 R-5	895 R-5	896 R-5									
200 Gal. Glass Rx			324 PEP II	P.M.	325 PEP II	326 PEF II				PEP II	5.6	4
Cyanoethylation 500 Gal. Rx												
CYANOETHYLATION 2000 GAL REACTOR					CEHEA							
DISTILLATION										PEA TOT	37.2 306.7	19 15



milliken chemical products

chemical specialties for expanding markets

Milliken Chemical: inspired by modern pioneers

A division of Milliken & Company, Milliken Chemical was guided from its early years by two modern pioneers in chemistry, Mr. Bradley Dewey, Sr. and Dr. Edwin R. Gilliland. Originally operating as Sylvan Chemical Company, Milliken Chemical opened its present plant in 1958. This Inman, S.C., facility was blueprinted by Mr. Dewey and Dr. Gilliland.

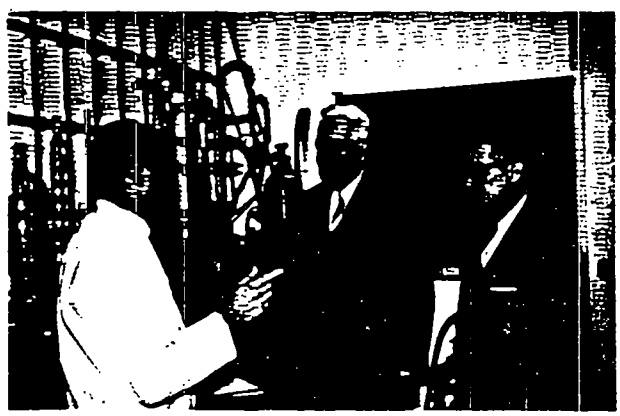
Both men were important figures in the development of modern chemistry and chemical engineering. Mr. Dewey directed and Dr. Gilliland contributed significantly to the successful synthetic rubber program that proved vital to the United States during World War II.

As consultants to Milliken Research Corporation, Mr. Dewey and Dr. Gilliland were largely responsible for designing and equipping the Milliken Chemical plant. It was named the Dewey plant in honor of Mr. Dewey. A Milliken & Company plant in Laurens, S.C., was named the Gilliland plant in honor of Dr. Gilliland, a distinguished professor who directed the MIT Department of Chemical Engineering for eight years.

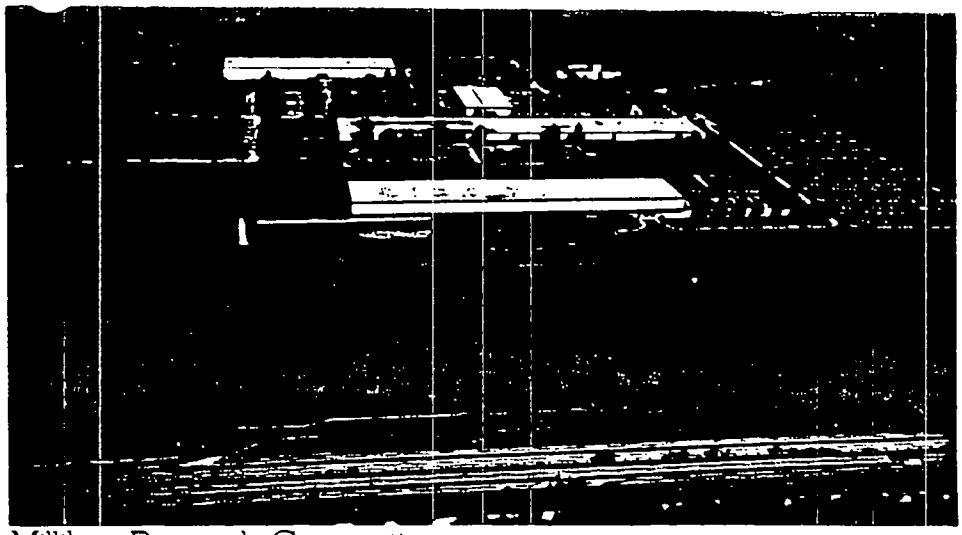
Three years after the construction of Milliken Chemical's Dewey Plant, its facilities had more than doubled. It has continued to expand in recent years.

The plant is located on a 194-acre tract just south of Inman, S.C., near the intersection of Interstate 85 and Interstate 26. The Milliken Research Center, which contributes to Milliken Chemical's research and production technology, is conveniently located nine miles away in Spartanburg, S.C.

Proximity to major interstate highways is one reason for the excellent common carrier service provided Milliken Chemical and its customers. To further speed area deliveries, Milliken Chemical has several tank trucks and vans. For the fastest possible rail shipment the plant has a dual track siding on a spur of the Southern Railway system.



Two eminent scientists Mr. Bradley Dewey, Sr. (center) and Dr. Edwin R. Gilliland (right) were Milliken Chemical consultants for many years and the Milliken Chemical plant's design reflects their thinking.



Milliken Research Corporation

product index

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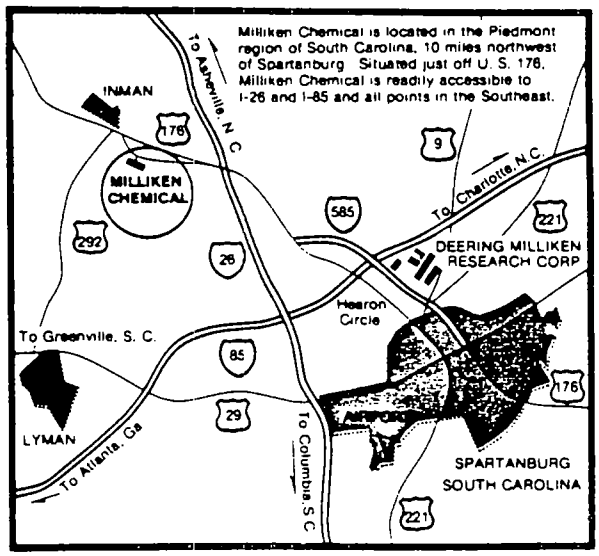
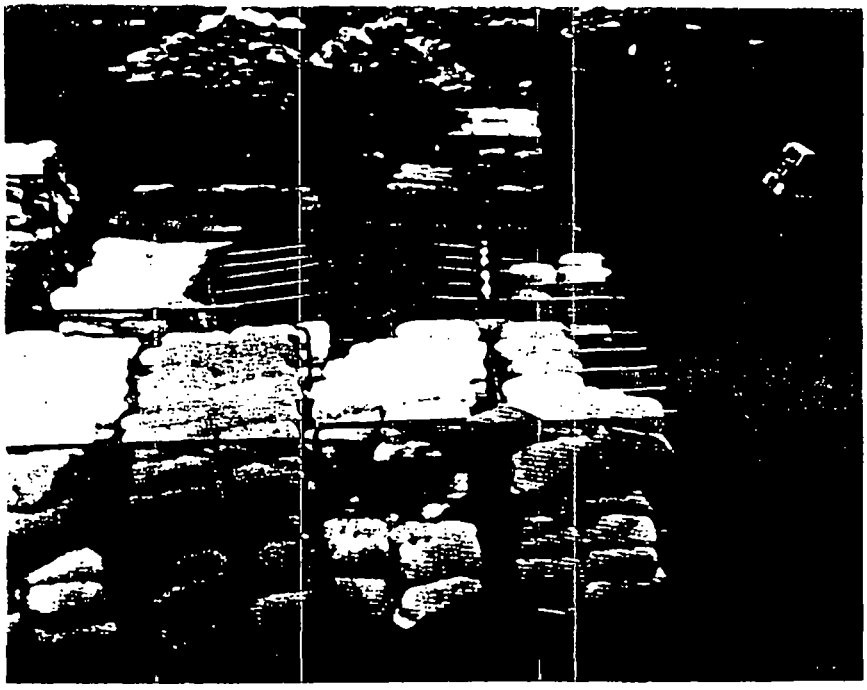
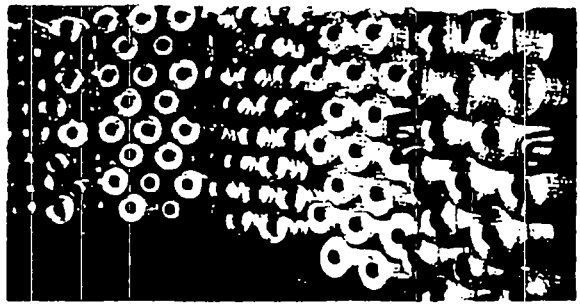






Versatint® fugitive tints

Versatint fugitive tints are patented polymeric water soluble colorants used primarily to achieve effective identification through color differentiation. Largely used by the textile industry to tint fiber or yarn, Versatint fugitive tints are easily removed with a water wash in subsequent processing. They can be safely applied to most synthetic fibers and will remain fugitive even after heat setting. Versatint fugitive tints are manufactured to standard strength and shade, and have attained a reputation of reliability which is insured through careful quality control.

Milliken is involved in continuing research to provide new colors with good fugitivity. As a result of this research effort several new products are available.

LF tints These tints, available in green, blue and gray, offer very bright color and exhibit improved resistance to light fading.

N-6 tints In response to requests from the marketplace for a "super" tint that will be fugitive from the most "difficult" fiber — especially nylon 6 — Milliken developed the Versatint N-6 fugitive tint series. These tints are fugitive even under processing conditions such as Kuster dyeing or TAK dyeing where a minimum amount of scouring is done. The N-6 tints are gaining industry-wide recognition as **the** most fugitive tints available for yarn manufacturers.

DC tints The most recent development resulting from Milliken's commitment to continuing leadership in tint research is the DC tint series. These tints may be removed from most textile substrates with either a water wash or a dry cleaning solvent scour. The DC tints are valuable to the manufacturer who needs color identification but cannot predict the scour conditions which will remove the tint.

Versatint Supra® Still another innovation has been the introduction of Versatint Supra. Supra is a special product designed to detect barre and other yarn defects of mixes. It saves time and money in addition to being fugitive after testing.

Although all the tints are used primarily in textile applications, their fugitivity, non-staining properties and biodegradability have enabled them to be used to color soaps and detergents.

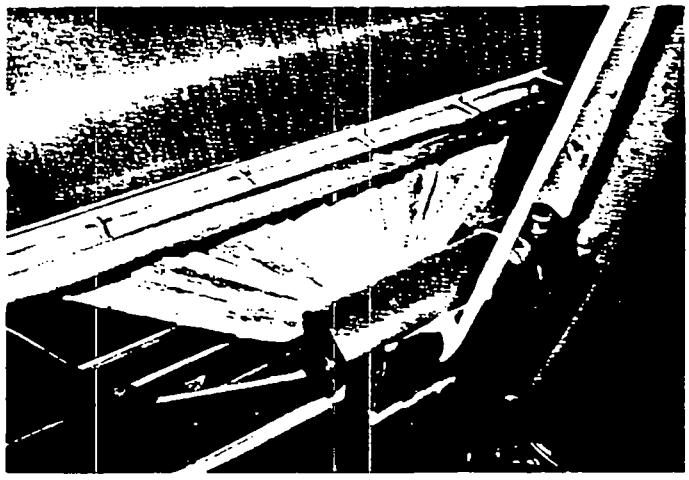
Versatint fugitive tints are available in a variety of colors. The primary colors of red, yellow and blue can be blended to offer an entire "rainbow" of colors.

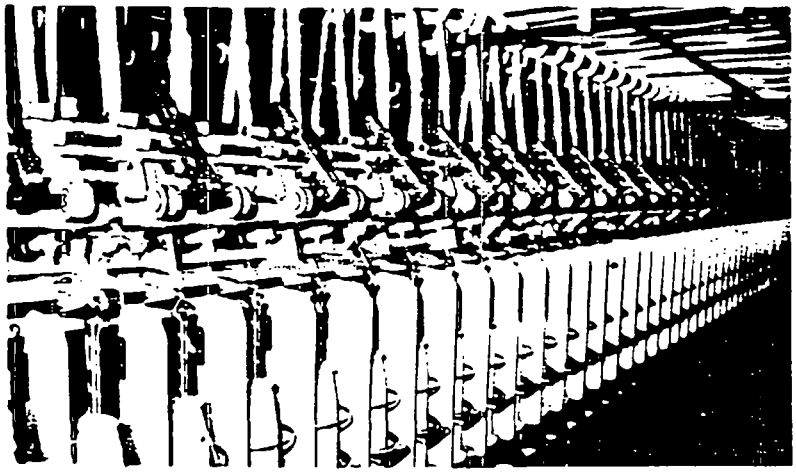
Syltint polyester tints

These economical tints are made for tinting polyester fibers, but in some cases may be applicable to cotton. Unlike conventional polyester tints made from dyes, they are removable from fibers such as nylon and acrylic — an advantage appreciated should accidental staining occur.

Syltint polyester tints are available in the primary colors of red, yellow and blue and in the blended colors of orange, purple, green and brown.

Oversprays and antistats





Milliken has been committed to developing a fine line of fiber oversprays for the textile industry. Milliken has a variety of finishes, each designed to be compatible with Versatint® fugitive tints. A suitable finish for practically any fiber can be found among the oversprays that Milliken offers and overspray compounds can be custom-blended for specific fibers or fiber processing conditions. Each has a different balance of lubricity, cohesiveness and antistatic properties that it imparts to the fiber. Inquiries about custom blends and the entire product line are welcome.

Syn Lube 105 The lubricant ingredient of Lubestat 2095 and Lubestat 2105, this lubricant softens synthetic fibers and acts as a tufting aid in carpet manufacturing.

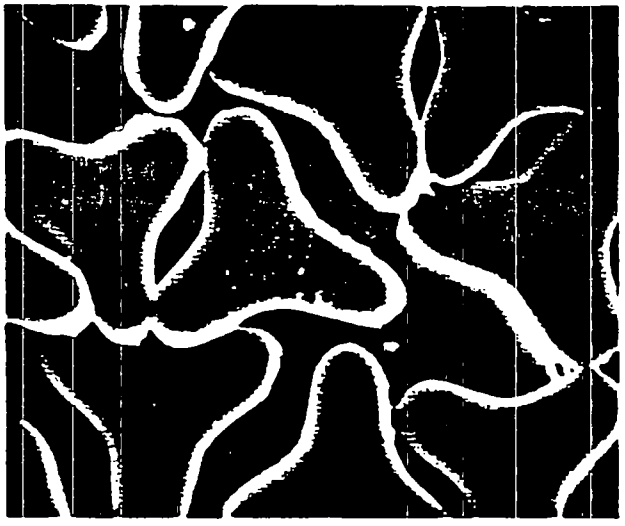
Syn Stat BH Syn Stat BH is the antistat portion of Lubestats 2095, 2105 and 2106. Syn Stat BH gives improved fiber-to-fiber cohesiveness as well as antistatic properties.

Lubestat 2095 and Lubestat 2105 Antistatic lubricants especially designed to provide excellent production efficiency in processing nylon staple fiber.

Lubestat 2106 Mill-proven antistatic lubricant for processing of stock-dyed acrylic fibers. Lubestat 2106 combines improved processing with minimum soiling characteristics.

Lubestat 5101 Antistatic lubricant designed especially for processing nylon staple made by the continuous process

Spin Finish H101 Mineral oil based antistat-lubricant which has had successful use on stock-dyed polyester fibers and on nylon.



Fiber finish chemicals

Milliken Chemical has combined its vast knowledge of textile fibers with its expanding chemical expertise to produce a broad range of fiber finish chemicals.

Ethoxylated castor oils Used as softener spin finish additive for synthetic fibers, these products have very good anti-soiling (wet soil) properties. Available in a wide range of degrees of ethoxylation for different emulsification properties.

- Syn Lube 105 (Polyoxyethylene (33) Glyceride Ester)
- Syn Lube 106 (60%) (Polyoxyethylene (200) Glyceride Ester)
- Syn Lube 107 (Polyoxyethylene (25) Glyceride Ester)
- Syn Lube 109 (Polyoxyethylene (80) Glyceride Ester)

Ethoxylated alcohols Nonionic wetting and emulsifying agents. A broad range of alcohol types and degrees of ethoxylation are available.

- Emulsifier DD-Polyoxyethylene (3) ether of tridecyl alcohol
- Emulsifier DG-Polyoxyethylene (3) ether of laurel alcohol
- Syn Lube TDA-92-Polyoxyethylene (8) ether of tridecyl alcohol
- Syn Lube TDA-94-Polyoxyethylene (6) ether of tridecyl alcohol
- Emulsifier 4214-Polyoxyethylene (14) ether of oleyl alcohol

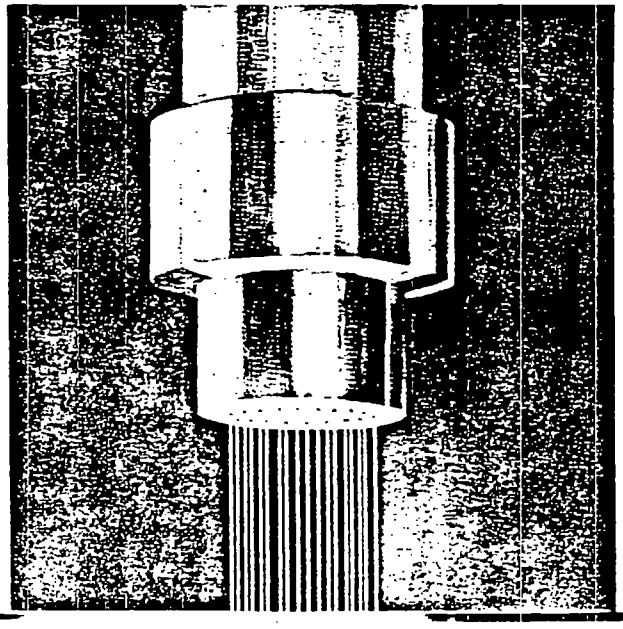
Emulsifier-dispersants Aryl polyoxyethylenes with outstanding heat stability, antistatic and emulsifying properties.

- Emulsifier 222
- Emulsifier 222-6
- Emulsifier 334
- Emulsifier 334-6
- Emulsifier 334-13

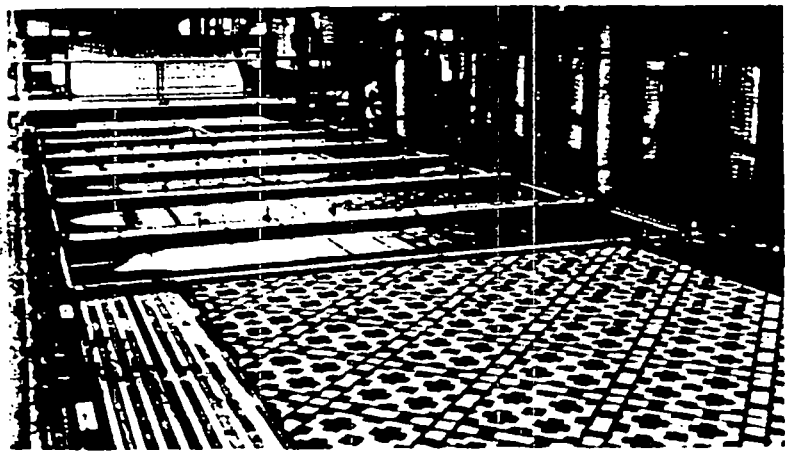
Ethoxylated sorbitan esters Used as oil-in-water emulsifiers.

- Syn Lube SL-80 (POE-20) Sorbitan Monolaurate
- Syn Lube SO-80 (POE-20) Sorbitan Monooleate
- Syn Lube SO-95 (POE-5) Sorbitan Monooleate.

Milliken Chemical is engaged in the development and manufacture of both proprietary and non-proprietary formulated "package" fiber finishes.



Emulsifiers and dispersants



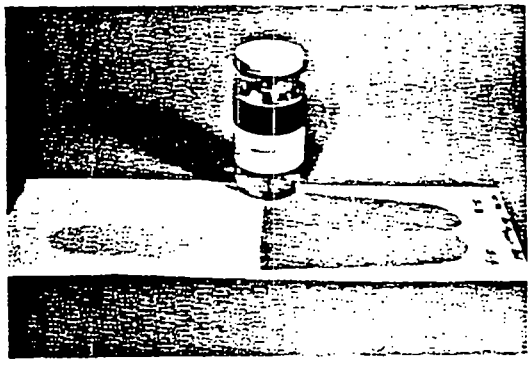
A listing of the ethoxylated castor oil, ethoxylated alcohols and ethoxylated sorbitan esters is included in the preceding fiber finish section. In addition, Milliken Chemical offers the following emulsifiers:

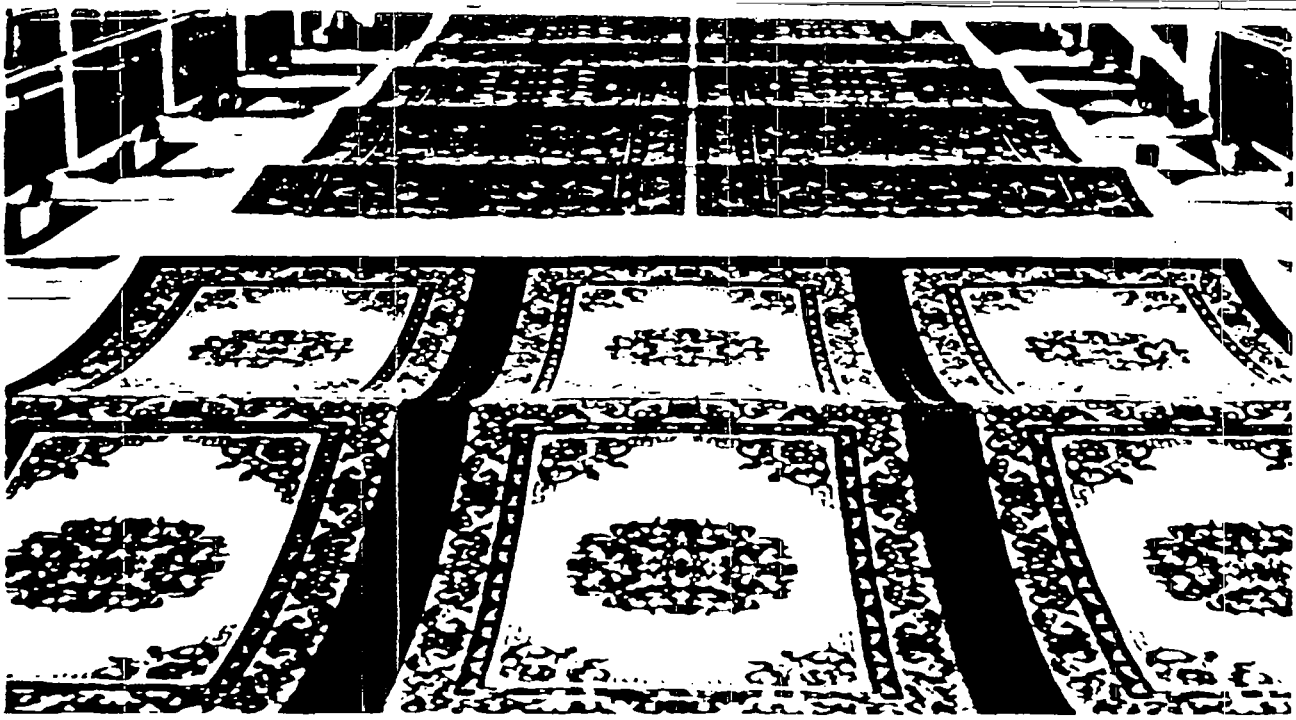
Emulsifier 9214 An anionic product having good stability in both acid and alkaline media, 9214 is an excellent emulsifier for perchloroethylene and other solvents. It exhibits high detergency for soil removal in a prescour prior to dyeing or for improved colorfastness in a postscour after dyeing.

Emulsifier TEA-97 Dispersing aid for use in the dye industry, particularly in conjunction with acid dyes.

Syn-Fac 905 Ethoxylated nonyl phenol general-purpose emulsifier.

Emulsifier 222 and Emulsifier 334 Have been used very widely as nonionic dispersing agents in textile printing systems. Their low foaming and high surface tension provide many advantages over dispersants previously used. They are also recommended for dispersing carbon black, titanium dioxide and for a variety of other applications. Versions of Emulsifier 222 and Emulsifier 334 can be used as intermediates to produce anionic emulsifiers (phosphate or sulfate type) which exhibit low foaming properties and high surface tensions.





Textile chemicals

Wetting agents

Syn-O-Foam K-1 A blend of anionic and nonionic surfactants to produce a concentrated foaming agent for continuous carpet dyeing insures level frost-free dyeings on the Kusters range.

Syn-O-Wet K-1 A blend of wetting agents especially formulated to use in conjuction with Syn-O-Foam K-1 on the Kusters range. And excellent penetrant for the Zimmer printing process.

Syn-O-Wet 200 An essentially nonionic surfactant blended with an ethylene oxide condensate to provide excellent chemical stability to strong acids and alkalies needed in the preparation of polyester-cotton fabrics. Also yields excellent rewetting properties.

Syn Fac 905 and Syn Fac 600 100% active nonionic general purpose surfactants for all phases of textile wet processing and for use as emulsifiers, wetting agents and dispersants for cosmetic, paint, detergent and other related industries.

Syn Scour KD Excellent after scour for Kuster dyeing of carpet, boil-off assistant for size removal and scour for preparation of polyester knit goods to remove coning oils.

Filament warp sizes

Syl Size 25 A polyacrylic acid solution polymer widely used as a warp size for nylon yarn. Manufactured under rigid specifications to assure uniform quality and chemical properties.

DMAS The monosodium salt of maleic anhydride and styrene copolymer. An outstanding size for filament acetate. It is considered the best in terms of fly reduction. and stretchability. An excellent film former with the outstanding advantage of operational efficiency combined with abrasion resistance, elasticity and flexibility. In paper coating applications, the addition of DMAS to starch at the size press will significantly improve the quality and printability of coated paper and paperboard.

Dyeing assistants

Dye Carriers A broad range of carriers designed for piece and package dyeing of polyester as well as carriers for polyester carpet dyeing.

Leveler 280 Leveling agent and surface-active stripping agent for disperse dyes on polyester

Emulsifier 9214 Used in dye-bath formulation to assist in emulsification of dyes and other organic chemicals present. 9214 greatly aids in prevention of dye stains.

Antifoam #5 Very effective antifoam agent for continuous dyeing of carpet.

Coning oils

Knitlube PL-710 and Knitlube PL-715
A series of water-white, self-emulsifying mineral oil lubricants for polyester, nylon and other fibers providing excellent lubricity, cohesion and static control. Knitting lubricants based on the PL-710 or PL-715 systems are widely used in texturized polyester knitting, and they have demonstrated optimum overall properties when one considers non-discoloration, low knitting stops, ease of scourability and subsequent lack of barre.

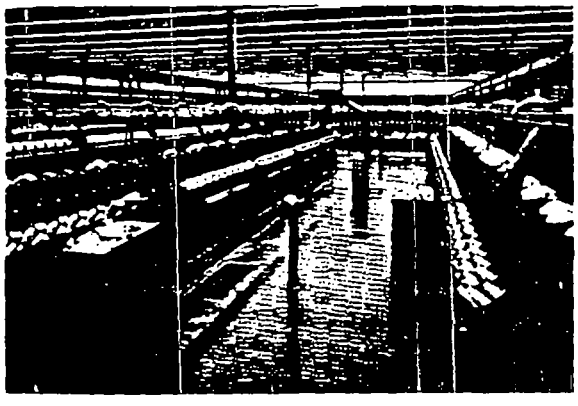
Ortholubes In 1975, Milliken Chemical acquired the Ortholube line of coning oils from American Aniline and Extract Co. of Philadelphia. This line consists of:

Ortholube STS — Offers good lubricity, excellent antistatic properties and good trimer control on dyed yarns.

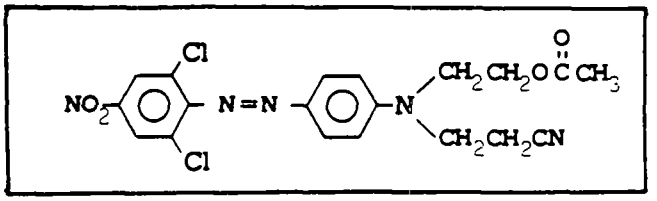
Ortholube 55 — lower cost, white coning oil with higher viscosity than STS.

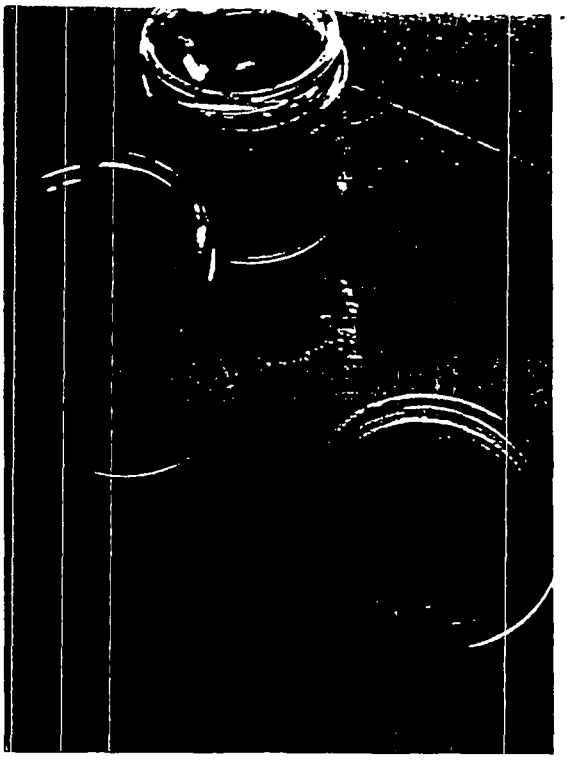
Ortholube LV — combines very high lubricity with the excellent static control and scourability of Ortholube STS.

Ortholube HT — provides high lubricity for the processing of hosiery yarns.



C.I. Disperse Orange 30





Dye intermediates

Milliken Chemical specializes in the production of high-quality organic chemicals. Our cyanoethylation and ethoxylation processes are carefully controlled to insure adherence to rigid specifications. These products are widely used as intermediates in the synthesis of dyestuffs, pharmaceuticals and other organic chemical intermediates.

CEEA N-(Beta-Cyanoethyl)-N-Ethylaniline
CEBA N-(Beta-Cyanoethyl)-N-Butylaniline
CEMA N-(Beta-Cyanoethyl)-N-Methylaniline
CEHEA N-(Beta-Cyanoethyl)-N-Hydroxyethylaniline
CEAEA N-(Beta-Cyanoethyl)-N-Acetoxyethylaniline
CEEMT N-(Beta-Cyanoethyl)-N-Ethyl m-Toluidine
PEA N-(Beta-Hydroxyethyl)-Aniline
PEEA N-(Beta-Hydroxyethyl)-N-Ethylaniline
PMEA N-(Beta-Hydroxyethyl)-N-Methylaniline
PDEA N, N-Di-(Beta-Hydroxyethyl)-Aniline
MCPDEA N, N-Di-(Beta-Hydroxyethyl)-m-Chloroaniline
MTDEA N, N-Di-(Beta-Hydroxyethyl)-m-Toluidine

Speciality chemicals

DDSA

Dodecenylsuccinic anhydride is used as a corrosion inhibitor or as an epoxy curing agent. Bulk storage facilities permit immediate shipment of tank truck quantities. A detailed brochure on DDSA and its uses is available from Milliken Chemical.

ODSA

Octadecenylsuccinic anhydride, a linear alpha olefin derived product has functionality as a raw material for rust and corrosion inhibition.
(Flexibility of equipment allows for the manufacture of other alkenylsuccinic anhydrides.)

NMA

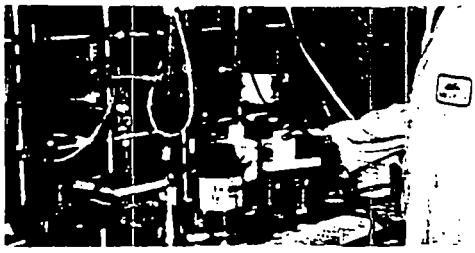
N-Methylolacrylamide is a water-white ultra-pure monomer used as a crosslinking agent in acrylic or vinyl polymers. Milliken's high purity and unique stabilization process allow bulk shipment of NMA.

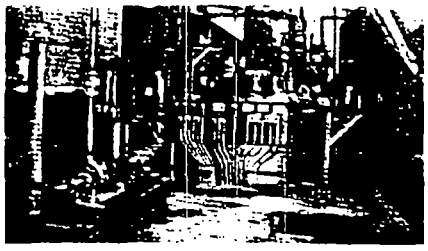
Syn bond

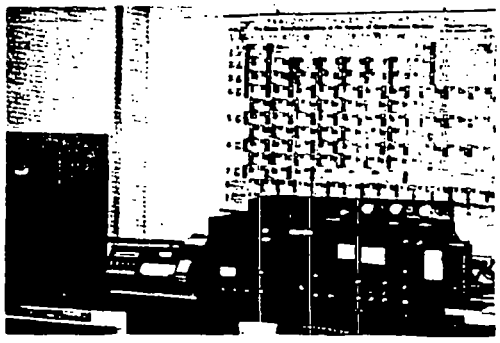
Syn bond is an emulsion terpolymer of styrene, butadiene and vinyl pyridine. It is used as an adhesive to bond rubber to tire cord, chafer fabric, V-belts or other textile substrates

Thickener PD-60

Carboxyl containing thickener which reacts with a variety of alkaline agents. Especially useful for acrylic resins and latices.







Milliken's singular standard of production

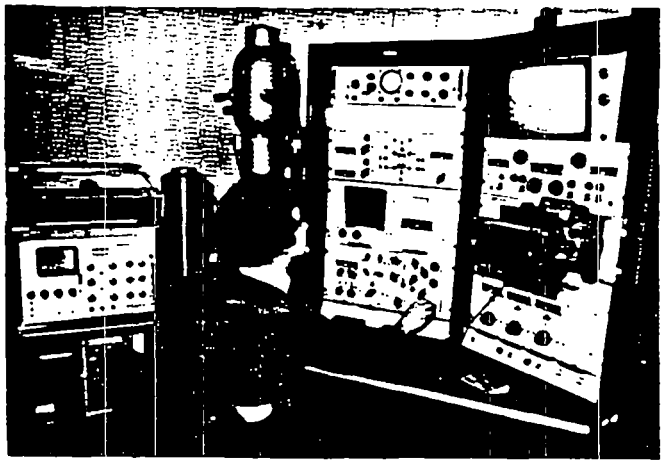
Milliken Chemical's complex production facilities are engineered to manufacture large quantities of highly diverse specialty compounds. This diversity and high-volume capacity have grown as the company has expanded with Milliken & Company. Milliken & Company is among the largest privately owned companies in the United States; its research center at Spartanburg, S.C., is the world's largest industrial textile research organization. These resources give Milliken Chemical a unique technological advantage over many other chemical companies.

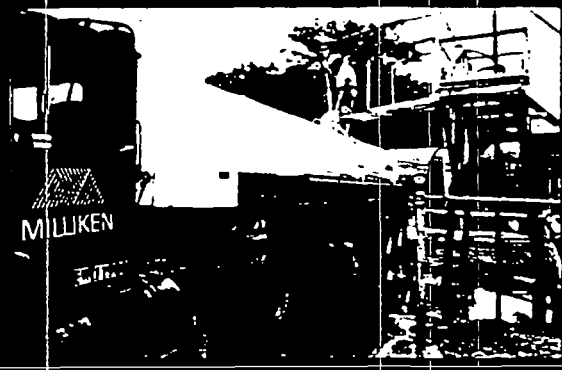
To protect the purity of its products, Milliken Chemical conducts quality control tests and product analyses on a daily basis. This exacting work is done at the plant's on-site laboratory and at the nearby Milliken Research Center, with its elaborate instrumentation and staff of research professionals.

As part of a comprehensive marketing plan, Milliken Chemical maintains warehouse facilities in Dalton, Georgia. Commercial warehouse space is also available in the Inman area.

The success of Milliken Chemical's production systems is demonstrated by the company's role as a custom manufacturer of specialty chemicals. The company supplies not only the textile industry, but also manufacturers of chemicals, petrochemicals, fiber, rubber, plastics, paint, petroleum and other products. A brochure on Milliken Chemical custom manufacturing is available upon request.

For more information about the products of Milliken Chemical, you need only contact us. Our marketing personnel are knowledgeable in all aspects of chemical manufacturing and sales. They will be happy to help you in any way possible, including arranging visits to the Milliken Chemical plant.





MILLIKEN
CHEMICALS

Milliken Chemical,
Division of Milliken & Company
P.O. Box 817, Inman, S.C. 29349
Telephone (803) 472-9041

ATTACHMENT B

ey

DATE: March 10, 1976

COPIES TO: Raymond M. Allen

emicals For Land Burial

DDSA	VT-YELLOW	SYN-BOND	R-5
-	0.65	1.85	4.38
630,000	8,500	580,000	36,000
100	18	100	13
None Detected	None Det.	None Det.	None Det.
0.006	None Det.	None Det.	None Det.
5.36	None Det.	1.05	None Det.
0.71	94.40	3.57	0.79
0.05	0.60	0.16	0.22
0.00	15.26	0.34	0.00
0.02	1.20	0.62	0.28
0.61	30.67	22.73	0.61
3.23	63.00	13.54	0.90
2.05	57.00	3.80	6.90
0.52	12.38	0.71	1.29
0.00	10.00	0.00	0.00
0.20	0.70	2.15	0.10
None Det.	None Det.	None Det.	None Det.
"	"	"	"
"	"	"	"

to run TOC test.

ipped to run flashpoint test.

MILLIKE

TO: Mr

FROM: J.

SUBJECT: An

pH (S.U
COD (mg
% Solid
Pestici
Phenols
Oil & G

Ca (mg/
Cd (mg/
Cr (mg/
Cu (mg/
Fe (mg/
Mg (mg/
Mn (mg/
Ni (mg/
Pb (mg/
Zn (mg/

Hg (mg/
As (mg/
Cn (mg/

TOC -
Flashpo

JMB/klc

PIEDMONT INDUSTRIAL SERVICES
Gaffney, S. C. 29340

Clyde Medley
Route 7, Box 159
November 24, 1975

Milliken Chemical

Inman, South Carolina

Dear Sir:

In order for us to handle disposition of your latex waste by land burial it will be necessary for you to provide a chemical analysis of the waste.

This analysis must be made by a licensed chemist and certified by the chemist or by your firm, and upon receipt of the report by us, same will be delivered to the South Carolina Department of Health & Environmental Control for approval.

The chemical test must follow the parameters set out on the attached sheet, and the report should include a specific finding of each of the items listed.

In addition to the chemical analysis, we also need to have an estimate of the volume of waste on a weekly basis that we will be expected to handle.

Very truly yours,

PIEDMONT INDUSTRIAL SERVICES

By: Clyde Medley
Clyde Medley

CM/bs

Enclosure

TEST PARAMETERS FOR CHEMICAL ANALYSES

TOC		
pH	Mg	Cd
COD	Mn	Pb
% solids	Fe	Zn
Pesticides	Cu	Ni
Phenols	Hg	Ca
Flashpoint	Cr	As
Oil & grease		CN