

TENNESSEE VALLEY AUTHORITY

KNOXVILLE, TENNESSEE 37902

JUL 12 1989

Mr. J. Wayne Cropp
Chattanooga-Hamilton County
Air Pollution Control Bureau
3511 Rossville Boulevard
Chattanooga, Tennessee 37407

Dear Mr. Cropp:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT (SQN) - PERMIT
APPLICATIONS FOR EXISTING AIR POLLUTION SOURCES - SUPPLEMENTAL DATA

REFERENCE: LETTER, STEVEN T. COLWELL TO DALE V. WILHELM, APRIL 27, 1989

The following information is provided in response to the referenced letter which requests additional information regarding the permit applications submitted with my March 1 letter. We apologize for the lateness of this response, but your incoming letter was misrouted in TVA and was not received by my staff until April 27. The responses are numbered to correspond with the items in the referenced letter.

1. Modifications Carpenter Shop Woodworking Equipment with Transfer System and Storage Bin
 - a. The estimated volume of gas discharged from GCE at dry standard conditions is 3800 cubic feet per minute. This estimate is based on the manufacturer's data given in Enclosure 1. The fan is powered by a 1-horsepower motor operating at 1735 revolutions per minute.
 - b. A sketch of the storage bin is given in Enclosure 2.
2. Modifications Carpenter Shop Radial Arm Saw Served by Small Dust Collector
 - a. Input process rate is estimated to be 75 percent of the lumber going through the shop. The shop process rate is 450 pounds per hour; therefore, input process rate is approximately 340 pounds per hour.
 - b. The pressure drop across the baghouse has not been measured; however, the manufacturer stated it to be 4.5 inches of water. A copy of the vendored provided specifications is given in Enclosure 3.
 - c. The baghouse filter fabric type is woven.

8907180401 890712
PDR ADOCK 05000327
P PDC

Cool
11

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Mr. J. Wayne Cropp

5. Service Building Paint Spray Booth Wash Water Curtain

- a. The dilution ratio used for determining the applied coating reported on the E010B form was 99 parts coating to 1 part thinner. Form E010B was included as a typical coating applied. Revised E010B forms for those coatings actually applied during the last year are given in Enclosure 4.
- b. A Material Safety Data Sheet (MSDS) for the thinner specified on the E010B form submitted earlier is not provided since revised E010B forms are being submitted.
- c. The usage data and MSDS for the coatings and thinners used for this source for the past year are given in Enclosure 4.

7. Hydrazine Tank Vent

- a. The tank was installed as part of the original plant equipment sometime around 1975.
- b. A copy of the E106 form for hydrazine that was used to determine the uncontrolled emission values in Item 7 of the E104 form is given in Enclosure 5.

8. Ammonia Tank Vent

- a. The tank was installed as part of the original plant equipment sometime around 1975.
- b. A copy of the E106 form for ammonia that was used to determine the uncontrolled emission values in Item 7 of the E104 form is given in Enclosure 6.

9. Construction Sandblast and Paint Shop with Two Building Roof Exhausters

- a. The process weight (item 12, E001 form) is estimated to be 600 gallons per year (2.3 gallons per day) of coatings and thinners and 3960 pounds per day of black beauty (grit used in sandblasting).
- b. The usage data and MSDS for all coatings and thinners used for this source for the past year are given in Enclosure 7. Revised E010B forms for those coatings actually applied during the last year are also given in Enclosure 7. Also included is a revised form E106 that more accurately reflects the uncontrolled pollutant emission rate.
- c. Attachment 1 referenced in the E106 form for this facility is given in Enclosure 8.

Mr. J. Wayne Cropp

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10. Unit 1 Lubricating Oil System Vapor Extractor Vents (4 Vents)

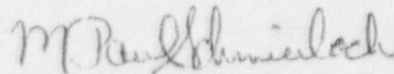
- a. We do not believe that individual permit applications and associated forms for vapor extractor should be required. We view the lubricating oil system as one system and the four vents as a group of identical (in the sense that they perform the same function) sets of equipment that have a common feed. Therefore, we request that you reconsider your request that individual permit applications be submitted for each vapor extractor.
- b. Drawings of the lubricating oil system, the vapor extractor and the mist eliminator are given in Enclosure 9.

11. Unit 2 Lubricating Oil System Vapor Extractor Vents (4 Vents)

- a. The comments and information provided in item 10 for Unit 1 also apply to the Unit 2 system.

If you or your staff have any questions or comments regarding this information, please contact Dale V. Wilhelm at (615) 632-6693 in Knoxville.

Sincerely,



M. Paul Schmierbach, Manager
Environmental Quality

Enclosures

cc (Enclosures):

Ms. S. C. Black, Assistant Director
for Projects
TVA Projects Division
Office of Special Projects
United States Nuclear Regulatory Commission
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852

Mr. F. R. McCoy, Assistant Director
for Inspection Programs
TVA Projects Division
United States Nuclear Regulatory Commission
Region II
101 Marietta Street, NW.
Suite 2900
Atlanta, Georgia 30323

Mr. J. Wayne Cropp

JUL 12 1989

Sequoyah Resident Inspector
Sequoyah Nuclear Plant
2600 Igou Ferry Road
Soddy Daisy, Tennessee 37379

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

ENCLOSURE 1

GAS DISCHARGE CURVE FOR BLOWER ON DUST COLLECTION SYSTEM
FOR MODIFICATIONS CARPENTER SHOP WOODWORKING EQUIPMENT

200



CHAMPION DESIGN ELEVEN CENTRIFUGAL FANS

SISW
SINGLE
CAMBER

WHEEL DIA. - 21-7/16"
TIP SPEED (FPM) - 5.61xRPM
INLET AREA - 3.43 Sq. Ft.
OUTLET AREA - 2.30 Sq. Ft.
MAX. BHP - .957 $\left(\frac{RPM}{1000}\right)^3$

CLASS I II III
MAX TIP SPEED 10,000 13,500 16,500
MAX RPM 1,783 2,406 2,941

CFM	OV	1/4 SP	3/8 SP	1/2 SP	5/8 SP	3/4 SP	7/8 SP	1 SP	1 1/4 SP	1 1/2 SP
		RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
1640	800	498 .11	551 .15	599 .20	643 .25	686 .30				
2300	1000	569 .16	616 .21	659 .26	701 .32	739 .38	775 .44	810 .50		
2760	1200	645 .23	688 .24	727 .35	765 .41	800 .48	835 .55	868 .62	928 .76	986 .91
3220	1400	723 .32	763 .39	800 .46	834 .53	867 .60	898 .67	928 .75	988 .91	1041 1.07
3680	1600	806 .44	840 .51	875 .59	907 .67	939 .75	967 .82	996 .91	1049 1.08	1103 1.27
4140	1800	886 .58	920 .66	952 .75	983 .83	1011 .92	1040 1.02	1066 1.10	1118 1.29	1165 1.47
4600	2000	969 .75	1003 .85	1031 .94	1060 1.03	1088 1.13	1113 1.22	1139 1.32	1187 1.52	1233 1.73
5060	2200	1054 .96	1084 1.06	1113 1.17	1138 1.26	1164 1.37	1191 1.48	1213 1.58	1260 1.80	1304 2.02
5520	2400	1140 1.20	1166 1.31	1194 1.43	1220 1.54	1243 1.65	1267 1.76	1291 1.89	1333 2.11	1377 2.35
5980	2600	1227 1.49	1251 1.60	1276 1.73	1302 1.86	1324 1.98	1345 2.09	1367 2.22	1411 2.48	1450 2.71
6440	2800	1314 1.83	1336 1.95	1359 2.07	1383 2.21	1407 2.35	1427 2.48	1447 2.60	1488 2.87	1527 3.14
6900	3000	1402 2.21	1422 2.34	1443 2.47	1465 2.61	1487 2.76	1510 2.92	1528 3.04	1565 3.31	1604 3.61
7360	3200	1490 2.65	1509 2.78	1529 2.92	1549 3.06	1569 3.21	1590 3.38	1612 3.55	1646 3.82	1681 4.12
7820	3400	1579 3.15	1597 3.28	1615 3.43	1633 3.57	1652 3.73	1672 3.89	1691 4.07	1728 4.39	1760 4.69
8280	3600	1668 3.71	1684 3.85	1701 3.99	1719 4.15	1736 4.31	1754 4.48	1773 4.65		

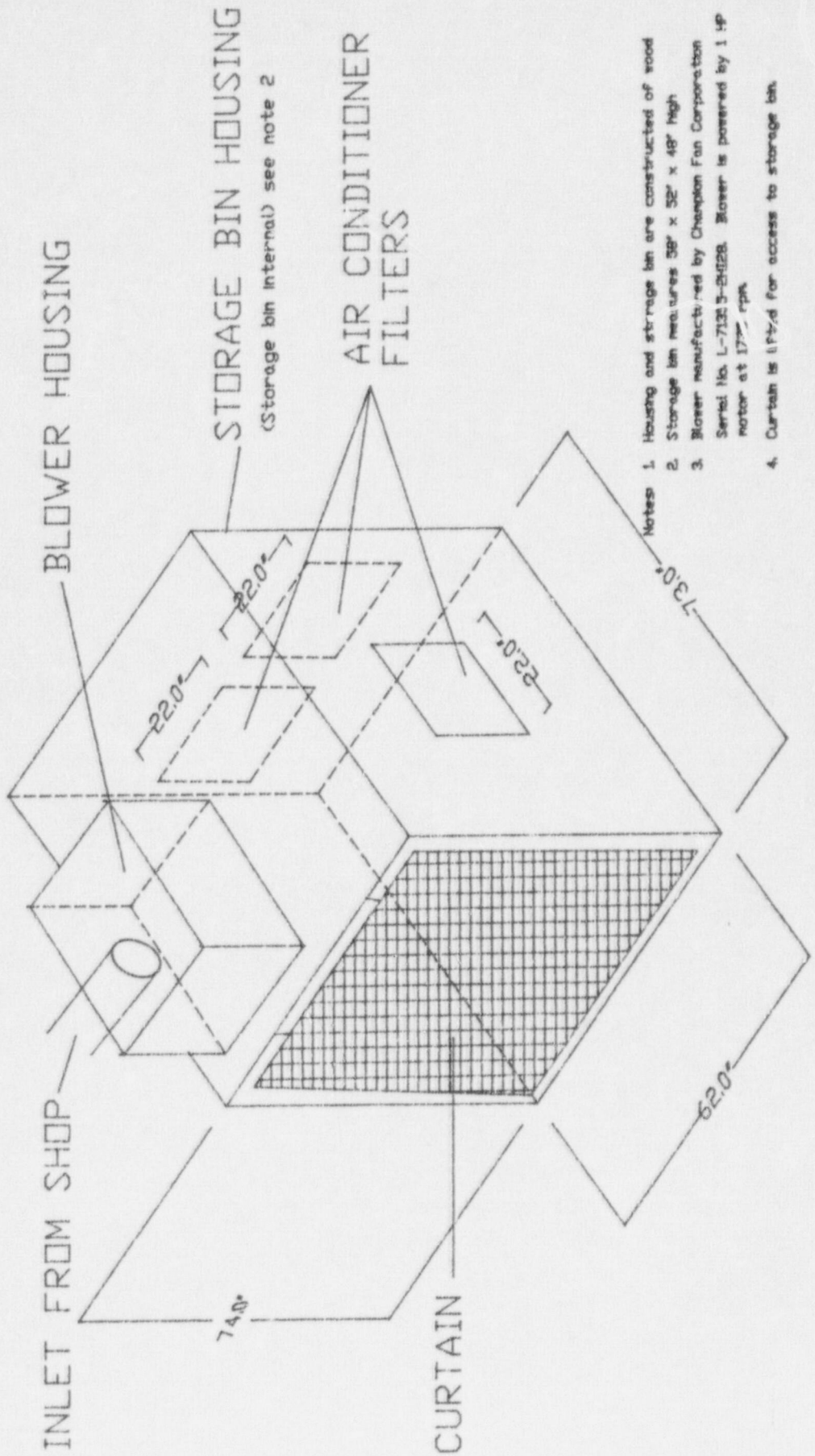
CFM	OV	1 3/4 SP	2 SP	2 1/2 SP	3 SP	3 1/2 SP	4 SP	4 1/2 SP	5 SP	5 1/2 SP
		RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
3680	1600	1152 1.45	1194 1.63	1286 2.02	1373 2.44					
4140	1800	1212 1.67	1258 1.88	1342 2.30	1422 2.74	1499 3.19	1577 3.67			
4600	2000	1278 1.94	1319 2.15	1403 2.62	1478 3.08	1550 3.55	1621 4.05	1691 4.57	1761 5.11	
5060	2200	1345 2.24	1389 2.48	1463 2.94	1540 3.46	1609 3.97	1676 4.49	1741 5.03		
5520	2400	1417 2.59	1455 2.82	1531 3.34	1600 3.85	1671 4.41	1736 4.98	1799 5.56		
5980	2600	1490 2.98	1528 3.24	1598 3.76	1667 4.31	1731 4.87	1792 5.44	1851 6.02		
6440	2800	1563 3.40	1600 3.69	1668 4.24	1735 4.83	1797 5.41	1857 6.00	1916 6.59	1974 7.19	
6900	3000	1640 3.90	1673 4.18	1744 4.81	1803 5.37	1866 6.01	1924 6.63	1981 7.26	2037 7.91	
7360	3200	1718 4.45	1750 4.74	1814 5.36	1876 6.02	1934 6.63	1993 7.32	2050 8.00	2099 8.69	
7820	3400	1794 5.02	1822 5.37	1888 6.09	1950 6.86	2007 7.66	2060 8.47	2110 9.28	2167 10.11	2215 10.91
8280	3600	1872 5.60	1904 6.07	1966 6.71	2022 7.39	2081 8.16	2132 8.94	2183 9.75	2236 10.59	2284 11.41
8740	3800	1950 6.18	1982 6.73	2044 7.50	2097 8.19	2152 8.94	2209 9.77	2255 10.4	2303 11.2	2353 12.0
9200	4000	2035 6.78	2065 7.33	2120 8.30	2176 9.09	2226 9.82	2278 10.6	2331 11.4	2375 12.2	2420 13.0
9660	4200	2116 7.40	2144 8.02	2197 9.18	2253 10.0	2302 10.8	2351 11.6	2401 12.4	2451 13.3	2492 14.1
10120	4400	2198 8.04	2227 8.69	2277 10.1	2329 11.0	2382 11.9	2426 12.6	2473 13.5	2521 14.4	2568 15.3

CFM	OV	6 SP	6 1/2 SP	7 SP	8 SP	9 SP	10 SP	11 SP	12 SP	13 SP
		RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
5520	2400			2040 10.56						
5980	2600			2120 11.42	2240 10.5					
6440	2800			2200 12.28	2285 11.3	2385 12.8				
6900	3000			2280 13.14	2335 12.1	2432 13.6	2526 15.2	2618 16.8		
7360	3200			2360 14.00	2415 12.9	2485 14.6	2573 16.2	2660 17.8	2747 19.5	2836 21.3
7820	3400			2440 14.86	2495 13.7	2543 15.6	2627 17.2	2711 19.0	2792 20.6	2875 22.4
8280	3600			2520 15.72	2575 14.5	2604 16.8	2685 18.4	2765 20.1	2844 21.9	2921 23.7
8740	3800			2600 16.58	2655 15.3	2684 17.9	2747 19.7	2823 21.4	2899 23.2	
9200	4000			2680 17.44	2735 16.1	2726 19.1	2806 20.9	2886 22.8		
9660	4200			2760 18.30	2815 16.9	2804 20.2	2869 22.3			
10120	4400			2840 19.16	2895 17.7	2884 21.6	2927 23.5			
10580	4600			2920 20.02	2975 18.5	2922 23.2				
11040	4800			3000 20.88	3055 19.3	2910 22.6				
11500	5000			3080 21.74	3135 20.1					
11960	5200			3160 22.60	3215 20.9					

ENCLOSURE 2

SKETCH OF STORAGE BIN FOR MODIFICATIONS CARPENTER SHOP
WOODWORKING EQUIPMENT

DUST COLLECTION AND STORAGE BIN
 FOR MODIFICATIONS CARPENTER SHOP
 WOODWORKING EQUIPMENT AT
 SEQUOYAH NUCLEAR PLANT



- Notes
1. Housing and storage bin are constructed of wood
 2. Storage bin measures 38" x 32" x 48" High
 3. Blower manufactured by Champion Fan Corporation
 Serial No. L-7132 3-25-028. Blower is powered by 1 HP
 motor at 1725 rpm
 4. Curtain is lifted for access to storage bin.

ENCLOSURE 3

SPECIFICATIONS FOR DUST COLLECTION SYSTEM
FOR THE MODIFICATIONS CARPENTER SHOP RADIAL ARM SAW

Up to ten times more air flow power
than industrial vacuums

DustMaster



The Most
Powerful Way
To Keep Your Work
Environment Clean

Ideal for Removing:

- Sawdust
- Wood Chips
- Metal Filings
- Iron and Steel
Chips
- Plastic Shavings
- Textile Lint
- Paper Shreds
- Fiberglass
Trimmings
- Rock Particles
- Leather Scraps
- Rubber Buffings
- Granite Dust

The DustMaster Two-Stage A High Quality, Industrial Collector Pow



The DustMaster is ready to help keep your work environment cleaner than ever before. More than a simple vacuum, the DustMaster's power actually captures dust and particles as they're produced, at the work station.

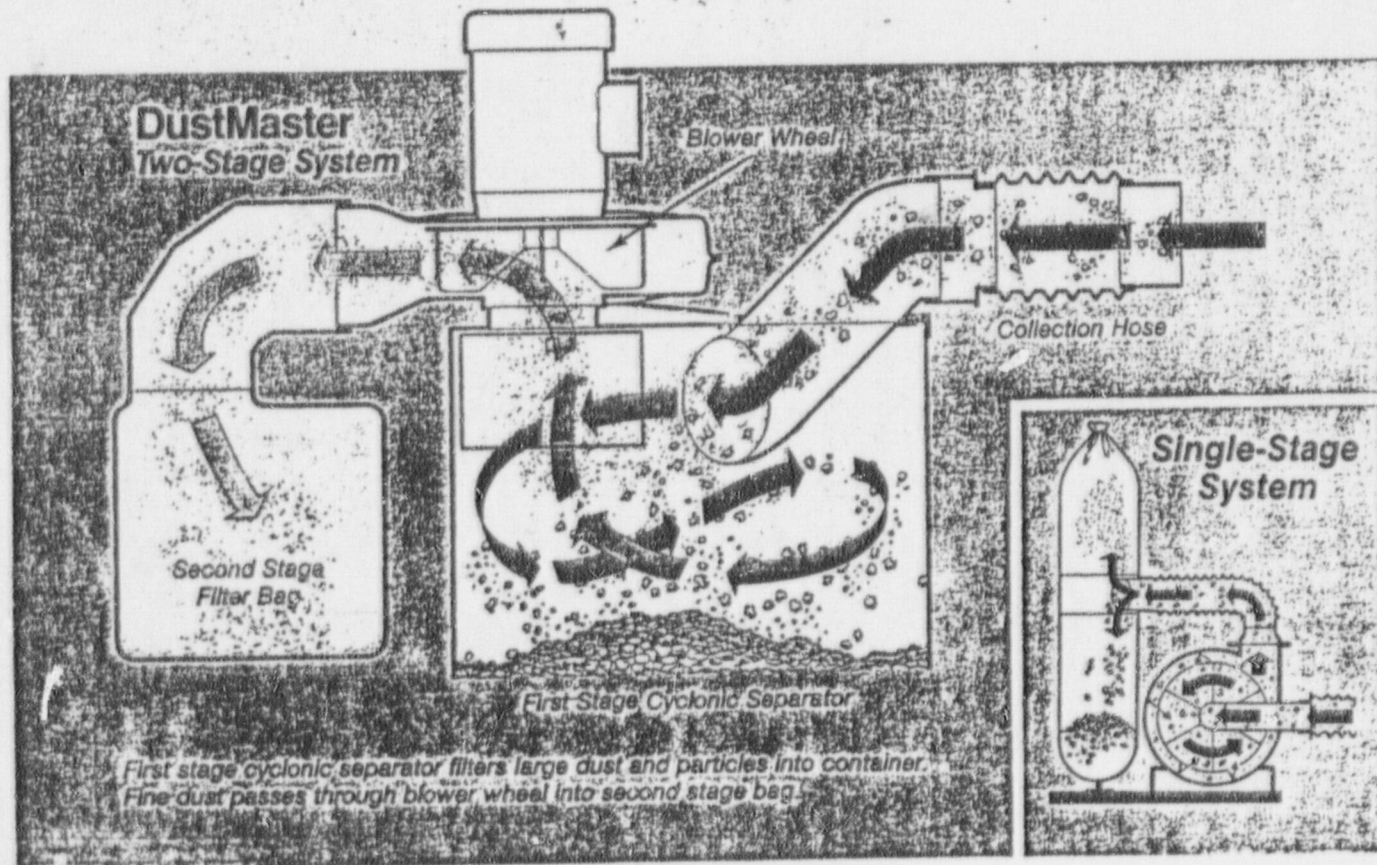
DustMaster's two-stage cyclonic design makes it superior to single-stage collectors. Chips and heavier particles drop to the bottom of the drum while lighter particles are trapped in the attached dust/filter bag. The results...a cleaner shop and a healthier environment.

With up to ten times more air flow power than industrial vacuums, the DustMaster has plenty of power to handle any job. Also, since it's available

in several motor sizes, there's one to meet your specific needs.

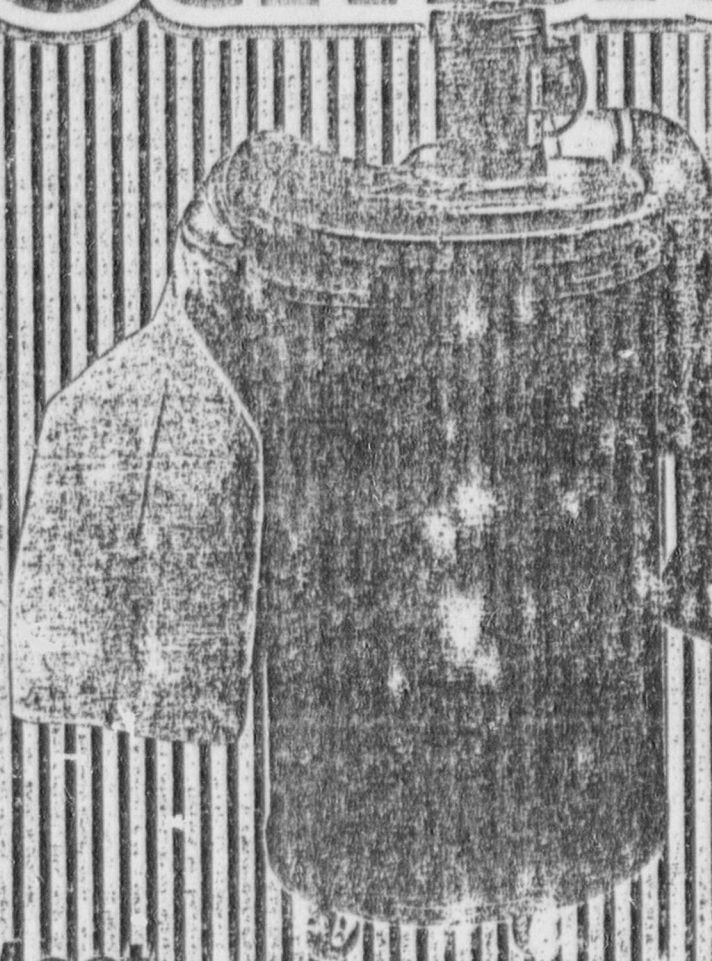
Winning Design Features

- Powerful. Up to ten times the ability to draw in dust than a heavy-duty shop vacuum.
- Durable. Made in the U.S.A. Heavy-duty fiberglass drum lid and 14-gauge steel blower housing.*
- Industrial duty motor. Designed to perform a minimum of eight years under continual, heavy-duty use; years longer with normal use.
- Portable. Easily moved from one job to another.



Up to ten times more air flow power
than industrial vacuums

DustMaster



The Most
Powerful Way
To Keep Your Work
Environment Clean

Ideal for Removing:

- Sawdust
- Wood Chips
- Metal Filings
- Iron and Steel
Chips
- Plastic Shavings
- Textile Lint
- Paper Shreds
- Fiberglass
Trimmings
- Rock Particles
- Leather Scraps
- Rubber Buffings
- Granite Dust

The DustMaster Two-Stage A High Quality, Industrial Collector Power



The DustMaster is ready to help keep your work environment cleaner than ever before. More than a simple vacuum, the DustMaster's power actually captures dust and particles as they're produced, at the work station.

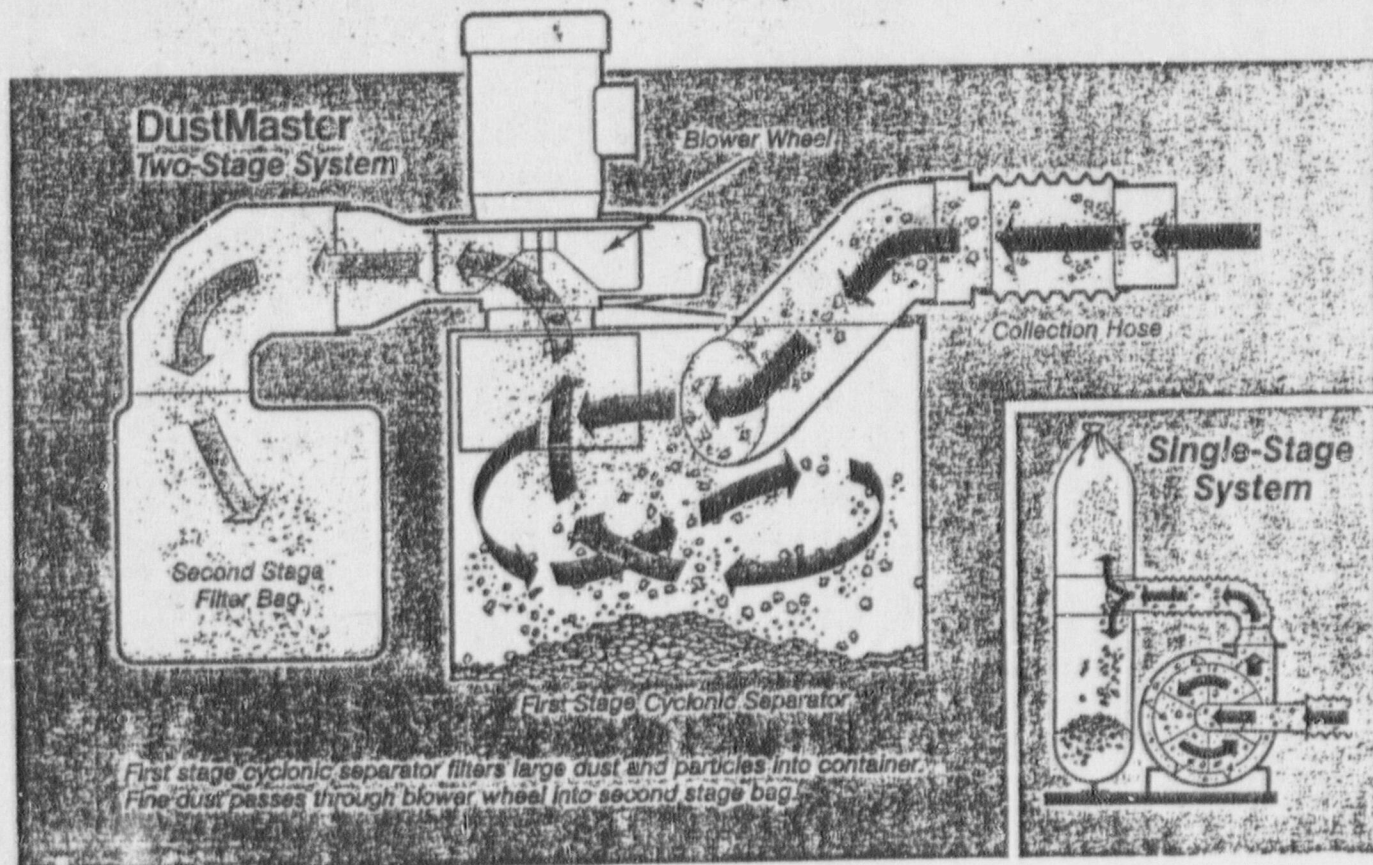
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- Portable. Easily moved from one job to another.



Dust Collector

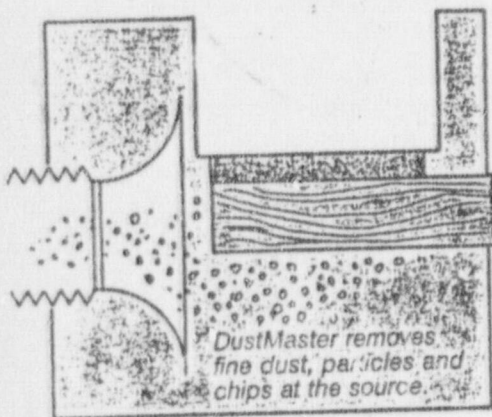
Powerful Enough For Your Needs

Removes Waste at the Source

The DustMaster removes fine dust, particles and chips at the source, before they get into the air or on the floor. Powered by a high-performance, heavy-duty industrial motor, jobs are done quickly, quietly.

It's efficient. The self-cleaning, cast aluminum radial blade blower draws in the smallest chips and dust. The permanently lubricated, ball bearing motor is totally enclosed and fan-cooled. It's safe because there are no exposed moving parts.

The result is a cleaner working environment. The DustMaster gets waste as it's being made, not after the job is done.



More Power, More Capacity

Efficient dust collection requires high air velocity around the tool. Government and industry officials have established recommendations for minimum air flow,

in cubic feet per minute (CFM) needed to keep the environment clean.

The minimum air flow for most tools is 300-700 CFM.

- Home vacuums provide 100 CFM.
- Industrial vacuums can supply up to 120 CFM.
- The DustMaster supplies 350-1100 CFM, many times the power of the heaviest duty industrial vacuum.

Shop vacuums can't match the DustMaster's collection volume either. Mounting on a 55-gallon, open-top drum* provides ample waste capacity. Final air filtration area is twenty square feet; cotton duck filter bag is equipped with a zippered clean-out.

The hoses are also designed for maximum efficiency. While shop vacuums use small diameter hose that can easily clog, the DustMaster's

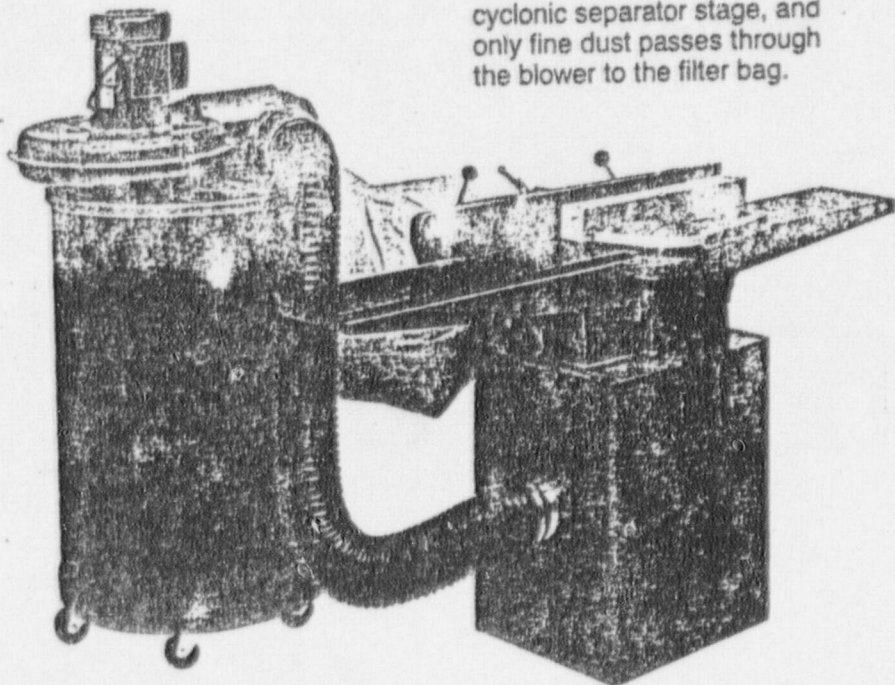
heavy-duty, wire-reinforced hoses—available up to 6" in diameter—accommodate even the largest chips. The DustMaster outperforms the largest industrial vacuum cleaner, and its two-stage design makes it superior to single-stage collectors.

Two-Stage System More Durable, Efficient

The two-stage system is more durable, efficient and safer than competitive single-stage collector systems.

Single-stage collectors draw dust-laden air directly into the blower, where contact with grit and particles causes rapid wear to the wheel and housing. Sparks can also occur, providing an increased fire potential.

By contrast, the DustMaster two-stage system separates all the large, abrasive particles out of the air stream in the cyclonic separator stage, and only fine dust passes through the blower to the filter bag.



The DustMaster Dust Collector Pick The Power You Need

The DustMaster's many sizes are well-suited for industrial and commercial applications. A complete line of nozzles, fittings and hoses makes it flexible enough for many varied operations.

Typical Applications of DustMaster*

Machine And Required CFM Range	Dust Collector Horsepower Ratings			
	1/3	1/2	1	2
Table/Band Saw 700-1100 CFM	—	—	X	X
Belt/Disc Sander 700-1100 CFM	—	—	X	X
Jointer 300-800 CFM	X	X	X	X
Grinder 200-1100 CFM	X	X	X	X
Foundry Mixer 700-1100 CFM	—	—	X	X
Bag Filling 400-1100 CFM	—	X	X	X
Butting/Polishing 300-1100 CFM	X	X	X	X
Stone Cutting 500-800 CFM	—	—	X	X
Laboratory Equipment 300-1100 CFM	X	X	X	X

*NFPA standards require specific duct design and dust collector configuration when collecting aluminum or magnesium dust. Consult current NFPA standards before selecting a dust collector and/or duct design for aluminum or magnesium.



Note: Drum and drum dolly are not supplied with the DustMaster.

Five Models Available

Complete dust collectors with permanently lubricated, ball bearing, continuous-duty, TEFC motor, dust bag and five-foot hose.

Model	33S	50S	100S	100S	250S
Stock No.	1Z726	1Z967	1Z863	1Z864	3Z002
Motor	1/2HP, 1PH	1/2HP, 1PH	1HP, 1PH	1HP, 3PH	2HP, 3PH
RPM	3450	3450	3450	3450	3450
Motor Voltage	115/208-230	115/208-230	115/208-230	208-220/440	208-220/440
HZ and Low Voltage Amps	60-7.6	60-7.6	60-12.0	60-3.2	60-4
Max. Static Pressure	3" WG	7" WG	4 1/2" WG	4 1/2" WG	8 1/2" WG
Max. CFM	355	450	700	700	1100
Max. Hose Velocity, FPM	7230	5155	5120	5130	5600
dBA @ 5ft.	76	78	83	83	85
Hose Size	3"x60"	4"x60"	5"x60"	5"x60"	6"x60"
Drum Lid Dia.	20"	20"	24"	24"	24"
Drum Size (not included)	20-24 Gal.	20-24 Gal.	55 Gal.	55 Gal.	55 Gal.
Ship Wt., lbs.	43	51	73	65	81
Electrical Hookup	Wired for 115V, 8' cord set and switch	Wired for 115V, 8' cord set and switch	Wired for 115V, 8' cord set and switch	Supplied ready for wiring into 220/460 source	Supplied ready for wiring into 220/460 source

Quality DustMaster Accessories

Dust Bag: A 20 sq. ft. filtration area cotton duck filter bag comes with the DustMaster.

Nozzles: A front intake nozzle and a side intake nozzle come with the DustMaster.

Hose Kits (optional): Four hose kits are available. Hose kits contain one hose, two clamps and one tubular steel connector sleeve. Use for extending hose or replacing original hose.

Hose Size	Model	Stock No.	Shipping Wt.
3"x60"	HK 3	1Z891	1.6 lbs.
4"x60"	HK 4	1Z890	2.2 lbs.
5"x60"	HK 5	2Z061	2.5 lbs.
6"x60"	HK 6	2W449	2.8 lbs.

DustMaster™

by Cincinnati Fan

ENCLOSURE 4

USAGE DATA AND MATERIAL SAFETY DATA SHEETS
FOR COATINGS AND THINNERS USED
IN THE SERVICE BUILDING PAINT SHOP

LISTING OF COATINGS AND THINNERS USED
IN THE SERVICE BUILDING PAINT SHOP

<u>PRODUCT</u>	<u>QUANTITY USED</u>
Warren Maintenance and Machinery Enamel	2 gallons
Benjamin Moore Satin Finish Varnish	3 gallons
Benjamin Moore Sanding Sealer	3 gallons
Benjamin Moore Walnut Stain	3 gallons
Phenoline Thinner	1 gallon
Phenoline 305 Paint	1.5 gallons
Carboline Thinner	1 gallon
Carboline Zinc Primer	1.5 gallons
Sherwin Williams Industrial Enamel	4 gallons
Sherwin Williams Red Oxide Primer	5 gallons
Sign Painting Lettering Enamel One Shot	
Black	3 quarts
Red	2 quarts
Blue	2 quarts
Green	1 quart
Gold	1 quart
Gum turpentine	3 gallons

Note: Material Safety Data Sheets are attached.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (SERVICE BLDG PAINT SPRAY BOOTH)

Product Name: "1 SHOT" (R) LETTERING ENAMEL

Product Manufacturer: CONSUMERS PAINT FACTORY, INC

Usage Data

Daily (gal/day): 0.009

Annual (gal/yr): 2.25

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 9

Solids % by Weight: 40 % by Volume: 65

VOC % by Weight: 60 % by Volume: 35

Water % by Weight: NA % by Volume: _____

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No _____

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
 Title: MANAGER OF ENVIRONMENTAL QUALITY

10-1
HMC 1641

53851015 019

SECTION I

Manufacturer's Name
Consumers Paint Factory, Inc.
Address (Number, Street, City, State and Zip Code)
P.O. Box 6398, Gary Indiana 46406
Chemical Name and Synonyms
N/A
Chemical Family
Paints and Coatings

Emergency Telephone No.
219-949-1684

Trade Names and Synonyms
"I Shot" (R) Lettering Enamel
Formula
N/A

SECTION II - HAZARDOUS INGREDIENTS

See Table I, Section II Attached

SECTION III - PHYSICAL DATA

Note: Data Herein (except % Vol.) for solvent portion only

Boiling Point (°F.)	246-385	Specific Gravity (H ₂ O=1)	.74 - .89
Vapor Pressure (mm Hg.)	2-15	Percent Volatile by Vol.(%)	25% - 35%
Vapor Density (AIR=1)	3.8 - 4.9	Evaporation Rate (Ether = 1)	9 - 70
Solubility in Water	ins.		
Appearance and Odor	Water white and characteristic petroleum odor.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (method used)	Flammable Limits	Lel	Uel
Pensky-Martens closed tester: 84° - 110° F		N.E.	N.E.
Extinguishing Media	Carbon dioxide or dry chemical		

Special Fire Fighting Procedures:
Water spray may be ineffective. Water spray should be used to cool containers exposed to fire.
Do not enter the fire area without proper protective equipment, including self-contained breathing apparatus.

Unusual Fire and Explosion Hazards:
Avoid source of ignition, flame, static electricity, heat, electrical spark.

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value
See Table 1, Section II.
Effects of Overexposure
See Table 2, Section V
Emergency and First Aid Procedures
See Table 2, Section V

SECTION VI - REACTIVITY DATA

Stability Unstable Stable X Conditions to Avoid Excessive Heat

Incompatibility (Materials to Avoid) None Hazardous Decomposition Products CO, NOx, Lead, Chromium Fume

Hazardous Polymerization May Occur Will Not Occur X Conditions to Avoid

SECTION VII - SPILL OR LEAK PROCEDURES

Steps To Be Taken in Case Material Is Released Or Spilled Eliminate all heat sources, open flames, and other sources of ignition. Absorb with solid absorbent. Shovel into containers. If large quantities are spilled, personal protective equipment may be required.

Waste Disposal Method Dispose as paint waste in accordance with Federal, State, and local regulations.

SECTION VIII - SPECIAL PROTECTIVE INFORMATION

Respiratory Protection (specify type) Organic vapor respirator with particulate filter approved by NIOSH.

Ventilation Local Exhaust Preferred - Paint Spray Booth, 150 fpm face velocity Mechanical (general) Acceptable for small volume applications Special None Other None

Protective Gloves Butyl rubber or equivalent Other Protective Equipment None Eye Protection Spectacles with side shields.

SECTION IX - SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling and Storing Keep container closed when not in use. See labels for normal handling caution.

Other Precautions Handle carefully in accordance with hazardous properties of flammable liquids as suggested by the National Fire Protection Association. Liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of any materials designated.

National Paint and Coatings Association Hazardous Material Information System

Table 2
Section V
Health Hazard Data

Effects of Overexposure

May cause dizziness, giddiness, narcosis, central nervous system depression. Prolonged overexposure to solvents may cause kidney, liver, and other systemic damage.

Recent reports indicate that prolonged exposure to solvents at moderate levels may affect higher brain functions and mental capacity.

Lead may cause liver, central nervous system and systemic effects on the blood and blood-forming organs after high, prolonged exposure.

Exposure to airborne concentrations of chromates has been associated with lung cancer. Prolonged exposure to high concentrations can cause perforation of the nasal septa.

Emergency and First Aid Procedures

If overcome by vapors, remove to fresh air. If not breathing, restore breathing. Get medical help or a physician immediately.

If ingested, do not induce vomiting. Get medical help or a physician immediately.

Eye Contact: Flush with large quantities of water for 15 minutes. Get medical help or a physician immediately.

Skin Contact: Remove excess material with paper towels or rags. Wash with mild soap and warm water. If any redness or swelling persists, get medical attention.

TABLE I
SECTION II, "HAZARDOUS INGREDIENTS"
"1 Shot" Lettering Enamels

Chemical Abstract Services Number	TLV	101L		102L		104L		108L		114L		124L		134L		144L		142L		
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
in Solid																				
M.C.	N.E.*	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60
Alcohols																				
3032-32-4	100 ppm	20-30	30-40	30-40	30-40	30-40	30-40	30-40	30-40	20-30	20-30	20-30	20-30	20-30	20-30	20-30	20-30	20-30	20-30	30-40
Aromatic Naphtha	100 ppm***	5-10	1-5	1-5	1-5	--	5-10	5-10	5-10	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5
Aliphatic Acids																				
68-037-38-7	N.E.*	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1
Alkyl Ethyl Oxime																				
96-29-1	N.E.*	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1
Alcohol																				
67-56-1	200 ppm	11-1	--	--	--	--	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	--
Aluminum Salt																				
7440-48-4	0.1 mg/m ³	.1-1	11-1	11-1	11-1	.1-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1	11-1
(Lead)																				
.05 mg/m ³	.1-1	5-10	5-10	5-10	5-10	.1-1	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	5-10
Aluminum Oxide																				
13463-67-7	15 mg/m ³ ND**	40-50	--	--	--	--	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5
Aluminum Oxide																				
13463-67-7	15 mg/m ³ ND**	40-50	--	--	--	--	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5
Aluminum Oxide																				
13463-67-7	15 mg/m ³ ND**	40-50	--	--	--	--	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5
Aluminum Oxide																				
13463-67-7	15 mg/m ³ ND**	40-50	--	--	--	--	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5

Not Established
 L.D. = Nuisance Dust
 PEL (Permissible Exposure Limit - TLV Not Established)
 S. = Not Otherwise Specified. These are not believed to be hazardous ingredients under 29 CFR 1910.1260.
 * = Multiple Components, some of which are claimed trade secret by our supplier.

TABLE I
SECTION II, "HAZARDOUS INGREDIENTS"
"i Shot" Lettering Enamels
(Continued)

Chemicals	Chemical Abstract Services Number	TLV	144L %	148L %	150L %	152L %	156L %	158L %	X162L %	191L %	193L %	199L %
Resin Solids	M.C.	N.E.*	40-50	40-50	40-50	40-50	40-50	40-50	40-50	30-40	5-10	40-50
Solvents												
Mineral Spirits	8032-32-4	100 ppm	30-40	30-40	30-40	30-40	30-40	40-50	30-40	20-30	40-50	40-50
Aromatic Naphtha	6038-30-306	100 ppm***	5-10	5-10	1-5	1-5	5-10	--	5-10	1-5	--	--
Additives												
Aliphatic Acids	68-037-38-7	N.E.*	.1-1	.1-1	.1-1	.1-1	1-5	.1-1	1-5	.1-1	.1-1	1-5
Methyl Ethyl Ketoxime	96-29-7	N.E.*	.1-1	.1-1	.1-1	--	.1-1	.1-1	.1-1	.1-1	.1-1	.1-1
Methyl Alcohol	67-56-1	200 ppm	lt.1	lt.1	lt.1	--	lt.1	--	--	lt.1	--	lt.1
Pigments												
Cobalt	7440-48-4	0.1 mg/m ³	lt.1	lt.1	lt.1	.1-1	lt.1	lt.1	lt.1	lt.1	.1-1	lt.1
Pb (Lead)	M.C.	.05 mg/m ³	5-10	5-10	1-1	.1-1	1-5	.1-1	1-5	5-10	--	1-5
Chromates CrO ₃	M.C.	.1 mg/m ³	1-5	--	--	--	--	--	1-5	--	--	--
Titanium Dioxide	13463-67-7	15 mg/m ³ ND**	5-10	1-5	--	5-10	10-20	1-5	1-5	1-5	10-20	--
Pigments (N.O.S.)	M.C.	N.E.	5-10	5-10	1-5	1-5	1-5	10-20	5-10	5-10	--	5-10

*Not Established

**N.D. = Nuisance Dust

***PEL (Permissible Exposure Limit - TLV Not Established)

N.O.S. = Not Otherwise Specified. These are not believed to be hazardous ingredients under 29 CFR 1910.1200.

lt = less than

M.C. = Multiple Compounds, some of which are claimed trade secret by our supplier.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (SERVICE BLDG PAINT SPRAY BOOTH)

Product Name: PRIMER PAINT, RED OXIDE

Product Manufacturer: THE SHERWIN-WILLIAMS CO

Usage Data

Daily (gal/day): 0.019

Annual (gal/yr): 5

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 9.62

Solids % by Weight: 60 % by Volume: 37.6

VOC % by Weight: 40 % by Volume: 62.4

Water % by Weight: NA % by Volume: _____

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Handwritten Signature]
Title: MANAGER OF ENVIRONMENTAL QUALITY

MATERIAL SAFETY DATA SHEET
 FOR COATINGS, RESINS AND RELATED MATERIALS
 (Approved by U.S. Department of Labor 'Essentially Similar' to form OSHA-20)

MANUFACTURER'S NAME
 THE SHERWIN-WILLIAMS COMPANY
 101 Prospect Avenue N.W.
 Cleveland, Ohio 44115

EMERGENCY TELEPHONE NO.
 (216) 566-2917

DATE OF PREPARATION
 6-Aug-86

INFORMATION TELEPHONE NO.
 (216) 566-2902

Section I -- PRODUCT IDENTIFICATION

PRODUCT NUMBER
 E61 R C21
 PRODUCT NAME
 Primer Paint, Red Oxide
 PRODUCT CLASS
 Alkyd Paint

* - Trade Mark

OCT 20 1986

Section II -- HAZARDOUS INGREDIENTS

CAS No.	INGREDIENT	% by WEIGHT	ACGIH-TLV	OSHA-PEL	UNITS	V.P.
64742-48-9	V. M. & P. Naphtha.	40	300		PPM	12.0
64742-47-8	Mineral Spirits.	<5	100	500	PPM	2.0
11103-86-9	Potassium Zinc Chromate. <I>	<0.5	0.05		Mg/M3	
	< > Ingredient is an IARC<I>, NTP<N> or OSHA<O> listed carcinogen					
	Chromium VI (as Cr)	0.02	0.05		Mg/M3	

Section III -- PHYSICAL DATA

EVAPORATION RATE -- Slower than Ether
 VAPOR DENSITY -- Heavier than Air
 BOILING RANGE (F) 240 - 395
 % VOLATILE VOLUME 62.4
 WT/GAL 9.62

Section IV -- FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION
 RED LABEL -- Flammable, Flash below 100 F
 FLASH POINT 50 F FMCC
 LEL 0.9

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section V -- HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE -- See Section II EFFECTS OF OVEREXPOSURE

ACUTE: Overexposure causes eye, skin and respiratory irritation. May cause nervous system depression accompanied by headache, dizziness, nausea, confusion and staggering gait. Extreme overexposure may result in unconsciousness and possible death.

CHRONIC: Prolonged overexposure to ingredients in Section II may cause adverse effects to the liver and urinary systems.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

EMERGENCY AND FIRST AID PROCEDURES

If INHALED: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

If on SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.

If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

Section VI -- REACTIVITY DATA

STABILITY -- Stable

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide, Oxides of Metals in Section II

HAZARDOUS POLYMERIZATION -- Will Not Occur

Section VII -- SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate and remove with inert absorbent.

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability and extractability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and Local regulations regarding pollution.

Section VIII -- PROTECTION INFORMATION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using.

Protect against hazardous dust or fumes which may be generated by sanding, wirebrushing, abrading, burning, brazing or welding of the dried film.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

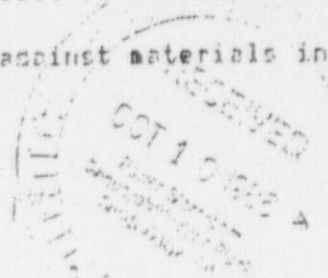
If personal exposure cannot be controlled below applicable limits by ventilation, wear respiratory device approved by NIOSH/MSHA for protection against materials in Section II.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section II.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.



Section IX -- PRECAUTIONS

DOL STORAGE CATEGORY -- 1B

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone! Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

OTHER PRECAUTIONS

This coating contains materials classified as nuisance particulates, for example titanium dioxide, calcium carbonate, etc. (see ACGIH TLV List, Preface and Appendix D), which may be present at hazardous levels only during sanding or abrading of the dried film.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.



The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (SERVICE BLDG PAINT SPRAY BOOTH)

Product Name: INDUSTRIAL ENAMEL, MIDSTONE BASE

Product Manufacturer: THE SHERMAN-WILLIAMS CO.

Usage Data

Daily (gal/day): 0.015

Annual (gal/yr): 4

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 8.86

Solids % by Weight: 60 % by Volume: 42.9

VOC % by Weight: 40 % by Volume: 57.1

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
Title: MANAGER OF ENVIRONMENTAL QUALITY

B54 W 102

MATERIAL SAFETY DATA SHEET FOR COATINGS, RESINS AND RELATED MATERIALS

12

(Approved by U.S. Department of Labor 'Essentially Similar' to form OSHA-20)

RECEIVED SCH APR 23 1987

MANUFACTURER'S NAME THE SHERWIN-WILLIAMS COMPANY 101 Prospect Avenue N.W. Cleveland, Ohio 44115

EMERGENCY TELEPHONE NO. (216) 566-2917

DATE OF PREPARATION 5-Mar-86

INFORMATION TELEPHONE NO. (216) 566-2902

Section I -- PRODUCT IDENTIFICATION

PRODUCT NUMBER B54 W 102

* - Trade Mark

PRODUCT NAME Industrial Enamel, Midtone Base

PRODUCT CLASS Alkyd Enamel

Section II -- HAZARDOUS INGREDIENTS

Table with 6 columns: CAS No., INGREDIENT, PERCENT, TLV-PPM, TLV-MG/M3, LEL, V.P. Row 1: 64742-47-8, Mineral Spirits, 40, 100, 581, 1.0, 2.0

Section III -- PHYSICAL DATA

EVAPORATION RATE -- Slower than Ether VAPOR DENSITY -- Heavier than Air BOILING RANGE (F) 300 - 395 % VOLATILE VOLUME 57.1 WT/GAL 8.86

Section IV -- FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION Combustible, Flash above 99 and below 200 F FLASH POINT 101 F PMCC LEL 1.0

EXTINGUISHING MEDIA Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

B54 W.102

Industrial Enamel, Midtone Base

 Section V -- HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE -- See Section II
 EFFECTS OF OVEREXPOSURE

ACUTE: In a confined area vapors in high concentration are anesthetic. Overexposure may result in lightheadedness and staggering gait.
 Irritant to skin and upper respiratory system.

CHRONIC: Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

EMERGENCY AND FIRST AID PROCEDURES

If INHALED: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

If on SKIN: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

If in EYES: Flush eyes with large amounts of water for 15 minutes.

Get medical attention.

 Section VI -- REACTIVITY DATA

STABILITY -- Stable

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION -- Will Not Occur

 Section VII -- SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate and remove with inert absorbent.

WASTE DISPOSAL METHOD

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and Local regulations regarding pollution.

 Section VIII -- PROTECTION INFORMATION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using.

Protect against dust which may be generated by sanding or abrading the dried film.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear respiratory device approved by NIOSH/MSHA for protection against materials in Section II.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section II.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

Section IX -- PRECAUTIONS

DOL STORAGE CATEGORY -- 2

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Contents are COMBUSTIBLE. Keep away from heat and open flame.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labelings. Do not take internally. Keep out of the reach of children.

OTHER PRECAUTIONS

This coating contains materials classified as nuisance/particulates, for example titanium dioxide, calcium carbonate, etc. (see ACGIH TLV List, Preface and Appendix D), which may be present at hazardous levels only during sanding or abrading of the dried film.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY
 Applicable APCB Certificate #: (SERVICE BLDG PAINT SPRAY BOOTH)
 Product Name: CARBO ZINC
 Product Manufacturer: CARBOLINE Co.

Usage Data

Daily (gal/day): 0.01

Annual (gal/yr): 2.5

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 8.8

Solids % by Weight: 35.7 % by Volume: 15

VOC % by Weight: 64.3 % by Volume: 85

Water % by Weight: NA % by Volume: _____

As Applied (Diluted): (1:1.5)

Density (lbs/gal): 8 % by Volume: _____

Solids % by Weight: 67 % by Volume: 60

VOC % by Weight: 33 % by Volume: 40

Water % by Weight: NA % by Volume: _____

Thinner Data

Chemical Composition: CARBOLINE THINNER 33

Density (lbs/gal): 6.5

Mfr. Data Sheet or Certification is attached. Yes No _____

*For MSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
 Title: MANAGER OF ENVIRONMENTAL QUALITY

MATERIAL SAFETY DATA SHEET

HMC 2580

Carboline Co.
350 Hanley Industrial Ct.
St. Louis, MO 63144
PREPARATION DATE: 08/11/87

INFORMATION TELEPHONE NO.: 314-644-1000
EMERGENCY TELEPHONE NO.: 314-644-1000
PREPARER: JKM

REPLACES DATE: NEW MSDS

SECTION I - PRODUCT IDENTIFICATION

CARBO ZINC 11 SG-BASE
Q10231 GREEN

SECTION II - HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NUMBER	WT. PERCENT IS LESS THAN	(TLV-TWA)	OCCUPATIONAL EXPOSURE LIMITS (TLV-STEL)	(PEL)	VAPOR PRESSURE mmHg 20C	KNOWN OR SUSPECTED CARCINOGEN
ETHYL ALCOHOL	64-17-5	30%	NOT EST.	NOT EST.	NOT EST.	43.0	NO
PICA	12001-25-2	10%	20.0 mg/m ³	NOT EST.	NOT EST.	0.0	NO*
HYDRATED ALUMINUM SILICATE -KAO-LIN	1335-30-4	20%	10.0 mg/m ³	NOT EST.	NOT EST.	0.0	NO*
TETRAALKYL ORTHOSILICATE	MIXTURE	10%	10 PPM	NOT EST.	NOT EST.	0.0	NO
Z-ETHOXY BUTANOL	111-76-2	10%	50 ppm	NOT EST.	NOT EST.	0.5	NO
ISOPROPANOL	67-63-0	20%	400 ppm	NOT EST.	NOT EST.	90.0	NO
METHANOL	67-56-1	5%	250 mg/m ³	NOT EST.	NOT EST.	138.0	NO
YELLOW IRON OXIDE		5%	10.0 mg/m ³	NOT EST.	NOT EST.	0.0	NO*

* - NUISANCE DUST, ONLY HAZARDOUS WHEN DRIED COATING IS REMOVED

SECTION III - PHYSICAL DATA

BOILING RANGE : 149-340 F

VAPOR DENSITY : IS HEAVIER THAN AIR
EVAPORATION RATE: IS SLOWER THAN ETHER

VOLATILE BY WEIGHT: 64.3%
VOLATILE BY VOLUME: 85.0%

PRODUCT WT/GAL : 8.8 LBS./GAL. (U.S.)

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION:

FLASH POINT: 56 F LEL: 1.1%
(PENSKY-MARTENS CLOSED CUP) UEL: 36.0%

OSHA - FLAMMABLE LIQUID - CLASS IB
DOT - FLAMMABLE LIQUID OR SOLID

EXTINGUISHING MEDIA: DRY CHEMICAL CARBON DIOXIDE WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND MAY ACCUMULATE. VAPORS MAY BE IGNITED AT LOCATIONS DISTANT FROM THE HANDLING SITE. FLASHBACK OF FLAME TO THE HANDLING SITE MAY OCCUR.

SPECIAL FIREFIGHTING PROCEDURES: EVACUATE HAZARD AREA. WEAR PROTECTIVE CLOTHING USE A NUSSH APPROVED SELF-CONTAINED BREATHING UNIT. COOL FIRE-EXPOSED CONTAINERS WITH WATER. IN THE CASE OF LARGE FIRES, ALSO COOL SURROUNDING EQUIPMENT AND STRUCTURES WITH WATER.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVER EXPOSURE: ACUTE TOXICITY: OVEREXPOSURE CAN LEAD TO CENTRAL NERVOUS SYSTEM DEPRESSION PRODUCING HEADACHE, DIZZINESS, NAUSEA, AND LOSS OF CONSCIOUSNESS. EYE CONTACT: SHORT-TERM CONTACT MAY RESULT IN SLIGHT EYE IRRITATION. PROLONGED AND REPEATED CONTACT MAY BE MORE IRRITATING. SKIN CONTACT: PROLONGED REPEATED LIQUID CONTACT CAN CAUSE DEFATTING DRYING OF THE SKIN WHICH MAY RESULT IN SKIN IRRITATION OR DERMATITIS. INHALATION: HIGH CONCENTRATIONS OR PROLONGED EXPOSURE TO LOWER CONCENTRATIONS MAY BE SLIGHTLY IRRITATING TO MUCCOUS MEMBRANES. CAUSES EYE IRRITATION HARMFUL IF ABSORBED THROUGH SKIN. MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. CANNOT BE MADE NON-POISONOUS.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE

PRIMARY ROUTE(S) OF ENTRY: INHALATION DERMAL INGESTION

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SECTION V - HEALTH HAZARD DATA

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EMERGENCY AND FIRST AID PROCEDURES: EYE CONTACT: FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION. SKIN CONTACT: WASH WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES. CLEAN BEFORE USING IF PERSISTENT IRRITATION OCCURS. GET MEDICAL ATTENTION. INHALATION: REMOVE TO FRESH AIR. PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET MEDICAL ATTENTION. POISON!!! IF SWALLOWED, INDUCE VOMITING. GIVE TWO GLASSES OF WATER AND GAG VICTIM. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

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SECTION VI - REACTIVITY DATA

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STABILITY: THIS PRODUCT IS STABLE UNDER NORMAL STORAGE CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR UNDER NORMAL CONDITIONS.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

CONDITIONS TO AVOID: AVOID HEAT, SPARKS, AND OPEN FLAME.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDIZING AGENTS.

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SECTION VII - SPILL OR LEAK PROCEDURES

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: WARNING: FLAMMABLE. ELIMINATE ALL IGNITION SOURCES. HANDLING EQUIPMENT MUST BE GROUNDED TO PREVENT SPARKING. LARGE SPILLS: EVACUATE THE HAZARD AREA OF UNPROTECTED PERSONNEL. WEAR APPROPRIATE RESPIRATOR AND PROTECTIVE CLOTHING. DIKE AND CONTAIN. TRANSFER TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUAL WITH AN ABSORBENT SUCH AS CLAY OR SAND. FLUSH AREA WITH WATER AND DISPOSE OF FLUSH SOLUTIONS AS INDICATED BELOW. SMALL SPILLS: TAKE UP WITH AN ABSORBENT MATERIAL AND SEAL TIGHTLY FOR PROPER DISPOSAL.

WASTE DISPOSAL METHOD: PLACE CONTAMINATED MATERIAL IN SUITABLE CONTAINERS FOR DISPOSAL. PLACE IN A DISPOSAL FACILITY APPROVED UNDER RCRA REGULATIONS FOR HAZARDOUS WASTE. USE NON-LEAKING CONTAINERS. SEAL TIGHTLY AND LABEL PROMPTLY.

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SECTION VIII - SAFE HANDLING AND USE INFORMATION

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RESPIRATORY PROTECTION: IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION II) USE A NIOSH - APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE - SUPPLYING RESPIRATOR OR AN AIR - PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

VENTILATION: USE EXPLOSION - PROOF VENTILATION AS REQUIRED TO CONTROL VAPOR CONCENTRATIONS.

PROTECTIVE GLOVES: WEAR IMPERVIOUS GLOVES.

EYE PROTECTION: WEAR CHEMICAL GOGGLES TO PREVENT EYE CONTACT.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING AS REQUIRED TO PREVENT SKIN CONTACT.

HYGIENIC PRACTICES: WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDRY CONTAMINATED CLOTHING BEFORE REUSE.

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SECTION IX - SPECIAL PRECAUTIONS

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PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. STRONG OXIDIZING AGENTS. KEEP CONTAINERS CLOSED. STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. GROUND EQUIPMENT TO PREVENT ACCUMULATION OF STATIC CHARGE. IF POURING OR TRANSFERRING MATERIALS, CONTAINERS MUST BE BONDED AND GROUNDED.

OTHER PRECAUTIONS: DO NOT WELD, HEAT OR DRILL ON OR NEAR CONTAINER. EVEN EMPTIED CONTAINERS CAN CONTAIN EXPLOSIVE VAPORS. PROVIDE RESPIRATORY PROTECTION AGAINST SMOKE AND FUMES GENERATED DURING BURNING OR DUSTS GENERATED DURING REMOVAL OF DRY COATINGS.

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THE INFORMATION CONTAINED HEREIN IS, TO THE BEST OF OUR KNOWLEDGE AND BELIEF ACCURATE. HOWEVER, SINCE THE CONDITIONS OF HANDLING AND USE ARE BEYOND OUR CONTROL, WE MAKE NO GUARANTEE OF RESULTS AND ASSUME NO LIABILITY FOR DAMAGES INCURRED BY USE OF THIS MATERIAL. IT IS THE RESPONSIBILITY OF THE USER TO COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS. E 10

CARBOLINE COMPANY
1401 S. Hanley Road
St. Louis, MO 63144

INFORMATION TELEPHONE NO
CHEMTREC EMERGENCY TELEPHONE NO.
DATE OF PREPARATION:

(314) 644-1000
(800)-424-9300
09/12/86

116

SECTION I - PRODUCT IDENTIFICATION

RECEIVED
SQN

PRODUCT NAME: CARBOLINE THINNER 33
PRODUCT CODE: 01-0533-0
PRODUCT CLASS: SOLVENT BLEND

MAY 16 1987

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT (LABEL NAME IF DIFFERENT)	WEIGHT PERCENT	EXPOSURE LIMITS		VAPOR PRESSURE 20°C mm/Hg
		(TLV-TWA)	(PEL)	
AROMATIC HYDROCARBON	>1%	50 ppm	NONE	10.0
1-METHOXY 2-PROPANOL (PROPYLENE GLYCOL MONO METHYL ETHER)	>1%	100 ppm	NONE	12.5
DIPROPYLENE GLYCOL MONOMETHYL ETHER	>1%	100 ppm	NONE	0.55

SECTION III - PHYSICAL DATA

BOILING RANGE: 248 - 363°F
MIXED WEIGHT/GALLON: 5 - 8 LBS./GAL. (U.S.)

VOLATILE BY WEIGHT: 98 - 100%
VOLATILE BY VOLUME: 98 - 100%

VAPOR DENSITY: IS HEAVIER THAN AIR.
EVAPORATION RATE: IS SLOWER THAN ETHER.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: (OSHA): - FLAMMABLE LIQUID - CLASS IC
(DOT): - FLAMMABLE LIQUID OR SOLID

FLASH POINT(PHCC): 91°F

LEL: 0.9

EXTINGUISHING MEDIA: DRY CHEMICAL.

UNUSUAL FIRE AND EXPLOSION HAZARD: KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT AND OPEN FLAMES. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

SPECIAL FIREFIGHTING PROCEDURES: WATER MAY BE USED TO COOL CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTO-IGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, SPRAY NOZZLES ARE PREFERABLE. WATER SPRAY MAY BE INEFFECTIVE.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVER EXPOSURE: INHALATION: IRRITATION TO THE RESPIRATORY TRACT, HEADACHE, DIZZINESS, AND NAUSEA ARE POSSIBLE. SKIN CONTACT: PRIMARY IRRITATION. EYE CONTACT: PRIMARY IRRITATION.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: UNKNOWN.

PRIMARY ROUTE(S) OF ENTRY: INHALATION.

EMERGENCY AND FIRST AID PROCEDURES: INHALATION: REMOVE TO FRESH AIR AND RESTORE BREATHING. TREAT SYMPTOMATICALLY AND CONSULT A PHYSICIAN. SKIN CONTACT: REMOVE COATING WITH SOLVENT. IMMEDIATELY WASH AFFECTED AREA WITH SOAP AND WATER. CONSULT A PHYSICIAN IF IRRITATION PERSISTS. EYE CONTACT: FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. TAKE TO A PHYSICIAN FOR MEDICAL TREATMENT. INGESTION: DRINK 1 OR 2 GLASSES OF WATER TO DILUTE. DO NOT INDUCE VOMITING. CONSULT A PHYSICIAN OR POISON CONTROL CENTER.

SECTION VI - REACTIVITY DATA

STABILITY: THIS PRODUCT IS STABLE UNDER NORMAL STORAGE CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR UNDER NORMAL CONDITIONS.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, AND POSSIBLY ALDEHYDES.

CONDITIONS TO AVOID: ALSO MAY PRODUCE FUMES WHEN HEATED TO DECOMPOSITION, AS IN WELDING. FUMES MAY CONTAIN OXIDES OF METALS LISTED IN SECTION II.

INCOMPATIBILITY (MATERIALS TO AVOID): NONE REASONABLY FORESEEABLE.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: AVOID BREATHING SOLVENT VAPORS. ENSURE ADEQUATE VENTILATION. AVOID SPILLS, FLAMES AND ANYTHING WHICH COULD CAUSE FIRE.

WASTE DISPOSAL METHOD: SOAK LIQUIDS WITH SAND/ST OR RAGS AND REMOVE. FLUSH WITH WATER IF POSSIBLE. AVOID SKIN CONTACT AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: NIOSH/OSHA APPROVED RESPIRATOR TYPES SUITABLE FOR MATERIALS IN SECTION II RECOMMENDED. APPROVED CHEMICAL MECHANICAL FILTERS RECOMMENDED WHEN VENTILATION IS RESTRICTED.

VENTILATION: SUFFICIENT VENTILATION, IN VOLUME AND PATTERN, SHOULD BE PROVIDED TO KEEP AIR CONTAMINATION BELOW CURRENT APPLICABLE OSHA PERMISSIBLE EXPOSURE LIMIT OR ACGIH'S TLV LIMIT LISTED IN SECTION II.

PROTECTIVE GLOVES: PROTECTIVE GLOVES RECOMMENDED.

EYE PROTECTION: CHEMICAL GOGGLES WITH SIDE SHIELDS OR FACE SHIELDS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT: PROTECTIVE CREAMS AND CLOTHING RECOMMENDED TO AVOID SKIN CONTACT.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING, SMOKING OR USING THE RESTROOM; SMOKE IN DESIGNATED AREAS ONLY.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: STORE MATERIAL IN A COOL DRY AREA WITH VENTILATION SUITABLE FOR STORING MATERIALS SHOWN IN SECTION II.

OTHER PRECAUTIONS: PROVIDE RESPIRATORY PROTECTION AGAINST SMOKE AND FUMES GENERATED DURING BURNING OR DUSTS GENERATED DURING REMOVAL OF DRY COATINGS.

29 CFR PARTS 1915, 1916, AND 1917 REQUIRE THE PREPARATION OF THIS MATERIAL SAFETY DATA SHEET.

COATING/THINNER DATA FORM

Company Name: SECOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY
 Applicable APCB Certificate #: (SERVICE BLDG PAINT SPRAY BOOTH)
 Product Name: PHENOLINE 305 PRIMER
 Product Manufacturer: CARBOLINE COMPANY

Usage Data

Daily (gal/day): 0.01

Annual (gal/yr): 2.5

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 10.5

Solids % by Weight: 72.5 % by Volume: 59.5

VOC % by Weight: 27.5 % by Volume: 40.5

Water % by Weight: NA % by Volume:

As Applied (Diluted): (1:1.5)

Density (lbs/gal): ~~% by Volume:~~

Solids % by Weight: 71 % by Volume: 60

VOC % by Weight: 29 % by Volume: 40

Water % by Weight: NA % by Volume:

Thinner Data

Chemical Composition: SOLVENT BLEND

Density (lbs/gal): 6.5

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
 Title: MANAGER OF ENVIRONMENTAL QUALITY

CARBOLINE COMPANY
1201 S. Hanley Road
St. Louis, MO 63144

INFORMATION TELEPHONE NO.
CHEMTREC EMERGENCY TELEPHONE NO.
DATE OF PREPARATION:

(314) 644-1000
(800)-424-9300
09/12/86

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: PHENOLINE THINNER
PRODUCT CODE: 01-0505-0
PRODUCT CLASS: SOLVENT BLEND

Amc 109
HMC 0209

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT (LABEL NAME IF DIFFERENT)	WEIGHT PERCENT	EXPOSURE LIMITS		VAPOR PRESSURE 20°C mm/Hg
		(TLV-TWA)	(PEL)	
XYLENE S-METHYL-2-HEXANONE (KETONE) ✓	SQM >1%	100 ppm	100 ppm	21.0
1-METHOXY-2-PROPANOL (PROPYLENE GLYCOL MONO METHYL ETHER) ✓	JUL 6 1987 >1%	50 ppm	NONE	4.5
ETHYL BENZENE (AROMATIC HYDROCARBON)	>1%	100 ppm	NONE	12.5
2-ETHOXY BUTANOL (ETHYLENE GLYCOL MONO BUTYL ETHER)	>1%	100 ppm	100 ppm	7.5
		25 ppm	50 ppm	0.6

SECTION III - PHYSICAL DATA

BOILING RANGE: 248 - 340°F
MIXED WEIGHT/GALLON: 5 - 8 LBS./GAL. (U.S.)
VOLATILE BY WEIGHT: 98 - 100%
VOLATILE BY VOLUME: 98 - 100%
VAPOR DENSITY: 15 HEAVIER THAN AIR.
EVAPORATION RATE: 15 SLOWER THAN ETHER.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: (OSHA): - FLAMMABLE LIQUID - CLASS IC
(DOT): - FLAMMABLE LIQUID OR SOLID
FLASH POINT(PICC): 77°F
LEL: 1.0

EXTINGUISHING MEDIA: DRY CHEMICAL.

UNUSUAL FIRE AND EXPLOSION HAZARD: KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT AND OPEN FLAMES. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

SPECIAL FIREFIGHTING PROCEDURES: WATER MAY BE USED TO COOL CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTO-IGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, SPRAY NOZZLES ARE PREFERABLE. WATER SPRAY MAY BE INEFFECTIVE.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVER EXPOSURE: INHALATION: IRRITATION TO THE RESPIRATORY TRACT, HEADACHE, DIZZINESS, AND NAUSEA ARE POSSIBLE. SKIN CONTACT: PRIMARY IRRITATION. EYE CONTACT: PRIMARY IRRITATION.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: UNKNOWN.

PRIMARY ROUTE(S) OF ENTRY: DERMAL AND INHALATION.

EMERGENCY AND FIRST AID PROCEDURES: INHALATION: REMOVE TO FRESH AIR AND RESTORE BREATHING. TREAT SYMPTOMATICALLY AND CONSULT A PHYSICIAN. SKIN CONTACT: REMOVE COATING WITH SOLVENT. IMMEDIATELY WASH AFFECTED AREA WITH SOAP AND WATER. CONSULT A PHYSICIAN IF IRRITATION PERSISTS. EYE CONTACT: FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. TAKE TO A PHYSICIAN FOR MEDICAL TREATMENT. INGESTION: DRINK 1 OR 2 GLASSES OF WATER TO DILUTE. DO NOT INDUCE VOMITING. CONSULT A PHYSICIAN OR POISON CONTROL CENTER.

SECTION VI - REACTIVITY DATA

STABILITY: THIS PRODUCT IS STABLE UNDER NORMAL STORAGE CONDITIONS. HAZARDOUS POLYMERIZATION: WILL NOT OCCUR UNDER NORMAL CONDITIONS.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, AND POSSIBLY ALDEHYDES.

CONDITIONS TO AVOID: ALSO MAY PRODUCE FUMES WHEN HEATED TO DECOMPOSITION, AS IN WELDING. FUMES MAY CONTAIN OXIDES OF METALS LISTED IN SECTION II.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: AVOID BREATHING SOLVENT VAPORS. ENSURE ADEQUATE VENTILATION. AVOID SPARKS, FLAMES AND ANYTHING WHICH COULD CAUSE FIRE.

WASTE DISPOSAL METHOD: SOAK LIQUIDS WITH SAND/ST OR RAGS AND REMOVE. FLUSH WITH WATER IF POSSIBLE. AVOID SKIN CONTACT AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: NIOSH/OSHA APPROVED RESPIRATOR TYPES SUITABLE FOR MATERIALS IN SECTION II RECOMMENDED. APPROVED CHEMICAL MECHANICAL FILTERS RECOMMENDED WHEN VENTILATION IS RESTRICTED.

VENTILATION: SUFFICIENT VENTILATION, IN VOLUME AND PATTERN, SHOULD BE PROVIDED TO KEEP AIR CONTAMINATION BELOW CURRENT APPLICABLE OSHA PERMISSIBLE EXPOSURE LIMIT OR ACGIH'S TLV LIMIT LISTED IN SECTION II.

PROTECTIVE GLOVES: PROTECTIVE GLOVES RECOMMENDED.

EYE PROTECTION: CHEMICAL GOGGLES WITH SIDE SHIELDS OR FACE SHIELDS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT: PROTECTIVE CREAMS AND CLOTHING RECOMMENDED TO AVOID SKIN CONTACT.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING, SMOKING OR USING THE RESTROOM, SMOKE IN DESIGNATED AREAS ONLY.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: STORE MATERIAL IN A COOL DRY AREA WITH VENTILATION SUITABLE FOR STORING MATERIALS SHOWN IN SECTION II.

OTHER PRECAUTIONS: PROVIDE RESPIRATORY PROTECTION AGAINST SMOKE AND FUMES GENERATED DURING BURNING OR DUSTS GENERATED DURING REMOVAL OF DRY COATINGS.

29 CFR PARTS 1915, 1916, AND 1917 REQUIRE THE PREPARATION OF THIS MATERIAL SAFETY DATA SHEET.

MATERIAL SAFETY DATA SHEET FOR COATINGS, RESINS, AND RELATED MATERIALS

CARBOLINE COMPANY
1401 S. Hanley Road
St. Louis, MO 63144

INFORMATION TELEPHONE NO.
CHEMTREC EMERGENCY TELEPHONE NO.
DATE OF PREPARATION:

(314) 644-1000
(800)-424-9300
09/12/86

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: PHENOLINE 305 PRIMER PART A
PRODUCT NAME: PHENOLINE 305 PRIMER PART B

PRODUCT CODE: 01-0606-A
PRODUCT CODE: 01-0606-B

PRODUCT CLASS: MODIFIED PHENOLIC

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT (LABEL NAME IF DIFFERENT)	WEIGHT PERCENT			EXPOSURE LIMITS		VAPOR PRESSURE
	PART A	PART B	MIXED	(TLV-TWA)	(PEL)	20°C mm/Hg
4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE)	>1%	>1%	>1%	50 ppm	100 ppm	40.0
M & P NAPHTHA (NAPHTHA)	>1%	>1%	>1%	200 ppm	NONE	2.0
2 ETHOXYETHANOL (ETHYLENE GLYCOL MONO ETHYL ETHER)	>1%	>1%	>1%	5 ppm	200 ppm	3.8
TOLLENE	>1%	0%	>1%	100 ppm	NONE	38.0
ISOPROPANOL	0%	>1%	>1%	200 ppm	400 ppm	90.0
DIETHYLENE TRIAMINE (ALKYL AMINE)	0%	>1%	>1%	1 ppm	NONE	1.0
XYLENE	>1%	0%	>1%	100 ppm	100 ppm	21.0
1,3 DIAMINOPROPAHE (ALKYL AMINE)	0%	>1%	>1%	NONE	NONE	8.0
PHENOL	0%	>1%	>1%	5 ppm	5 ppm	0.2
N,N,N',N'-TETRAMETHYL-1,3 BUTANEDIAMINE (ALKYL AMINE)	0%	>1%	>1%	NONE	NONE	2.0
THE FOLLOWING DUST EXPOSURE POTENTIAL COULD EXIST AS NORMAL DUST HAZARDS OR WHEN REMOVING CURED COATINGS BY DRY ABRASION METHODS.						
POTASSIUM ALUMINSILICATE - MICA (MICA)	>1%	0%	>1%	6mg/s	15mg/s	NONE
CALCINED ALUMINUM SILICATE-KAOLIN (CLAY)	>1%	0%	>1%	10mg/s	10mg/s	NONE

SECTION III - PHYSICAL DATA

BOILING RANGE: 173 - 300°F
MIXED WEIGHT/GALLON: 9 - 12 LBS./GAL. (U.S.)

VOLATILE BY WEIGHT: 26 - 29%
VOLATILE BY VOLUME: 39 - 42%

VAPOR DENSITY: IS HEAVIER THAN AIR.
EVAPORATION RATE: IS SLOWER THAN ETHER.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: (OSHA): PT. A - FLAMMABLE LIQUID - CLASS IC
PT. B - FLAMMABLE LIQUID - CLASS IB
(DOT): PT. A - FLAMMABLE LIQUID OR SOLID
PT. B - FLAMMABLE LIQUID OR SOLID

FLASH POINT: (PMCC) PT. A: 96°F
PT. B: 54°F
LEL: 0.9

EXTINGUISHING MEDIA: DRY CHEMICAL, WATER FOG OR OTHER MEDIA SUITABLE FOR SOLVENTS IN SECTION II.

UNUSUAL FIRE AND EXPLOSION HAZARD: KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT AND OPEN FLAMES. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

SPECIAL FIREFIGHTING PROCEDURES: WATER MAY BE USED TO COOL CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTO-IGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, SPRAY NOZZLES ARE PREFERABLE. WATER SPRAY MAY BE INEFFECTIVE.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVER EXPOSURE: INHALATION: IRRITATION TO THE RESPIRATORY TRACT, HEADACHE, DIZZINESS, AND NAUSEA ARE POSSIBLE. SKIN CONTACT: PRIMARY IRRITATION. EYE CONTACT: PRIMARY IRRITATION. 2-ETHOXYETHANOL AND 2-ETHOXYETHANOL ACETATE CAN BE ABSORBED AFTER ORAL, SKIN, OR INHALATION EXPOSURE, AND CAN CAUSE TOXICITY IN INTERNAL ORGANS SUCH AS BLOOD, LIVER, KIDNEYS, AND TESTES. SOME STUDIES INDICATE LONG-TERM CHRONIC EXPOSURE TO 2-ETHOXYETHANOL AND 2-ETHOXYETHANOL ACETATE MAY CAUSE REPRODUCTIVE DISORDERS. ALKYL AMINES (i.e. DIETHYLENE TRIAMINE) ARE SKIN SENSITIZERS. AVOID SKIN CONTACT AND INHALATION BY WEARING APPROPRIATE PROTECTIVE CLOTHING, RESPIRATORS, AND EYE PROTECTION.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: UNKNOWN.

PRIMARY ROUTE(S) OF ENTRY: DERMAL AND INHALATION.

SECTION V - HEALTH HAZARD DATA - cont.

POLICY AND FIRST AID PROCEDURES: INHALATION: REMOVE TO FRESH AIR AND RESTORE BREATHING. TREAT SYMPTOMATICALLY AND CONSULT A PHYSICIAN. SKIN CONTACT: REMOVE COATING WITH SOLVENT. IMMEDIATELY WASH AFFECTED AREA WITH SOAP AND WATER. CONSULT A PHYSICIAN IF IRRITATION PERSISTS. EYE CONTACT: FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. TAKE TO A PHYSICIAN FOR MEDICAL TREATMENT. INGESTION: DRINK 1 OR 2 GLASSES OF WATER TO DILUTE. DO NOT INDUCE VOMITING. CONSULT A PHYSICIAN OR POISON CONTROL CENTER. FOR CHEMICAL EMERGENCY - SPILL, LEAK, FIRE, EXPLOSION, OR ACCIDENT CALL CHEMTREC 1-800-424-9300 DAY OR NIGHT.

SECTION VI - REACTIVITY DATA

STABILITY: THIS PRODUCT IS STABLE UNDER NORMAL STORAGE CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR UNDER NORMAL CONDITIONS.

DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, AND POSSIBLY ALDEHYDES.

CONDITIONS TO AVOID: ALSO MAY PRODUCE FUMES WHEN HEATED TO DECOMPOSITION, AS IN WELDING. FUMES MAY CONTAIN OXIDES OF METALS LISTED IN SECTION II.

COMPATIBILITY (MATERIALS TO AVOID): NONE REASONABLY FORESEEABLE.

SECTION VII - SPILL OR LEAK PROCEDURES

ACTIONS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: AVOID BREATHING SOLVENT VAPORS. ENSURE ADEQUATE VENTILATION. AVOID SPARKS, FLAMES AND OTHER SOURCES OF HEAT WHICH COULD CAUSE FIRE.

DISPOSAL METHOD: SOAK LIQUIDS WITH SANDBLAST OR RAGS AND REMOVE. FLUSH WITH WATER IF POSSIBLE. AVOID SKIN CONTACT AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: NIOSH/OSHA APPROVED RESPIRATOR TYPES SUITABLE FOR MATERIALS IN SECTION II RECOMMENDED. APPROVED CHEMICAL MECHANICAL FILTERS RECOMMENDED WHEN VENTILATION IS RESTRICTED.

VENTILATION: SUFFICIENT VENTILATION, IN VOLUME AND PATTERN, SHOULD BE PROVIDED TO KEEP AIR CONTAMINATION BELOW CURRENT APPLICABLE OSHA PERMISSIBLE EXPOSURE LIMIT OR ACGIH'S TLV LIMIT LISTED IN SECTION II.

PROTECTIVE GLOVES: PROTECTIVE GLOVES RECOMMENDED.

FACE PROTECTION: CHEMICAL GOGGLES WITH SIDE SHIELDS OR FACE SHIELDS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT: PROTECTIVE CREAMS AND CLOTHING RECOMMENDED TO AVOID SKIN CONTACT.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING, SMOKING OR USING THE RESTROOM; SMOKE IN DESIGNATED AREAS ONLY.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: STORE MATERIAL IN A COOL DRY AREA WITH VENTILATION SUITABLE FOR STORING MATERIALS SHOWN IN SECTION II.

OTHER PRECAUTIONS: PROVIDE RESPIRATORY PROTECTION AGAINST SMOKE AND FUMES GENERATED DURING BURNING OR DISTURBANCES GENERATED DURING REMOVAL OF DRY COATINGS.

29 CFR PARTS 1915, 1916, AND 1917 REQUIRE THE PREPARATION OF THIS MATERIAL SAFETY DATA SHEET.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (SERVICE BLDG PAINT SPRAY BOOTH)

Product Name: SOLVENT THINNED STAIN

Product Manufacturer: BENJAMIN MOORE & CO

Usage Data

Daily (gal/day): 0.01

Annual (gal/yr): 3

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 7

Solids % by Weight: 20 % by Volume: 12

VOC % by Weight: 80 % by Volume: 88

Water % by Weight: NA % by Volume: _____

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No _____

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
Title: MANAGER OF ENVIRONMENTAL QUALITY

HMC 399

MATERIAL SAFETY DATA SHEET - NPCA 1-84
FOR COATINGS, RESINS, AND RELATED MATERIALS
REPLACES NPCA 1-82

MANUFACTURER'S NAME
Benjamin Moore & Co.
51 Chestnut Ridge Road
Montvale, New Jersey 07645

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EMERGENCY TELEPHONE NO.
(201) 344-1200

DATE OF PREPARATION: July 1987
SUPERCEDES March 1986

INFORMATION TELEPHONE NO.
(201) 344-1200

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NUMBER: 241 20,21,58,59,60,62,64,65, PRODUCT NAME: Moore's Interior Wood Penetrating Stain
67,68,69

PRODUCT CLASS: Solvent Thinned Stain

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS#	PERCENT	OCCUPATIONAL EXPOSURE LIMITS		VAPOR PRESSURE
			TLV	PEL	
Ethylene Glycol Monobutyl Ether	111-76-2	6-14	50 ppm	100 ppm	7.0 mm Hg. @ 25°
Mineral Spirits *RECOMMENDED BY SUPPLIER.	64742-88-7	67-75	100 ppm	50 ppm	<5.0 mm Hg. @ 100

SECTION III - PHYSICAL DATA

BOILING RANGE: 313° - 388°F VAPOR DENSITY: HEAVIER LIGHTER THAN AIR
EVAPORATION RATE: FASTER SLOWER THAN ETHER % VOLATILE VOLUME 88 WT/GAL 7 lbs.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA FLASH POINT 110°F LEL 1.0%
Combustible liquid DOT X
EXTINGUISHING MEDIA: FOAM "ALCOHOL" FOAM CO2 DRY CHEMICAL WATER FOG OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

SPECIAL FIREFIGHTING PROCEDURES: Do not use water stream on burning liquid. Cool exposed containers with water.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Ingestion may cause narcosis. Eye Contact - Primary irritation. Animal studies have shown ingestion of ethylene glycol at high levels can cause central nervous system, kidney, blood, and possible liver effects.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Unknown

PRIMARY ROUTE(S) OF ENTRY: DERMAL INHALATION INGESTION

EMERGENCY AND FIRST AID PROCEDURES: If swallowed, immediately give 1 or 2 glasses of water and call physician, hospital emergency room or Poison Control Center for way to induce vomiting. In case of eye contact, flush with plenty of water. If irritation persists, consult physician. For skin contact, wash off with mild soap and water.

SECTION VI - REACTIVITY DATA

STABILITY: UNSTABLE STABLE
HAZARDOUS POLYMERIZATION: MAY OCCUR WILL NOT OCCUR

HMC 399

HAZARDOUS DECOMPOSITION PRODUCTS: Burning may produce carbon monoxide and carbon dioxide.
CONDITIONS TO AVOID: Not Applicable

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INCOMPATIBILITY (MATERIALS TO AVOID): Not Applicable

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SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Avoid breathing vapors. Use non-sparking tools to return materials to containers. Absorb residue with Fuller's earth.

WASTE DISPOSAL METHOD: Conventional procedures in compliance with local, State and Federal Regulation. Do not incinerate sealed containers.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: Use NIOSH approved respirator specified for protection against paint spray mist and organic vapors in restricted or confined areas.

VENTILATION: Adequate to maintain working atmosphere below T.L.V. and L.E.L (See Section II for ingredient data and concentrations). Mechanical exhaust may be required in confined area. Discharge exhaust only in area away from ignition sources.

PROTECTIVE GLOVES: Required during repeated contact.

EYE PROTECTION: Safety glasses to protect against splashes.

OTHER PROTECTIVE EQUIPMENT: Clothing adequate to protect skin.

HYGIENIC PRACTICES: Not Applicable

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Combustible - Keep away from heat and flame. Harmful or fatal if swallowed.

OTHER PRECAUTIONS: Use only adequate ventilation. Avoid prolonged contact with skin and breathing of vapor or spray mist. Close container after each use. Keep out of the reach of children. Do not take internally.

NOTICE:

Reports have associated permanent brain and nervous system damage with repeated prolonged exposure to solvents among persons engaged in the painting trade. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (SERVICE BLDG PAINT SPRAY BOOTH)

Product Name: VARNISH

Product Manufacturer: BENJAMIN MOORE & CO

Usage Data

Daily (gal/day): 0.01

Annual (gal/yr): 3

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 7.3

Solids % by Weight: 39 % by Volume: 30

VOC % by Weight: 61 % by Volume: 70

Water % by Weight: _____ % by Volume: _____

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
 Title: MANAGER OF ENVIRONMENTAL QUALITY

595 RECEIVED
JUL 18 1986

**MATERIAL SAFETY DATA SHEET NPCA 1-84
FOR COATINGS, RESINS, AND RELATED MATERIALS
REPLACES NPCA 1-82**

MANUFACTURER'S NAME

Benjamin Moore & Co.
51 Chestnut Ridge Rd., Montvale, N.J. 07645

EMERGENCY TELEPHONE NO.

201-344-1200

DATE OF PREPARATION

March 1986

INFORMATION TELEPHONE NO.

201-344-1200

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NUMBER 04300

PRODUCT NAME Benwood Satin Finish Varnish

PRODUCT CLASS Varnish

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS#	PERCENT	OCCUPATIONAL EXPOSURE LIMITS		VAPOR PRESSURE
			TLV	PEL	
Mineral Spirits	64742-88-7	61	100 ppm	500 ppm	< 5.0 mm Hg @ 100°F

SECTION III - PHYSICAL DATA

BOILING RANGE 313°F
 EVAPORATION RATE FASTER THAN WATER
 WT/GAL 7.3 lbs.
 VAPOR DENSITY HEAVIER THAN AIR
 VOLATILE VOLUME 70%

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION OSHA DOT FLASH POINT LEL
 Combustible liquid X 101°F 1.0%

EXTINGUISHING MEDIA: "ALCOHOL" FOAM CO2 DRY CHEMICAL WATER FOG OTHER

UNUSUAL FIRE AND EXPLOSION HAZARDS

NONE

SPECIAL FIREFIGHTING PROCEDURES - Do not use water stream on burning liquid. Cool exposed containers with water.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE - Inhalation - Respiratory irritation and central nervous system effect - Anesthetic.

Skin and Eye Contact - Primary irritation.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE:

PRIMARY ROUTE(S) OF ENTRY: ~~DERMAL~~ / INHALATION / INGESTION

EMERGENCY AND FIRST AID PROCEDURES - Inhalation - Remove from area, maintain breathing, call physician. Skin and eye contact - Wash with mild soap and water.

SECTION VI - REACTIVITY DATA

UNSTABLE STABLE

HAZARDOUS POLYMERIZATION MAY OCCUR WILL NOT OCCUR
HAZARDOUS DECOMPOSITION PRODUCTS -
~~BURNING~~ may produce carbon dioxide and carbon monoxide.
CONDITIONS TO AVOID

Not Applicable

COMPATIBILITY (MATERIALS TO AVOID)

~~Not Applicable~~

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Avoid breathing vapors. Use non-sparking tools to return materials to container. Absorb residue with Fuller's earth.

WASTE DISPOSAL METHOD

Conventional procedures in compliance with local, state and federal regulations. Do not incinerate sealed containers.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION Use NIOSH approved respirator specified for protection against paint spray mist and organic vapors in restricted or confined areas.

VENTILATION Adequate to maintain working atmosphere below T.L.V. and L.E.L. (See Section I) for ingredient data and concentrations). Mechanical exhaust may be required in confined areas.

PROTECTIVE GLOVES ~~Discharge vapors only in area away from ignition sources.~~

Required during repeated contact.

EYE PROTECTION

Safety glasses to protect against splashes.

OTHER PROTECTIVE EQUIPMENT

Clothing adequate to protect skin.

HYGIENIC PRACTICES: Not Applicable

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Combustible - Keep away from heat and flame.

OTHER PRECAUTIONS

Use only with adequate ventilation.

Avoid prolonged contact with skin and breathing of vapor or spray mist.

Close containers after each use.

Keep out of the reach of children.

Do not take internally.

NOTICE: Reports have associated permanent brain and nervous system damage with repeated prolonged overexposure to solvents among persons engaged in the painting trade. Intentional or negligent, deliberately concentrating and inhaling the contents may be harmful or fatal.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY
 Applicable APCB Certificate #: (SERVICE BLDG PAINT SPRAY BOOTH)
 Product Name: SAFETY BLACK
 Product Manufacturer: WARREN PAINT & COLOR COMPANY

Usage Data

Daily (gal/day): 0.008
 Annual (gal/yr): 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 7.70
 Solids % by Weight: 49.62 % by Volume: 38.74
 VOC % by Weight: 50.38 % by Volume: 61.26
 Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____
 Solids % by Weight: _____ % by Volume: _____
 VOC % by Weight: _____ % by Volume: _____
 Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: TURPENTINE
 Density (lbs/gal): 7.1
 Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
 Title: MANAGER OF ENVIRONMENTAL QUALITY

MATERIAL SAFETY DATA SHEET

MANUFACTURER'S NAME:
 WARREN PAINT AND COLOR COMPANY
 700 WEDGEWOOD AVENUE
 NASHVILLE, TN 37203

EMERGENCY TELEPHONE NO.
 (615) 292-6655
 INFORMATION TELEPHONE NO.
 (615) 292-6655

DATE OF PREPARATION: 06/14/89

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NUMBER: 2304
 PRODUCT NAME : SAFETY BLACK
 PRODUCT CLASS : PAINT

HMIS RATINGS: H F R PP
 1 2 0 B

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	WEIGHT PERCENT	OCCUPATIONAL EXPOSURE LIMITS	VAPOR PRESSURE HG @ TEMP
MINERAL SPIRITS	64742-88-7	50.38	500.00 PPM	6.2 100F

HAZARDOUS INGREDIENTS FOLLOWED BY AN ASTERISK (*) ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT OF 1986 AND OF 40 CFR 372. DISTRIBUTION OF THIS PRODUCT MUST BE ACCOMPANIED BY A COPY OF THIS MSDS.

SECTION III - PHYSICAL DATA

BOILING POINT : 307 DEG F
 VAPOR DENSITY: HEAVIER THAN AIR
 EVAPORATION RATE : 41.15 (ETHYL ETHER = 1) WT/GAL: 7.70
 % VOLATILE VOLUME: 61.26 VOLATILE ORGANIC COMPOUNDS: 3.91

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: COMBUSTIBLE - CLASS IIA
 FLASH POINT: 103 DEG F TCC

*This is one
 maintenance and
 machine enamel
 used.*



UNUSUAL FIRE AND EXPLOSION HAZARDS:

Handle as combustible material. Vapors form an explosive mixture in air between the upper and lower explosive limits which can be ignited by many sources such as pilot lights, open flames, electrical motors and switches.

SPECIAL FIREFIGHTING PROCEDURES:

Respiratory equipment should be worn to avoid inhalation of concentrated vapors. Water should not be used except as fog to keep nearby containers cool.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

Inhalation-Dizziness, breathing difficulty, headaches, & loss of coordination.
Eye contact-Severe irritation, tearing, redness, and blurred vision.
Skin contact-Can dry and chafe skin causing cracks, irritation, and dermatitis.
Ingestion-Can cause gastrointestinal irritation, vomiting, nausea & diarrhea.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE:

Anesthesia, respiratory tract irritation, dermatitis, nausea, vomiting.

PRIMARY ROUTE(S) OF ENTRY: DERMAL, INHALATION, INGESTION

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation overexposure-Move person to fresh air. If breathing stops, apply artificial respiration and seek immediate medical attention. Eye contact-flush with large quantities of water for 15 minutes. Skin contact-wash thoroughly with soap and water and see a doctor. Ingestion-Do not induce vomiting, can cause chemical pneumonitis and pulmonary edema. Contact physician immediately.

SECTION IV - REACTIVITY DATA

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide, carbon dioxide, oxides of nitrogen.

CONDITIONS TO AVOID:

Excessive heat, poor ventilation, corrosive atmospheres, excessive aging.

INCOMPATIBILITY (MATERIALS TO AVOID):

Alkaline materials, strong acids and oxidizing materials.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Eliminate ignition sources, provide good ventilation, dike spill area and add absorbent earth or sandust to spilled liquid.

WASTE DISPOSAL METHOD:

Collect absorbent/spilled liquid mixture into metal containers.

Consult local, state & federal hazardous waste regulation before disposing into approved hazardous waste landfills. Obey relevant laws.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION:

When spraying this material use a NIOSH approved cartridge respirator or gas mask suitable to keep airborne mists and vapor concentration below the time-weighted threshold limit values. When using in poorly ventilated and confined spaces, use a fresh-air supplying respirator or a self-contained breathing apparatus.

VENTILATION:

General mechanical ventilation or local exhaust should be suitable to keep vapor concentrations below TLV. Ventilation equipment should be explosion proof.

PROTECTIVE GLOVES:

Impermeable chemical handling gloves for skin protection.

EYE PROTECTION:

Use chemical safety glasses, goggles, and faceshields for eye protection.

OTHER PROTECTIVE EQUIPMENT:

Use impermeable aprons and protective clothing whenever possible to prevent skin contact. The use of head caps whenever possible is strongly recommended.

HYGIENIC PRACTICES:

Eye washes and safety showers in the workplace is recommended.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Use non-sparking utensils when handling this material. Avoid hot metal surfaces. Use in cool, well-ventilated areas. Keep containers closed when not in use. Keep away from excessive heat and open flames.

OTHER PRECAUTIONS:

Smoking in areas where this material is used should be strictly prohibited.
NOTE: This information is accurate to the best knowledge of Warren Paint and Color Co., but is furnished without any expressed or implied warranties.

MATERIAL SAFETY DATA SHEET 018798

MANUFACTURER: KLEAN-STRIP, DIVISION OF
W.M. BARR & COMPANY
2105 CHANNEL AVENUE
P.O. BOX 1879
MEMPHIS, TENNESSEE

DATE PREPARED: 10/01/85

TELEPHONE NUMBER: (901) 775-010

INFORMATION HANDLING SER.
ATTN: KATHLEEN SAMPLE
P.O. BOX 1213
LENGLEWOOD CO 80150_1

CM
w/14

SECTION I - PRODUCT IDENTIFICATION

FORMULA NUMBER: 1683
PRODUCT NUMBER: GT-69
PRODUCT NAME: GUM SPIRITS TURPENTINE KLEAN STRIP
PRODUCT CLASS: THINNER-SOLVENT

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	CAS#	PERC WT	OCCUPATIONAL EXPOSURE LIMITS		Vapor Pressure
			TLV	PEL 100	
TURPENTINE	8006-64-2	<100	100 ppm	100 ppm	INE

SECTION III - PHYSICAL DATA

BOILING RANGE: 309 THRU 330 F
EVAPORATION RATE: Slower Than Ether.

VAPOR DENSITY: Heavier Than Air.
% VOLATILE: 100.0
LBS/Gal: 7.1

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASS: OSHA-Class IC
DOT-Flammable Liquid.

FLASH POINT: 94F
LEL: 0.0

EXTINGUISHING MEDIA: Use Carbon Dioxide, Dry Powder or Foam.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep container tightly closed. Isolate from heat, electrical equipment, sparks, open flames and hot surfaces.

SPECIAL FIREFIGHTING PROCEDURES: Self-contained respiratory protection should be provided for firefighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up.

SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Inhalation Ingestion Dermal

EFFECTS OF OVEREXPOSURE - SHORT TERM EFFECTS:

INHALATION - May cause headache, dizziness and nausea.

INGESTION - Not determined.

SKIN CONTACT - Not determined.

EYE CONTACT - May cause irritation.

EFFECTS OF OVEREXPOSURE - LONG TERM EFFECTS:

Prolonged or repeated contact may cause dermatitis. Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY OVEREXPOSURE: None recognized.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION - If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

INGESTION - Call your hospital emergency room, poison control center or physician immediately for instructions.

SKIN CONTACT - Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

EYE CONTACT - Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

SECTION VI - REACTIVITY DATA

STABILITY: Stable.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: None recognized.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizing agents.

SECTION VII - SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Avoid breathing vapors. Ventilate area. Flush large spills of material into suitable retaining area or containers with large quantities of water. Small spills can be absorbed by appropriate inert absorbent.

WASTE DISPOSAL: Dispose in accordance with applicable local, state and federal regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: For OSHA controlled work place, use only with adequate ventilation under engineered air control systems designed to provide maximum appropriate TLV. For occasional use where engineered air control is not feasible, use NIOSH approved respirators. For occasional consumer use, use only with adequate ventilation.

VENTILATION: Adequate ventilation must be provided. See respiratory protection above.

PROTECTIVE GLOVES: Use impermeable gloves to prevent skin irritation.

EYE PROTECTION: Safety glasses, chemical goggles and/or face shields are recommended to safeguard against potential eye contact, irritation or injury.

OTHER PROTECTIVE EQUIPMENT: Varying application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc.

HYGIENIC PRACTICES: Wash hands thoroughly after use.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Do not store near flames or elevated temperatures.

OTHER PRECAUTIONS: Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to local regulations.



NOTE: THE INFORMATION CONTAINED HEREIN IS FURNISHED WITHOUT WARRANTY OF ANY KIND. EMPLOYERS SHOULD USE THIS INFORMATION ONLY AS A SUPPLEMENT TO OTHER INFORMATION GATHERED BY THEM AND MUST MAKE INDEPENDENT DETERMINATION OF SUITABILITY AND COMPLETENESS OF INFORMATION FROM ALL SOURCES TO ASSURE PROPER USE OF THESE MATERIALS AND THE SAFETY AND HEALTH OF EMPLOYEES. ANY USE OF THIS DATA AND INFORMATION MUST BE DETERMINED BY THE USER TO BE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.

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ENCLOSURE 5

E106 FORM FOR HYDRAZINE TANK VENT

POLLUTION ESTIMATION FORM

FORM: E106

1. Name of Company (as shown on Line 1, Form E001): SEQUOYAH NUCLEAR PLANT, TENNESSEE VALLEY AUTHORITY

2. Equipment Name (as shown on Line 10, Form E001): HYDRAZINE TANK VENT

3. Type of pollutant for which estimation is made: HYDRAZINE

4. Pollutant Emission Factor (PEF): 0.089 lbs/cf
 (Give value & units in lbs/ton, lbs/lbs, lbs/gal, gr/ft³, etc.)
 Source of Emission Factor: _____

5. Uncontrolled Pollution Emission Rate:

$$\frac{0.089 \text{ lbs/cf}}{\text{(PEF from Item 4)}} \times \frac{(0.5 \text{ cfm})(60 \text{ min/hr})(0.75 \text{ hr})}{\text{(Give operating rate for this equipment and the appropriate units in either lbs/hr, tons/hr, gal/hr or CFM)}} = \frac{2 \text{ lbs/hr}}{\text{(Give value \& units)}}$$

6. Uncontrolled Pollution Emission Rate: 2 lbs emitted/hr
 (from Item 5 convert to lbs/hr)

This is to certify that I am familiar with the operations concerning this equipment and that the information provided on this application is true and complete to the best of my knowledge. This form must be completely filled out before acceptable.

Mail To:
 CHATTANOOGA-HAMILTON COUNTY
 AIR POLLUTION CONTROL BUREAU
 3511 Rossville Boulevard
 Chattanooga, Tennessee 37407

Company Official: M. Paul Schmirer
 Signature
 Title: MANAGER OF ENVIRONMENTAL QUALITY
 Date: 7-12-89

DO NOT WRITE BELOW THIS LINE

 Engineer Approval

This form corresponds to permit number: _____

Special Notations: _____

ENCLOSURE 6

E106 FORM FOR AMMONIA TANK VENT

1. Name of Company (as shown on Line 1, Form E001): SEQUOYAH NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY

2. Equipment Name (as shown on Line 10, Form E001): AMMONIA TANK VENT

3. Type of pollutant for which estimation is made: Ammonia

4. Pollutant Emission Factor (PEF): 0.044 lbs/cf
 (Give value & units in lbs/ton, lbs/lbs, lbs/gal, gr/ft³, etc.)
 Source of Emission Factor: LINDE SPECIALTY GASES - SAFETY AND EMERGENCY PROCEDURES

5. Uncontrolled Pollution Emission Rate:

$$\frac{0.044 \text{ lbs/cf}}{\text{(PEF from Item 4)}} \times \frac{(0.29 \text{ CFM})(60 \text{ min/hr})}{\text{(Give operating rate for this equipment and the appropriate units in either lbs/hr, tons/hr, gal/hr or CFM)}} = \frac{0.64 \text{ lbs/hr}}{\text{(Give value \& units)}}$$

6. Uncontrolled Pollution Emission Rate: 0.64 lbs/hr lbs emitted/hr
 (from Item 5 convert to lbs/hr)

This is to certify that I am familiar with the operations concerning this equipment and that the information provided on this application is true and complete to the best of my knowledge. This form must be completely filled out before acceptable.

Mail To:
 CHATTANOOGA-HAMILTON COUNTY
 AIR POLLUTION CONTROL BUREAU
 3511 Rossville Boulevard
 Chattanooga, Tennessee 37407

Company Official: [Signature]
 Signature
 Title: MANAGER OF ENVIRONMENTAL QUALITY
 Date: 7-12-89

DO NOT WRITE BELOW THIS LINE

 Engineer Approval

This form corresponds to permit number: _____

Special Notations: _____

ENCLOSURE 7

USAGE DATA AND MATERIAL SAFETY DATA SHEETS
FOR COATINGS AND THINNERS USED
AT THE CONSTRUCTION SANDBLAST AND PAINT SHOP

LISTING OF COATINGS AND THINNERS
USED AT THE CONSTRUCTION SANDBLAST AND PAINT SHOP

<u>PRODUCT</u>	<u>QUANTITY USED</u>
Carboline Number 33 Thinner	260 gallons
Carboline Carbo-Zinc	220 gallons
Nutec 6	5 gallons
Nutec 1201	5 gallons
Enamel Paint (PPG Industries and Sherwin-Williams Co.)	30 gallons
Varsol	<u>50 gallons</u>
TOTAL	600 gallons

Note: Material Safety Data Sheets are attached except for Carboline Carbo-Zinc which was provided earlier.

1. Name of Company (as shown on Line 1, Form E001): SEQUOYAH NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY

2. Equipment Name (as shown on Line 10, Form E001): CONSTRUCTION SAND BLAST AND
PAINT SHOP WITH TWO BUILDING ROOF EXHAUSTERS

3. Type of pollutant for which estimation is made: VOC

4. Pollutant Emission Factor (PEF): 5.3 LBS VOC / GALLON OF PAINT
 (Give value & units in lbs/ton, lbs/lbs, lbs/gal, gr/ft³, etc.)
 Source of Emission Factor: SEE ATTACHMENT 1

5. Uncontrolled Pollution Emission Rate:

$$\frac{5.3 \text{ LBS/GAL}}{\text{(PEF from Item 4)}} \times \frac{(600 \frac{\text{GALS}}{\text{YR}})(\frac{1 \text{ YR}}{1000 \text{ HR}})}{\text{(Give operating rate for this equipment and the appropriate units in either lbs/hr, tons/hr, gal/hr or CFM)}} = 3 \frac{\text{LBS}}{\text{HR}}$$
 (Give value & units)

6. Uncontrolled Pollution Emission Rate: 3 LBS/HR lbs emitted/hr
 (from Item 5 convert to lbs/hr)

This is to certify that I am familiar with the operations concerning this equipment and that the information provided on this application is true and complete to the best of my knowledge. This form must be completely filled out before acceptable.

Mail To:
 CHATTANOOGA-HAMILTON COUNTY
 AIR POLLUTION CONTROL BUREAU
 3511 Rossville Boulevard
 Chattanooga, Tennessee 37407

Company Official: M. Paul Kamberbach Signature
 for Title: MANAGER OF ENVIRONMENTAL QUALITY
 Date: 7-12-89

DO NOT WRITE BELOW THIS LINE

 Engineer Approval

This form corresponds to permit number: _____

Special Notations: _____

COATING/THINNER DATA FORM

Company Name: SEVUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (CONST SAND BUSTING & PAINT SHOP)

Product Name: CARBO ZINC

Product Manufacturer: CARBOLINE COMPANY

Usage Data

Daily (gal/day): 275 / 260 ^{DAYS} / _{YR} = 1.0

Annual (gal/yr): 275 = 220 + (1/4)220
PART FINISH

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

(NOTE: PROVIDED WITH MARCH 1, 1989 APPLICATION)

Density (lbs/gal): 21.5

Solids % by Weight: 80 % by Volume: 40

VOC % by Weight: 20 % by Volume: 60

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): 1/4

Density (lbs/gal): 12.3 % by Volume:

Solids % by Weight: 57 % by Volume: 30

VOC % by Weight: 43 % by Volume: 70

Water % by Weight: 0 % by Volume: 0

Thinner Data

Chemical Composition: AROMATIC HYDROCARBON, ETHYLENE GLYCOL MONOBUTYL ETHER

Density (lbs/gal): 7.4 MONOETHYL ETHER

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
 Title: MANAGER OF ENVIRONMENTAL QUALITY

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY
 Applicable APCB Certificate #: (CONST SANDBLAST & PAINT SHOP SERVICE BIDS PAINT SPRAY BOOTH)
 Product Name: CARBOLINE NUMBER 33 THINNER
 Product Manufacturer: CARBOLINE COMPANY

Usage Data

Daily (gal/day): 205/260 = 0.8
 Annual (gal/yr): (260 - 55) = 205 CLEAN-UP SOLVENT
 Rule 25.43 & 25.44 * AMOUNT USED W/ CARBO ZINC AS THINNER

Analysis or Manufacturer's Certification Data*: SEE ATTACHED MSDS
 As Received (Concentrated): NA

Density (lbs/gal): _____
 Solids % by Weight: _____ % by Volume: _____
 VOC % by Weight: _____ % by Volume: _____
 Water % by Weight: _____ % by Volume: _____

As Applied (Diluted): NA

Density (lbs/gal): _____ % by Volume: _____
 Solids % by Weight: _____ % by Volume: _____
 VOC % by Weight: _____ % by Volume: _____
 Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: ETHYLENE GLYCOL MONOETHYL ETHER
ETHYLENE GLYCOL MONOBUTYL ETHER
 Density (lbs/gal): 7.4

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
 Title: MANAGER OF ENVIRONMENTAL QUALITY

MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor as "Essentially Similar" to Form OSHA-20)

REPLACES: 12/82
DATE OF PREP.: 1/84

Section I

MANUFACTURER'S NAME: Carboline Company
 STREET ADDRESS: 350 Hanley Industrial Court CITY, STATE AND ZIP CODE: St. Louis, MO 63144
 EMERGENCY TELEPHONE NO.: 314-644-1000
 INFORMATION TELEPHONE NO.: 314-644-1000
 PRODUCT CLASS: Solvent Blend MANUFACTURER'S CODE IDENTIFICATION
 TRADE NAME: Carboline Thinner #33 533/4A75

Section II -- HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	OCCUPATIONAL EXPOSURE LIMITS (TLV®-TWA)	VAPOR PRESSURE mm/Hg	TOXICITY DATA
Aromatic Hydrocarbon	50	100ppm	3.0	
Ethylene Glycol Monobutyl Ether	25	50ppm	0.6	
Ethylene Glycol Monethyl Ether	25	5ppm	3.8	

Section III -- PHYSICAL DATA

BOILING RANGE: 275-340°F VAPOR DENSITY: HEAVIER, LIGHTER, THAN AIR
 EVAPORATION RATE: FASTER, SLOWER, THAN ETHER PERCENT VOLATILE BY VOLUME: 100 WEIGHT PER GALLON: 7.4 ± 0.37

Section IV -- FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION (OSHA): Combustible Liquid - Class II FLASH POINT (PMCC): 101°F LEL: 1.0

EXTINGUISHING MEDIA: Use dry chemical or chemical foam suitable for solvents shown.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Isolate from heat, electrical equipment, sparks and open flame. Closed containers may explode when exposed to extreme heat. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposure to extreme heat is present.

CARBOLINE - CARBOLINE THINNER
- CODE: 533/4A75

Section V -- HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE

Inhalation: Irritation to respiratory tract; headache, dizziness and nausea.
Skin or Eye Contact: Primary irritation.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Remove to fresh air. Restore breathing. Consult a physician.
Eye Contact: Flush immediately with large amounts of water. Consult a physician.
Skin Contact: Remove coating with solvent. Immediately wash affected area with soap and water. Consult a physician if irritation persists.

Section VI -- REACTIVITY DATA

STABILITY: UNSTABLE STABLE CONDITIONS TO AVOID: Unknown

INCOMPATIBILITY (Materials to avoid): None reasonably foreseeable

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂, possibly aldehydes

HAZARDOUS POLYMERIZATION: MAY OCCUR WILL NOT OCCUR

Section VII -- SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL RELEASED OR SPILLED: Avoid breathing solvent vapors. Ensure adequate ventilation. Avoid sparks, flames and anything which could cause fire.

WASTE DISPOSAL METHOD: Soak liquids with sawdust or rags. Remove. Flush with water if possible. Avoid skin contact. Disposal should be in accordance with local, state and federal regulations.

Section VIII -- SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NIOSH/OSHA approved respirator types suitable for materials in Section II recommended. Approved chemical/mechanical filter recommended when ventilation is restricted. Approved air line type respirators or hoods recommended in confined areas.

VENTILATION: Sufficient ventilation, in volume and pattern, should be provided to keep air contamination below current applicable OSHA permissible exposure limit or ACGHI's TLV® limit.

PROTECTIVE GLOVES: Protective gloves recommended.

EYE PROTECTION: Chemical goggles with side shields or face shields recommended.

OTHER PROTECTIVE EQUIPMENT: Protective creams and clothing recommended to avoid skin contact.

Section IX -- SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in a cool, dry area with ventilation suitable for storing materials shown in Section II.

OTHER PRECAUTIONS: Provide respiratory protection against smoke and fumes generated during burning or dusts generated during removal of dry coatings.

29 CFR Parts 1915, 1916 and 1917 require the preparation of this Material Safety Data Sheet.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITYApplicable APCB Certificate #: (CONST SAND BUSTING & PAINT SHOP)Product Name: NUTEC #6 EPOXY STEEL PRIMERProduct Manufacturer: IMPERIAL COATINGS CORP, INCUsage DataDaily (gal/day): 5/260 = 0.02Annual (gal/yr): 5

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 12.3Solids % by Weight: 70 % by Volume: 75.8VOC % by Weight: 30 % by Volume: 24.2Water % by Weight: 0 % by Volume: 0As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data CUREChemical Composition: CELLOSOLVE ACETATE, XYLOL, POLYAMIDE, MAGNESIUM SILICATE

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
Title: MANAGER OF ENVIRONMENTAL QUALITY

MATERIAL SAFETY DATA SHEET

003156

NPCA 1-7

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP 7/78
REV. 033178

Section I

MANUFACTURER'S NAME

IMPERIAL COATINGS CORPORATION, INC.

STREET ADDRESS

16362 Chef Menteur Highway,

EMERGENCY TELEPHONE NO.

(504) 254-1433

CITY, STATE, AND ZIP CODE

New Orleans, Louisiana 70129

PRODUCT CLASS

Epoxy Polyamide

MANUFACTURERS CODE IDENTIFICATION

#6

TRADE NAME

Nutec #6 Epoxy Steel Primer

Section II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV		LEL	VAPOR PRESSURE
		PPM	mg/m ³		
<u>Base:</u> Epoxy	25	-	11.4 g/kg Oral LD ₅₀	-	-
Micaceous Pigment	10	-	176mp/m ³	-	-
Strontium Yellow	5	-	176mp/m ³	-	-
Magnesium Silicate	30	-	176mp/m ³	-	-
Xylol	10	100	435	1.0	9.5
Cellosolve	5	100	740	2.6	3.7
MIBK	10	100	410	1.2	15.2
Aromatic Naphtha	5	200	-	1.0	4.4
<u>Cure:</u> Cellosolve Acetate	15	100	540	1.7	1.2
Xylol	15	100	435	1.0	9.5
Polyamide	30	-	-	-	-
Magnesium Silicate	40	-	176mp/m ³	-	-

Section III - PHYSICAL DATA

BOILING RANGE 237°F to 277°F.

VAPOR DENSITY HEAVIER. LIGHTER THAN AIR

EVAPORATION RATE FASTER SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME 24.2

WEIGHT PER GALLON 12.3 lbs.

Section IV - FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY FLAMMABLE - Less than 100°F.

FLASH POINT 68°F.

LEL 1.1

EXTINGUISHING MEDIA

Use National Fire Protection Class B extinguisher, CO₂, dry chemical or foam designed to extinguish Class IB liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS Keep containers tightly closed. Isolate from heat, electrical equipment, spark, and open flame. Closed containers may explode when exposed to extreme heat. Do not apply to hot surfaces. Paint vapors can cause violent explosion. When applying in enclosed area, supply sufficient ventilation to keep vapors below LEL level.

SPECIAL FIRE FIGHTING PROCEDURES Water spray may be ineffective.

Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are required.

Section V – HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF OVEREXPOSURE

Inhalation: Anesthetic irritation of the respiratory tract or acute nervous system depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma.

Skin and Eye Contact: Primary irritation.

EMERGENCY AND FIRST AID PROCEDURES

Fumes: Remove from exposure. Restore breathing. Keep warm and quiet. Notify a physician.
Splash (Eyes): Flush immediately with copious quantities of running water for at least 15 minutes. Take to a physician for definitive medical treatment. Splash (Skin): Wash affected areas with water. Remove contaminated clothing. Consult a physician.

Section VI – REACTIVITY DATA

STABILITY UNSTABLE STABLE

CONDITIONS TO AVOID Flame, high heat and moisture.

INCOMPATIBILITY (Materials to avoid)

HAZARDOUS DECOMPOSITION PRODUCTS

CO, CO₂, Aldehydes, NO₂, amide monomer.

HAZARDOUS POLYMERIZATION MAY OCCUR WILL NOT OCCUR

CONDITIONS TO AVOID Excessive heat after mixing component may cause fast polymerization.

Section VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors, ventilate area. Remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD Dispose in accordance with Local, State, and Federal regulations.
Incinerate in approved facility. Do not incinerate closed containers.

Section VIII – SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION In outdoor or open areas, use Bureau of Mines, approved mechanical filter respirator to remove solid or airborne particles or overspray during spray application. In restricted ventilation areas, use Bureau of Mines approved chemical-mechanical filters designed to remove a combination of particles, gas and vapor. In confined areas, use Bureau of Mines approved airline type respirators or hoods.

VENTILATION Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of most hazardous ingredient in Section II below acceptable limit, LEL in Section IV below stated limit and to remove decomposition products during welding or flame cutting on surfaces coated with this product.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Use safety eye wear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT Prevent prolonged skin contact to contaminated clothing.

Section IX – SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Do not store above 120° F. Store large quantities in buildings designed and protected for storage of NFPA Class I combustible liquids.

OTHER PRECAUTIONS

Do not take internally. Do not flame cut, braze, or weld without U.S. Bureau of Mines approved respirator or appropriate ventilation.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (CONST SAND BUSTING & PAINT SHOP)

Product Name: NUTEC #1201 PART A & PART B

Product Manufacturer: IMPERIAL COATING CORP, INC

Usage Data

Daily (gal/day): 5/260 = 0.02

Annual (gal/yr): 5

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 11.5

Solids % by Weight: 74.5 % by Volume: 55.5

VOC % by Weight: 25.5 % by Volume: 44.5

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No _____

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Handwritten Signature]
Title: MANAGER OF ENVIRONMENTAL QUALITY

MATERIAL SAFETY DATA SHEET FOR COATINGS, RESINS, AND RELATED MATERIALS

IMPERIAL COATINGS
1401 S. Hanley Road
St. Louis, MO 63144

INFORMATION TELEPHONE NO.
CHEMTREC EMERGENCY TELEPHONE NO.
DATE OF PREPARATION:

(314) 644-1000
(800)-424-9300
09/22/86

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: NUTEC #1201 PART A
PRODUCT NAME: NUTEC #1201 PART B

PRODUCT CODE: 09-5903-A(L)
PRODUCT CODE: 09-5903-B(L)

PRODUCT CLASS: EPOXY POLYAMIDE

HMC 2428

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT (LABEL NAME IF DIFFERENT)	WEIGHT PERCENT			EXPOSURE LIMITS		VAPOR PRESSURE 20°C mm/Hg
	PART A	PART B	MIXED	(TLV0-TWA)	(PEL)	
* LEAD CHROMATE	>1%	0%	>1%	0.05mg/m	1.0mg/m	NONE
XYLENE	>1%	>1%	>1%	100 ppm	100 ppm	21.0
* LEAD MOLYBDATE ORANGE (LEAD COMPOUND)	>1%	0%	>1%	0.05mg/m	0.1mg/m	NONE
ISOPROPANOL	>1%	0%	>1%	200 ppm	400 ppm	90.0
BENZENE	>1%	0%	>1%	100 ppm	NONE	38.0
2 ETHOXYETHANOL (ETHYLENE GLYCOL MONO ETHYL ETHER)	>1%	0%	>1%	5 ppm	200 ppm	3.8
4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE)	>1%	0%	>1%	50 ppm	100 ppm	40.0
AROMATIC PETROLEUM NAPHTHA (AROMATIC HYDROCARBON)	>1%	0%	>1%	50 ppm	NONE	10.0
ETHYL BENZENE (AROMATIC HYDROCARBON)	>1%	>1%	>1%	100 ppm	100 ppm	7.5
2,4,6-TRI(DIMETHYLAMINO)PHENOL (ALKYL AMINE)	0%	>1%	>1%	NONE	NONE	0.01
DIETHYLENE TRIAMINE (ALKYL AMINE)	0%	>1%	>1%	1 ppm	NONE	1.0
THE FOLLOWING DUST EXPOSURE POTENTIAL COULD EXIST AS NORMAL DUST HAZARDS OR WHEN REMOVING CURED COATING BY DRY ABRASION METHODS.						
SOAPSTONE SILICATE (TALC)	>1%	0%	>1%	6mg/m	15mg/m	NONE
	>1%	0%	>1%	6mg/m	15mg/m	NONE

* THIS RAW MATERIAL IS A CARCINOGEN OR A SUSPECTED CARCINOGEN.

SECTION III - PHYSICAL DATA

BOILING RANGE: 190 - 346°F
MIXED WEIGHT/GALLON: 10 - 13 LBS./GAL. (U.S.)
VOLATILE BY WEIGHT: 24 - 27%
VOLATILE BY VOLUME: 43 - 46%
VAPOR DENSITY: IS LIGHTER THAN AIR.
EVAPORATION RATE: IS SLOWER THAN ETHER.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: (OSHA): PT. A - FLAMMABLE LIQUID - CLASS IB
PT. B - FLAMMABLE LIQUID - CLASS IC
(DOT): PT. A - FLAMMABLE LIQUID OR SOLID
PT. B - FLAMMABLE LIQUID OR SOLID
FLASH POINT: (PMCC) PT. A: 135°F
PT. B: 180°F
LEL: 0.9

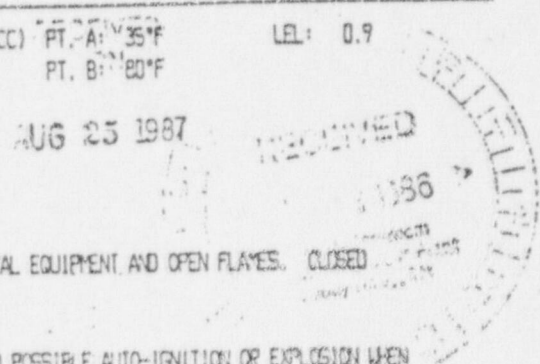
EXTINGUISHING MEDIA: DRY CHEMICAL, WATER FOG OR OTHER MEDIA SUITABLE FOR SOLVENTS IN SECTION II.

UNUSUAL FIRE AND EXPLOSION HAZARD: KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT AND OPEN FLAMES. CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

SPECIAL FIREFIGHTING PROCEDURES: WATER MAY BE USED TO COOL CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTO-IGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, SPRAY NOZZLES ARE PREFERABLE. WATER SPRAY MAY BE INEFFECTIVE.

SECTION V - HEALTH HAZARD DATA

OF OVER EXPOSURE: INHALATION: IRRITATION TO THE RESPIRATORY TRACT, HEADACHE, DIZZINESS, AND NAUSEA ARE POSSIBLE. SKIN CONTACT: PRIMARY IRRITATION. EYE CONTACT: PRIMARY IRRITATION. LEAD CHROMATE IS A SUSPECTED CARCINOGEN. WEAR APPROPRIATE RESPIRATORY PROTECTION TO PREVENT INHALATION OF OVER-SPRAY AND APPROPRIATE PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EXCESSIVE CHRONIC LONG-TERM EXPOSURE TO LEAD MAY CAUSE A METALLIC TASTE IN THE MOUTH, LOSS OF APPETITE, INDIGESTION, NAUSEA, VOMITING, CONSTIPATION, ABDOMINAL CRAMPS, SLEEPLESSNESS AND WEAKNESS. ALKYL AMINES (i.e. DIETHYLENE TRIAMINE) ARE SKIN SENSITIZERS. AVOID SKIN CONTACT AND INHALATION BY WEARING APPROPRIATE PROTECTIVE CLOTHING, RESPIRATORS, AND EYE PROTECTION. 2-ETHOXYETHANOL AND 2-ETHOXYETHANOL ACETATE CAN BE ABSORBED AFTER ORAL, SKIN, OR INHALATION EXPOSURE, AND CAN CAUSE TOXICITY IN INTERNAL



SECTION V - HEALTH HAZARD DATA - cont.

ORGANS SUCH AS BLOOD, LIVER, KIDNEYS, AND TESTES. SOME STUDIES INDICATE LONG-TERM CHRONIC EXPOSURE TO 2-ETHOXYETHANOL AND 2-ETHOXYETHANOL ACETATE MAY CAUSE REPRODUCTIVE DISORDERS.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: UNKNOWN.

PRIMARY ROUTE(S) OF ENTRY: DERMAL AND INHALATION.

EMERGENCY AND FIRST AID PROCEDURES: INHALATION: REMOVE TO FRESH AIR AND RESTORE BREATHING. TREAT SYMPTOMATICALLY AND CONSULT A PHYSICIAN. SKIN CONTACT: REMOVE COATING WITH SOLVENT. IMMEDIATELY WASH AFFECTED AREA WITH SOAP AND WATER. CONSULT A PHYSICIAN IF IRRITATION PERSISTS. EYE CONTACT: FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. TAKE TO A PHYSICIAN FOR MEDICAL TREATMENT. INGESTION: DRINK 1 OR 2 GLASSES OF WATER TO DILUTE. DO NOT INDUCE VOMITING. CONSULT A PHYSICIAN OR POISON CONTROL CENTER. FOR CHEMICAL EMERGENCY - SPILL, LEAK, FIRE, EXPLOSION, OR ACCIDENT CALL CHEMTREC 1-800-424-9300 DAY OR NIGHT.

SECTION VI - REACTIVITY DATA

STABILITY: THIS PRODUCT IS STABLE UNDER NORMAL STORAGE CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR UNDER NORMAL CONDITIONS.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, AND POSSIBLY ALDEHYDES.

CONDITIONS TO AVOID: ALSO MAY PRODUCE FUMES WHEN HEATED TO DECOMPOSITION, AS IN WELDING. FUMES MAY CONTAIN OXIDES OF METALS LISTED IN SECTION II.

INCOMPATIBILITY (MATERIALS TO AVOID): NONE REASONABLY FORESEEABLE.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: AVOID BREATHING SOLVENT VAPORS. ENSURE ADEQUATE VENTILATION. AVOID SPARKS, FLAMES AND OTHER SOURCES OF HEAT WHICH COULD CAUSE FIRE.

WASTE DISPOSAL METHOD: SOAK LIQUIDS WITH SAWDUST OR RAGS AND REMOVE. FLUSH WITH WATER IF POSSIBLE. AVOID SKIN CONTACT AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: NIOSH/OSHA APPROVED RESPIRATOR TYPES SUITABLE FOR MATERIALS IN SECTION II RECOMMENDED. APPROVED CHEMICAL MECHANICAL FILTERS RECOMMENDED WHEN VENTILATION IS RESTRICTED.

VENTILATION: SUFFICIENT VENTILATION, IN VOLUME AND PATTERN, SHOULD BE PROVIDED TO KEEP AIR CONTAMINATION BELOW CURRENT APPLICABLE OSHA PERMISSIBLE EXPOSURE LIMIT OR ACGIH'S TLV LIMIT LISTED IN SECTION II.

PROTECTIVE GLOVES: PROTECTIVE GLOVES RECOMMENDED.

EYE PROTECTION: CHEMICAL GOGGLES WITH SIDE SHIELDS OR FACE SHIELDS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT: PROTECTIVE CREAMS AND CLOTHING RECOMMENDED TO AVOID SKIN CONTACT.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING, SMOKING OR USING TOILET. RESTROOM, SMOKE IN DESIGNATED AREAS ONLY.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: STORE MATERIAL IN A COOL DRY AREA WITH VENTILATION SUITABLE FOR STORING MATERIALS SHOWN IN SECTION II.

PRECAUTIONS: PROVIDE RESPIRATORY PROTECTION AGAINST SMOKE AND FUMES GENERATED DURING BURNING OR DUSTS GENERATED DURING REMOVAL OF DRY COATINGS.

COATING/THINNER DATA FORM

Company Name: SEEDSVAIL NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY
 Applicable APCB Certificate #: CONST SAND BLAST & PAINT SHIP PW/TWO BLDG ROOF EXHS
 Product Name: INDUSTRIAL ENAMEL
 Product Manufacturer: THE SHERWIN-WILLIAMS CO

Usage Data

Daily (gal/day): 2/260 = 0.008

Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 8.86

Solids % by Weight: 60 % by Volume: 42.9

VOC % by Weight: 40 % by Volume: 57.1

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): CAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
 Title: MANAGER OF ENVIRONMENTAL QUALITY

B54 W 102

12

MATERIAL SAFETY DATA SHEET
FOR COATINGS, RESINS AND RELATED MATERIALS
(Approved by U.S. Department of Labor 'Essentially Similar' to Form OSHA-101)

RECEIVED
SCN

MANUFACTURER'S NAME THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, Ohio 44115

EMERGENCY TELEPHONE NO. (216) 566-2917

DATE OF PREPARATION 5-Mar-86

INFORMATION TELEPHONE NO. (216) 566-2902

APR 23 1987

Section I -- PRODUCT IDENTIFICATION

PRODUCT NUMBER B54 W 102 * - Trade Mark

PRODUCT NAME Industrial Enamel, Midtone Base

PRODUCT CLASS Alkyd Enamel

Section II -- HAZARDOUS INGREDIENTS

CAS No.	INGREDIENT	PERCENT	TLV-PPM	TLV-MG/M3	LEL	V.P.
64742-47-8	Mineral Spirits.	40	100.	581.	1.0	2.0

Section III -- PHYSICAL DATA

EVAPORATION RATE -- Slower than Ether VAPOR DENSITY -- Heavier than Air

BOILING RANGE (F) 300 - 395 % VOLATILE VOLUME 57.1 WT/GAL 8.96

Section IV -- FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION Combustible; Flash above 99 and below 200 F

FLASH POINT 101 F PMCC LEL 1.0

EXTINGUISHING MEDIA Carbon Dioxide; Dry Chemical; Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section IX -- PRECAUTIONS

DOL STORAGE CATEGORY -- 2

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Contents are COMBUSTIBLE. Keep away from heat and open flame.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

OTHER PRECAUTIONS

This coating contains materials classified as nuisance particulates, for example titanium dioxide, calcium carbonate, etc. (see ACGIH TLV List, Particulate and Appendix D), which may be present at hazardous levels only during sanding or abrading of the dried film.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

COATING/THINNER DATA FORM

Company Name: SEQUOIAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY
 Applicable APCB Certificate #: (CONST. SAND BLAST & PAINT SHOP W/ TWO BLDG ROOF EXHS)
 Product Name: INDUSTRIAL ENAMEL
 Product Manufacturer: THE SHERWIN-WILLIAMS CO

Usage Data

Daily (gal/day): 2/260 = 0.008
 Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 9
 Solids % by Weight: 55 % by Volume: 42
 VOC % by Weight: 45 % by Volume: 58
 Water % by Weight: 0 % by Volume: 0

As Applied (Diluted):

SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____
 Solids % by Weight: _____ % by Volume: _____
 VOC % by Weight: _____ % by Volume: _____
 Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA
 Density (lbs/gal): _____
 Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: M. R. Schmitt
 Title: MANAGER OF ENVIRONMENTAL QUALITY

8542 MATERIAL SAFETY DATA SHEET FOR COATINGS, RESINS AND RELATED MATERIALS (Approved by U.S. Department of Labor 'Essentially Similar' to Form OSHA-20)

MANUFACTURER'S NAME THE SHERWIN-WILLIAMS COMPANY (214) 566-2111 EMERGENCY TELEPHONE NO. (214) 566-2111 DATE OF PREPARATION 3-Oct-68 INFORMATION TELEPHONE NO. (214) 566-2111

SECTION I -- PRODUCT IDENTIFICATION PRODUCT NAME Industrial Enamel, Non-Lead Colors TRADE DATA PRODUCT NUMBER AND COLORS 854 A 12 Tower Gray 854 A 13 Black Gray 854 B 11 Black 854 E 29 Safety Orange 854 U 14 Cedar Green 854 W 16 Walnut Brown 854 X 15 Deck Red 854 X 28 Safety Red 854 Y 104 Ultradeep Blue 854 W 10 Brilliant White 854 W 101 Pure White 854 W 102 Midtone Sand 854 W 103 Deeptone Sand 854 Y 17 Safety Yellow

SECTION II -- HAZARDOUS INGREDIENTS Table with columns: CAS NO., INGREDIENT, % BY WEIGHT, GHS-PI, GHS-P2, GHS-P3, GHS-S, GHS-SF. Includes Mineral Spirits, Titanium Dioxide, Chromium Oxide, and Chromium III (as Cr).

SECTION III -- PHYSICAL DATA 29 °C AT 1013 hPa -- Slower than Ethyl Alcohol DENSITY -- 0.95-1.00 g/ml 20 °C VAPOR DENSITY -- 1.00 (air = 1) VAPOR PRESSURE -- 10-15 mm Hg @ 20 °C

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA FLAMMABILITY CLASSIFICATION Combustible, Flash above 99 and below 100 F FLASH POINT 101 F PFRCC LEL 1.0 EXTINGUISHING MEDIA Carbon Dioxide, Dry Chemical, Foam UNUSUAL FIRE AND EXPLOSION HAZARDS Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame.

SECTION V -- TOXICOLOGICAL INFORMATION ACUTE TOXICITY: Inhalation: LD50 (rat) 1.0 g/kg. Ingestion: LD50 (rat) 1.0 g/kg. Dermal: LD50 (rat) 1.0 g/kg. CHRONIC TOXICITY: Inhalation: No adverse effects observed at 100 mg/m3 for 6 months. Ingestion: No adverse effects observed at 100 mg/kg for 6 months. Dermal: No adverse effects observed at 100 mg/kg for 6 months.

SECTION VI -- REACTIVITY DATA STABILITY -- Stable HAZARDOUS DECOMPOSITION PRODUCTS By itself: Carbon Dioxide, Carbon Monoxide HAZARDOUS POLYMERIZATION -- Will Not Occur SECTION VII -- SPILL OR LEAK PROCEDURES STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition. Ventilate and remove with inert absorbent. WASTE DISPOSAL METHOD Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability and extractability to determine the applicable EPA hazardous waste number.

SECTION VIII -- PROTECTION INFORMATION PRECAUTIONS TO BE TAKEN IN USE Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using. Protect against hazardous dust or fumes which may be generated by sanding or abrading of the dried film. VENTILATION Local exhaust preferred. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108. RESPIRATORY PROTECTION If personal exposure cannot be controlled below applicable limits by ventilation, wear respiratory device approved by NIOSH/MSHA for protection against materials in Section II.

SECTION IX -- PRECAUTIONS DOL STORAGE CATEGORY -- 2 PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Containers are COMBUSTIBLE. Keep away from heat and open flame. Consult NFPA Code. Use approved handling and Grounding procedures. Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children. OTHER PRECAUTIONS This coating contains materials classified as nuisance particulates, for example titanium dioxide, calcium carbonate, etc. (see ACGIH TLV List, Preface and Appendix D), which may be present at hazardous levels only during sanding or abrading of the dried film. Intentional release by deliberately sandblasting and labeling the contents can be harmful or fatal.

8542 Industrial Enamel, Non-Lead Colors page 1 SPECIAL FIRE FIGHTING PROCEDURES Full protective equipment including self-contained breathing apparatus should be used. Vapor spray may be irritating. If water is used, the material is dispersible. Water may be used to cool fire containers. A pressure relief valve and possible disintegration of material may occur during fire.

SECTION V -- HEALTH HAZARD DATA THRESHOLD LIMIT VALUE -- See Section II EFFECTS OF OVEREXPOSURE ACUTE: Overexposure causes eye, skin and respiratory irritation. Eye causes mucous membrane irritation accompanied by burning, stinging, redness, tearing and stinging pain. Severe overexposure may result in conjunctivitis and possible cornea. CHRONIC: Prolonged overexposure to ingredients in Section II may cause adverse effects in the liver, and urinary systems. Risk exposed to titanium dioxide dust at 150 mg/m3 developed lung cancer, however, such exposure levels are not attainable in the workplace. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

EMERGENCY AND FIRST AID PROCEDURES IF INHALED: If affected, remove from exposure. Restore breathing. Feed water and quiet. IF ON SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use. IF IN EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SECTION VI -- REACTIVITY DATA STABILITY -- Stable HAZARDOUS DECOMPOSITION PRODUCTS By itself: Carbon Dioxide, Carbon Monoxide HAZARDOUS POLYMERIZATION -- Will Not Occur

SECTION VII -- SPILL OR LEAK PROCEDURES STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition. Ventilate and remove with inert absorbent. WASTE DISPOSAL METHOD Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability and extractability to determine the applicable EPA hazardous waste number. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and local regulations regarding pollution.

SECTION VIII -- PROTECTION INFORMATION PRECAUTIONS TO BE TAKEN IN USE Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using. Protect against hazardous dust or fumes which may be generated by sanding or abrading of the dried film. VENTILATION Local exhaust preferred. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108. RESPIRATORY PROTECTION If personal exposure cannot be controlled below applicable limits by ventilation, wear respiratory device approved by NIOSH/MSHA for protection against materials in Section II.

RECEIVED BY MAIL AUG 9 1983

8542 Industrial Enamel, Non-Lead Colors page 2 PROTECTIVE GLOVES Wear gloves which are recommended by glove supplier for protection against materials in Section II. EYE PROTECTION Wear safety spectacles with unperforated side shields.

SECTION IX -- PRECAUTIONS DOL STORAGE CATEGORY -- 2 PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Containers are COMBUSTIBLE. Keep away from heat and open flame. Consult NFPA Code. Use approved handling and Grounding procedures. Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children. OTHER PRECAUTIONS This coating contains materials classified as nuisance particulates, for example titanium dioxide, calcium carbonate, etc. (see ACGIH TLV List, Preface and Appendix D), which may be present at hazardous levels only during sanding or abrading of the dried film. Intentional release by deliberately sandblasting and labeling the contents can be harmful or fatal.

HMSI table with columns: HEALTH, FLAMMABILITY, REACTIVITY. Values: HEALTH 2, FLAMMABILITY 2, REACTIVITY 0.

B54 Lead-Containing Colors on reverse.

This Material Safety Data Sheet conforms to the Hazard Communication standard, 29 CFR 1910.1201(g)(1), for similar chemical mixtures. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. These conditions of use are outside our control. We make no warranty, express or implied, and assume no liability in connection with any use of this information.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: CONST. SAND BLAST & PAINT SHOP W/ TWO BLDG ROOF EXHST

Product Name: CONTROL RUST ALL SURFACE ENAMEL

Product Manufacturer: THE SHERMAN-WILLIAMS CO

Usage Data

Daily (gal/day): 2/260 = 0.008

Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 9

Solids % by Weight: 50 % by Volume: 40

VOC % by Weight: 50 % by Volume: 60

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: N/A

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: W Paul Schmeckel
Title: MANAGER OF ENVIRONMENTAL QUALITY

HMC 1346

K8 Series Controls Rust All Surface Enamel

Section V -- HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE -- See Section II

EFFECTS OF OVEREXPOSURE

ACUTE: In a confined area vapors in high concentration are anesthetic. Overexposure may result in lightheadedness and staggering gait.

CHRONIC: Irritant to skin and upper respiratory system. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

EMERGENCY AND FIRST AID PROCEDURES

If INHALED: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

If on SKIN: Wash affected area thoroughly with soap and water.

If in EYES: Remove contaminated clothing and launder before re-use. Flush eyes with large amounts of water for 15 minutes. Get medical attention.

Section VI -- REACTIVITY DATA

STABILITY -- Stable

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION -- Will Not Occur

Section VII -- SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate and remove with inert absorbent.

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and Local regulations regarding pollution.

Section VIII -- PROTECTION INFORMATION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using.

Protect against dust which may be generated by sanding or abrading the dried film.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear respiratory device approved by NIOSH/MSHA for protection against materials in Section II.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section II.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

K8 Series MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor 'Essentially Similar' to form OSHA-20)

EMERGENCY TELEPHONE NO. (216) 566-2917

THE SHERWIN-WILLIAMS COMPANY

101 Prospect Avenue N.W.

Cleveland, Ohio 43115

DATE OF PREPARATION 15-May-86

INFORMATION TELEPHONE NO. (216) 566-2902

Section I -- PRODUCT IDENTIFICATION

Trade Mark

PRODUCT NAME	Color	Appearance
K8 B 3	Gloss Black	Gloss Black
K8 B 14	Wr. Iron Flat Black	Gloss Red
K8 E 5	Gloss Orange	Gloss Appliance White
K8 E 6	Gloss Orange	Wr. Iron Flat White
K8 G 6	Gloss Green	Gloss Yellow
K8 L 7	Gloss Blue	Gloss Yellow
K8 L 8	Gloss Blue	

Alkyd Enamel

Section II -- HAZARDOUS INGREDIENTS

INGREDIENT	BY WEIGHT	ACRIM-TLV	OSHA-TLV	UNITS	V.P.
742-47-8 Mineral Spirits.		100	500	PPM	2.0
742-88-7 Mineral Spirits 140 Flash.	and/or	100	500	PPM	0.5

Section III -- PHYSICAL DATA

EVAPORATION RATE	FLASH POINT	VAPOR DENSITY
Slower than Ether	105 F PHCC	-- Heavier than Air
300 - 416	LEL: 0.7	WT/GAL
		7.7-11.1

Section IV -- FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: Flash above 99 and below 200 F

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam

SPECIAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions during emergency conditions overexposure to composition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section IX -- PRECAUTIONS

DOL STORAGE CATEGORY -- 2
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Contents are COMBUSTIBLE. Keep away from heat and open flame.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Keep container closed when not in use. Transfer only to approved containers with complete
and appropriate labelling. Do not take internally. Keep out of the reach of children.

OTHER PRECAUTIONS
This coating contains materials classified as nuisance particulates, for example
titanium dioxide, calcium carbonate, etc. (see ACCIH TLY List, Preface and Appendix D),
which may be present at hazardous levels only during sanding or abrading of the dried film.

Intentional misuse: by deliberately concentrating and inhaling the contents can be harmful
or fatal.

This Material Safety Data Sheet conforms to the Hazard Communication standard,
29 CFR 1910.1200(g)(4), for similar complex mixtures.
The above information pertains to this product as currently formulated, and is based on
the information available at this time. Addition of reducers or other additives to this
product may substantially alter the composition and hazards of the product. Since conditions
of use are outside our control, we make no warranties, express or implied, and assume no
liability in connection with any use of this information.

COATING/THINNER DATA FORM

Company Name: SENOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (CONST. SAND BLAST & PAINT SHOP W/ TWO BLDG ROOF EXHS)

Product Name: PROMAR - 400 LATEX SEMI-GLOSS ENAMEL

Product Manufacturer: THE SHERMAN - WILLIAMS CO

Usage Data

Daily (gal/day): 2/260 = 0.008

Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 10

Solids % by Weight: 90 % by Volume: 30

VOC % by Weight: 10 % by Volume: 70

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Handwritten Signature]
Title: MANAGER OF ENVIRONMENTAL QUALITY

HMC 2852

093750

MATERIAL SAFETY DATA SHEET
 FOR COATINGS, RESINS AND RELATED MATERIALS
 (Approved by U.S. Department of Labor "Essentially Similar" to form OSHA-10)

EMERGENCY TELEPHONE NO. 1-800-368-5876

MANUFACTURER'S NAME: **3M SHELLS-HELLMAN COMPANY**
 121 Woodcock Avenue W. Waukegan, Ill. 60087
 219/866-0100 FAX 219/866-1411

DATE OF PREPARATION: 4/25/87-26 E

INFORMATION TELEPHONE NO. (219) 366-2182

Section I -- PRODUCT IDENTIFICATION

PRODUCT NAME: **PRONAR 400 Latex Semi-Gloss Enamel**

PRODUCT NUMBERS AND COLORS:
 831 W 401 Pure White (Base I) 831 W 402 Dove White
 831 W 403 Midtone (Base I) 831 W 404 Dove White
 831 W 405 Deepness (Base II) 831 W 406 Stipple White
 Including Non-Lead Tinted Colors

PRODUCT CLASS: **Latex Paint**

Section II -- HAZARDOUS INGREDIENTS

CAS NO.	CONCENTRATION	PERCENTAGE	HAZARD	PPM	PPM
127-26-1	Carbon Dioxide	5	50 M	PPM	0.1
107-11-3	Diethylene Glycol	5	50	PPM	0.1

PR & S.S.

Section III -- PHYSICAL DATA

EVAPORATION RATE -- Slower than Ethyl Acetate

BOILING RANGE (F) 107-110

VOLATILE VOLUME 9.2-10.2

Section IV -- FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: **Not Applicable**

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS: Extreme heat may cause closed containers to burst. Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, the nozzle is preferably fog. Water may be used to cool closed containers to prevent pressure build-up and possible venting or explosion when opened to relieve heat.

831-400 Section PRONAR 400 Latex Semi-Gloss Enamel

Section V -- HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE -- See Section II

EFFECTS OF OVEREXPOSURE

ACUTE: In a confined area vapors of high concentration may irritate the respiratory system. Irritation to skin and severe respiratory system.

CHRONIC: If inhaled: If affected, remove from exposure. Seek medical attention. If on skin: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before reuse. If to eyes: Flush eyes with large amount of water for 15 minutes. Get medical attention.

Section VI -- REACTIVITY DATA

STABILITY -- Stable

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION -- Will Not Occur

Section VII -- SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE OF MATERIAL RELEASED OR SPILLED: Remove all sources of ignition. Ventilate and remove or absorb if possible.

WASTE DISPOSAL METHOD: Waste from this product is not hazardous as defined under the American Conservation and Recovery Act (RCRA) 40 CFR 151. Incinerate in approved facility. Do not incinerate closed containers. Dispose of in accordance with Federal, State and Local regulations regarding pollution.

Section VIII -- PROTECTION INFORMATION

PRECAUTIONS TO BE TAKEN IN USE
 Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using. Protect against dust which may be generated by sanding or scrubbing the dried film.

VENTILATION
 Local exhaust ventilation. General exhaust acceptable if the vapors to materials to be sanded are maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
 If personal exposure cannot be controlled by applicable limits by ventilation, wear respiratory device approved for protection against materials in Section II.

PROTECTIVE GLOVES
 Wear gloves which are resistant to the material.

EYE PROTECTION
 Wear safety goggles or face shield.

831-400 Section PRONAR 400 Latex Semi-Gloss Enamel

Section IX -- PRECAUTIONS

DO NOT STORE CATEGORY -- 1B

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

OTHER PRECAUTIONS
 This coating contains materials classified as hazardous per se, for example titanium dioxide, calcium carbonate, etc. (see OSHA TSCA List, Toxicity and Appendix D). These may be present at hazardous levels only during sanding or scrubbing of the dried film.

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This Material Safety Data Sheet conforms to the Hazard Communication standard, 29 CFR 1910.1201(a), for similar chemical products. The above information appearing in this document is currently formulated, and is based on the information available at this time. Addition of products or other materials to this product may substantially alter the composition and hazards of the product. Check conditions of use and labeling for control. We make no warranty, coverage or liability, and assume no liability in connection with any use of this information.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (CONST SAND BLAST & PAINT SHOP W/ TWO BLDG ROOF EXITS)

Product Name: WHITE GLOSS EXT/INT ENAMEL

Product Manufacturer: PPG INDUSTRIES, INC

Usage Data

Daily (gal/day): 2/260 = 0.008

Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 9.84

Solids % by Weight: 69.2 % by Volume: 45.7

VOC % by Weight: 35.8 % by Volume: 54.30

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: M. R. Schmebach
Title: MANAGER OF ENVIRONMENTAL QUALITY

MATERIAL SAFETY DATA SHEET
COATINGS AND RESINS GROUP



SECTION I - PRODUCT INFORMATION

MANUFACTURER'S NAME: PPG INDUSTRIES, INC. CODE/IDENTITY: 6-252 (0130860)
 PRODUCT SAFETY LOC.: 260 KAPPA DRIVE TRADE NAME: WHITE GLOSS EXT/INT ENAMEL
 PITTSBURGH, PA 15238 CHEMICAL FAMILY: ALKYD/OIL
 MSDS CONTACT: MANAGER, INDUSTRIAL HYGIENE AND PRODUCT SAFETY US DOT: PAINT, COMBUSTIBLE LIQUID
 (412) 963-5822 DATE OF PREPARATION: 7/14/87
 EMERGENCY TELEPHONE: (304) 843-1300 CUSTOMER PART #:

HMC 2160

SECTION II - INGREDIENTS

	APPROX %WT.	CAS NO.	EXPOSURE LIMITS		
			ACGIH TLV	OSHA PEL	PPG IPEL
ALUMINUM SILICATE	1	1335-30-4	NOT EST.	NOT EST.	NOT EST.
TITANIUM DIOXIDE #	30	13463-67-7	10.00MG/M3	15.00MG/M3	10.00MG/M3
HYDROTREATED HEAVY NAPHTHA	15	64742-48-9	NOT EST.	NOT EST.	NOT EST.
HYDROTREATED MIDDLE DISTILLATES	5	64742-46-7	NOT EST.	NOT EST.	NOT EST.
MEDIUM ALIPHATIC SOLVENT NAPHTHA	20	64742-88-7	NOT EST.	NOT EST.	NOT EST.
FILM FORMERS, RESINS, AND ADDITIVLS	30	PROPRIETARY	NOT EST.	NOT EST.	NOT EST.

CARCINOGENIC ACCORDING TO CRITERIA ESTABLISHED BY: * = NTP ** = IARC B = OSHA # = OTHER

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: 100 - 273 DEG. C SOLUBILITY IN WATER: 0.1 %
 VAPOR PRESSURE: 0.5 mmHg WT/GAL (LBS): 9.84 (U.S.)
 VAPOR DENSITY: HEAVIER THAN AIR PH: U/I
 % VOL/VOLUME: 54.30 % SOLID BY WEIGHT: 64.2
 EVAP RATE(BUOAC=100): 10 SPECIFIC GRAVITY: 1.18

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

US-DOT CATEGORY: COMBUSTIBLE FLAMMABLE LIMITS: LEL 0.8 UEL U/I
 FLASHPOINT: 106 DEG. F PHCC

EXTINGUISHING MEDIA:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL, OR UNIVERSAL AQUEOUS FILM FORMING FOAM) DESIGNED TO EXTINGUISH NFPA CLASS II COMBUSTIBLE LIQUID FIRES.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAMES. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLT ON HOT SURFACES. TOXIC GASES MAY FORM WHEN PRODUCT IS CONTACTED BY FLAME OR HOT SURFACES.

SPECIAL FIRE FIGHTING PROCEDURES:

WATER SPRAY MAY BE INEFFECTIVE. WATER SPRAY MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. FIRE-FIGHTERS SHOULD WEAR SELF CONTAINED BREATHING APPARATUS.

SECTION V - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS DECOMPOSITION: NOT EXPECTED TO OCCUR

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):

AVOID CONTACT WITH STRONG ALKALIES, STRONG MINERAL ACIDS, OR STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:

MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS WHEN HEATED. WELDING, BRAZING, OR FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT MAY PRODUCE FUMES INCLUDING:

Carbon Monoxide

SECTION VI - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

PROVIDE MAXIMUM VENTILATION. ONLY PERSONNEL EQUIPPED WITH PROPER RESPIRATORY AND SKIN AND EYE PROTECTION SHOULD BE PERMITTED IN THE AREA. REMOVE ALL SOURCES OF IGNITION. TAKE UP SPILLED MATERIAL WITH SAND, SODIUM, VERMICULITE, OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR DISPOSAL.

WASTE DISPOSAL METHOD:

WASTE MATERIAL MUST BE DEPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS. EMPTY CONTAINERS SHOULD BE RECYCLED OR DISPOSED OF THROUGH AN APPROVED WASTE MANAGEMENT FACILITY.

SECTION VII - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: HARMFUL OR FATAL IF SWALLOWED.
 EYE CONTACT: CAUSES EYE IRRITATION.
 SKIN CONTACT: MAY CAUSE MODERATE SKIN IRRITATION.
 INHALATION: VAPOR AND SPRAY MIST MAY BE HARMFUL IF INHALED.

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JUL 31 1987

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	400 ppm for solvent (isopropyl alcohol)
EFFECTS OF OVEREXPOSURE	Mild dizziness when continuously inhaled. Might be irritating to skin of sensitive persons.
EMERGENCY AND FIRST AID PROCEDURES	If skin contact, wash with soap and water. If swallowed, do not induce vomiting. Call physician immediately.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid) None			
HAZARDOUS DECOMPOSITION PRODUCTS None			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

FOR TVA USE ONLY

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	Wipe up with rags. Wash off with alkaline detergent.
WASTE DISPOSAL METHOD	Dispose of in accordance with local, state and federal regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)	Not required	
VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General)	OTHER
PROTECTIVE GLOVES	Not required	EYE PROTECTION Not required
OTHER PROTECTIVE EQUIPMENT		

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	Store in cool, dry place.
OTHER PRECAUTIONS	

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY
 Applicable APCB Certificate #: CONST SAND BLAST & PAINT SHOP W/ TWO BLDG ROOF EXITS
 Product Name: REM LUSTRIAL ENAMEL, NON-LEAD COLORS
 Product Manufacturer: THE SHERWIN-WILLIAMS CO

Usage Data

Daily (gal/day): 2/260 = 0.008

Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 8.5

Solids % by Weight: 25 % by Volume: 35

VOC % by Weight: 75 % by Volume: 65

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Handwritten Signature]
 Title: MANAGER OF ENVIRONMENTAL QUALITY

HMC 556

REN LUSTRAL® Enamel, Non-Lead Colors

765 Series

UNUSUAL FIRE AND EXPLOSION HAZARDS
 Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and flames. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. During emergency conditions, responders in decontamination products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.
 SPECIAL FIRE FIGHTING PROCEDURES
 Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build up and possible autoignition or explosion when exposed to extreme heat.

MATERIAL SAFETY DATA SHEET
 FOR COATINGS, RESINS AND RELATED MATERIALS
 Issued by U.S. Department of Labor (Essentially Shelter) to form OSHA-201
 WILLIAMS COMPANY
 10000 W. 10th Avenue, W.M.
 Denver, Colorado 80231
 EMERGENCY TELEPHONE NO.
 (316) 566-2917

Section V -- HEALTH HAZARD DATA
 THRESHOLD LIMIT VALUE -- See Section II
 EFFECTS OF OVEREXPOSURE
 ACUTE: In a confined area vapors in high concentration are anesthetic. Overexposure result in lightheadedness and staggering gait.
 Iritant to skin and upper respiratory system.
 CHRONIC: Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.
 EMERGENCY AND FIRST AID PROCEDURES
 IF INHALED: If affected, remove from exposure. Restore breathing. Keep warm and quiet. If on SKIN: Wash affected area thoroughly with soap and water.
 IF IN EYES: Flush eyes with large amounts of water for 15 minutes.
 Get medical attention.

Section I -- PRODUCT IDENTIFICATION
 Trade Mark
 Trade Name
 INFORMATION TELEPHONE NO.
 (216) 566-2962

Section VI -- REACTIVITY DATA
 STABILITY -- Stable
 HAZARDOUS DECOMPOSITION PRODUCTS
 By fire: Carbon Dioxide, Carbon Monoxide
 HAZARDOUS POLYMERIZATION -- Will Not Occur
 Section VII -- SPILL OR LEAK PROCEDURES
 STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
 Remove all sources of ignition. Ventilate and remove with inert absorbent.
 WASTE DISPOSAL METHOD
 Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and Local regulations regarding pollution.
 Section VIII -- PROTECTION INFORMATION
 PRECAUTIONS TO BE TAKEN IN USE
 Use only with adequate ventilation. Avoid breathing vapors and spray mist. Avoid contact with skin and eyes. Wash hands after using.
 Protect against dust which may be generated by sanding or abrading the dried film.
 VENTILATION
 Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.107, 1910.108.
 RESPIRATORY PROTECTION
 If personal exposure cannot be controlled below applicable limits by ventilation, use respiratory device approved by NIOSH/MSHA for protection against materials in Section II.

Section II -- HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV-TWA	TLV-STC	REL.	V.P.
4 P. Naphtha	0-5	300	1350	0.9	12.0
Alc. Spirits	35-55	100	581	1.0	2.0
Alc. Solvents 140-Flash	0-5	200	1370	0.9	0.5
Acetone	0-5	25	120	1.1	0.6
Diethylpropanol	0-5	100	600	0.9	0.4
(See P6)	0.0-0.01			0.05	

Section III -- PHYSICAL DATA
 VAPOR DENSITY -- Heavier than Air
 VAPOR VOLUME
 58-65
 Section IV -- FIRE AND EXPLOSION HAZARD DATA
 FLASH POINT 102 F FMCC
 LEL 0.9
 UEL 7.4-9.6

Section V -- Trade Mark
 Trade Name
 INFORMATION TELEPHONE NO.
 (216) 566-2962

Section II -- HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV-TWA	TLV-STC	REL.	V.P.
4 P. Naphtha	0-5	300	1350	0.9	12.0
Alc. Spirits	35-55	100	581	1.0	2.0
Alc. Solvents 140-Flash	0-5	200	1370	0.9	0.5
Acetone	0-5	25	120	1.1	0.6
Diethylpropanol	0-5	100	600	0.9	0.4
(See P6)	0.0-0.01			0.05	

Section III -- PHYSICAL DATA
 VAPOR DENSITY -- Heavier than Air
 VAPOR VOLUME
 58-65
 Section IV -- FIRE AND EXPLOSION HAZARD DATA
 FLASH POINT 102 F FMCC
 LEL 0.9
 UEL 7.4-9.6

Continued on page 8

Continued on page 7

COATING/THINNER DATA FORM

Company Name: SEQUOIAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY
 Applicable APCB Certificate #: CONST. SAND BLAST & PAINT SHOP W/ TWO BLDG ROOF EXHS.
 Product Name: QUICK DRY ENAMEL
 Product Manufacturer: PPG INDUSTRIES INC

Usage Data

Daily (gal/day): 2/260 = 0.008

Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 9.15

Solids % by Weight: 62.3 % by Volume: 46.9

VOC % by Weight: 37.7 % by Volume: 53.10

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SOME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
 Title: MANAGER OF ENVIRONMENTAL QUALITY



021157
HMC 2657

MATERIAL SAFETY DATA SHEET COATINGS AND RESINS GROUP

SECTION I - PRODUCT INFORMATION

MANUFACTURER'S NAME: **PPG INDUSTRIES, INC.** CODE/IDENTITY: **5433** (111885E)
 PRODUCT SAFETY LOC.: **260 KAPPA DRIVE** TRADE NAME: **PPG PROPRIETARY**
PITTSBURGH, PA 15238 CHEMICAL FAMILY: **ALKYD**
 MSDS CONTACT: MANAGER, **INDUSTRIAL HYGIENE** DOT CLS: **PAINT, COMBUSTIBLE LIQUID**
AND PRODUCT SAFETY DATE OF PREPARATION: **1/4/01/86**
 EMERGENCY TELEPHONE: **(412) 963-5822**
(304) 843-1300

SECTION II - INGREDIENTS

INGREDIENTS	APPROX. % WT.	CAS NO.	EXPOSURE LIMITS		
			ACGIH TLV	OSHA PEL	PPG IPEL
ALUMINUM SILICATE	5	1335-38-4	NOT EST.	NOT EST.	NOT EST.
TITANIUM DIOXIDE	20	13463-67-7	10.00Mg/M3	15.00Mg/M3	10.00Mg/M3
ODORLESS MINERAL SPIRITS	20	8032-32-4	NOT EST.	NOT EST.	NOT EST.
HIGH BOILING ALIPHATIC SOLVENTS	5	NOT EST.	NOT EST.	NOT EST.	NOT EST.
MINERAL SPIRITS - RULE 66	15	8032-32-4	NOT EST.	NOT EST.	NOT EST.
PIGMENTS, RESINS, AND ADDITIVES	35	PROPRIETARY	NOT EST.	NOT EST.	NOT EST.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE : 136 - 273 DEG.C SOLUBILITY IN WATER: 0.0 % RECEIVED
 VAPOR PRESSURE: 0.5 mmHg WT/GAL (LBS): 9.15 SUN
 VAPOR DENSITY : HEAVIER THAN AIR pH: U/I
 % VOL/VOLUME : 53.10 % SOLID BY WEIGHT: 62.3 MAY 6 1988
 EVAP RATE (BuGAc=100): 9

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: **COMBUSTIBLE**
 FLASHPOINT: **104 DEG F PMCC** FLAMMABLE LIMITS: LEL 0.8 UEL U/I

EXTINGUISHING MEDIA:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL OR UNIVERSAL AQUEOUS FILM FORMING FOAM) DESIGNED TO EXTINGUISH NFPA CLASS IIIB COMBUSTIBLE LIQUID FIRES.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

~~KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAMES. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPROXIMATE HOT SURFACES. TOXIC GASES MAY FORM WHEN PRODUCT IS CONTACTED BY FLAME OR HOT SURFACES.~~

SPECIAL FIRE FIGHTING PROCEDURES:

WATER SPRAY MAY BE INEFFECTIVE. WATER SPRAY MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. FIRE-FIGHTERS SHOULD WEAR SELF CONTAINED BREATHING APPARATUS.

SECTION V - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: NOT EXPECTED TO OCCUR
 INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):
 AVOID CONTACT WITH STRONG ALKALIES, STRONG MINERAL ACIDS, OR STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:

MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS WHEN HEATED. WELDING, BRAZING, OR FLAME-CUTTING ON SURFACES COATED WITH THIS PRODUCT MAY PRODUCE FUMES INCLUDING:
 Carbon Monoxide.

SECTION VI - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

PROVIDE MAXIMUM VENTILATION. ONLY PERSONNEL EQUIPPED WITH PROPER RESPIRATORY AND SKIN AND EYE PROTECTION SHOULD BE PERMITTED IN THE AREA. REMOVE ALL SOURCES OF IGNITION. TAKE UP SPILLED MATERIAL WITH SAWDUST, VERMICULITE, OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR DISPOSAL.

WASTE DISPOSAL METHOD:

WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS. EMPTY CONTAINERS SHOULD BE RECYCLED OR DISPOSED OF THROUGH AN APPROVED WASTE MANAGEMENT FACILITY.

SECTION VII - HEALTH HAZARD DATA**EFFECTS OF OVEREXPOSURE FROM:****INGESTION:**

HARMFUL OR FATAL IF SWALLOWED.

EYE CONTACT:

CAUSES EYE IRRITATION.

SKIN CONTACT:

MAY CAUSE MODERATE SKIN IRRITATION.

INHALATION:

VAPOR AND SPRAY MIST MAY BE HARMFUL IF INHALED.

REPEATED EXPOSURE TO HIGH VAPOR CONCENTRATIONS MAY CAUSE IRRITATION OF THE RESPIRATORY SYSTEM AND PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE.

INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.

CHRONIC OVEREXPOSURE:

AVOID LONG-TERM AND REPEATED CONTACT.

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

EYE WATERING, HEADACHES, NAUSEA, DIZZINESS, AND LOSS OF COORDINATION ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH.

REDNESS, ITCHING, BURNING SENSATIONS AND VISUAL DISTURBANCES MAY BE INDICATIONS THAT EXCESSIVE EYE CONTACT HAS OCCURED.

DRYNESS, ITCHING, CRACKING, BURNING, REDNESS, AND SWELLING ARE CONDITIONS ASSOCIATED WITH EXCESSIVE SKIN CONTACT.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NOT APPLICABLE**SECTION VIII - FIRST AID PROCEDURES****INGESTION:**

IF SWALLOWED, DO NOT INDUCE VOMITING.

EYE CONTACT:

IN CASE OF EYE CONTACT, FLUSH EYES IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 5 MINUTES.

SKIN CONTACT:

IN CASE OF SKIN CONTACT, REMOVE PROMPTLY BY WIPING, FOLLOWED BY WATERLESS HAND CLEANER AND SOAP AND WATER.

INHALATION:

IF AFFECTED BY INHALATION OF VAPOR OR SPRAY MIST, REMOVE TO FRESH AIR. APPLY ARTIFICIAL RESPIRATION AND OTHER SUPPORTIVE MEASURES AS REQUIRED.

OTHER:

IF ANY OF THE FOLLOWING OCCUR DURING OR FOLLOWING USE OF THIS PRODUCT, CONTACT A POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN IMMEDIATELY; HAVE MATERIAL SAFETY DATA SHEET INFORMATION AVAILABLE. * INGESTION, * EXCESSIVE EXPOSURE TO A CORROSIVE MATERIAL.

* PERSISTENT SKIN/EYE IRRITATION OR BREATHING DIFFICULTIES.

SECTION IX - PROTECTION INFORMATION**PERSONAL PROTECTIVE EQUIPMENT FOR:****EYE PROTECTION:**

WEAR CHEMICAL-TYPE SPLASH GOGGLES OR FULL FACE SHIELD.

SKIN PROTECTION:

WEAR PROTECTIVE CLOTHING, INCLUDING IMPERMEABLE APRON AND GLOVES CONSTRUCTED OF: NITRILE RUBBER, NEOPRENE RUBBER OR POLYVINYL ALCOHOL.

RESPIRATORY PROTECTION:

Continuation of Manufacturer's Code - 54-110

DATE OF PREP: 4/01/86

OVEREXPOSURE TO VAPORS MAY BE PREVENTED BY ENSURING VENTILATION CONTROLS, VAPOR EXHAUST OR FRESH AIR ENTRY. NIOSH/MSHA APPROVED (TC-23C-) PAINT SPRAY OR AIR SUPPLIED (TC-19C-) RESPIRATORS MAY ALSO REDUCE EXPOSURE. IN ALL CASES, READ RESPIRATOR MANUFACTURER'S INSTRUCTIONS AND LITERATURE CAREFULLY TO DETERMINE THE TYPE OF AIRBORNE CONTAMINANTS AGAINST WHICH THE RESPIRATOR IS EFFECTIVE AND HOW IT IS TO BE PROPERLY FITTED.

OTHER EQUIPMENT:

CLEAN OR DISCARD CONTAMINATED CLOTHING AND SHOES.

VENTILATION REQUIREMENTS:

PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE CONCENTRATION OF INGREDIENTS LISTED IN SECTION II BELOW THE LOWEST SUGGESTED EXPOSURE LIMITS, THE LEL IN SECTION IV BELOW THE STATED LIMIT, AND TO REMOVE DECOMPOSITION PRODUCTS DURING WELDING OR FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT.

SECTION X - SPECIAL PRECAUTIONS**HANDLING AND STORAGE PRECAUTIONS:**

DO NOT STORE ABOVE 120 DEGREES F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NFPA CLASS III B COMBUSTIBLE LIQUIDS.

OTHER PRECAUTIONS:

IF THIS MATERIAL IS PART OF A MULTIPLE COMPONENT COATING SYSTEM, READ THE MATERIAL SAFETY DATA SHEET(S) FOR THE OTHER COMPONENT OR COMPONENTS BEFORE BLENDING AS THE RESULTING MIXTURE MAY HAVE THE HAZARDS OF ALL OF ITS PARTS.

CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF LIQUIDS IN EXCESS OF A FEW INCHES.

ALL CHEMICAL SUBSTANCES IN THIS PRODUCT COMPLY WITH ALL APPLICABLE RULES OR ORDERS UNDER THE ENVIRONMENTAL PROTECTION AGENCY'S TOXIC SUBSTANCE CONTROL ACT.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

U/I = UNKNOWN INFORMATION N/A = NOT APPLICABLE NOT EST. = NOT ESTABLISHED

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (CONST. SAND BLAST & PAINT SHOP W/ TWO BLDG ROOF EXHS)

Product Name: BRILLIANT RED GLOSS ENAMEL

Product Manufacturer: PPG INDUSTRIES

Usage Data

Daily (gal/day): 2/260 = 0.008

Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 8.25

Solids % by Weight: 61.9 % by Volume: 51.4

% by Weight: 38.1 % by Volume: 48.60

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
Title: MANAGER OF ENVIRONMENTAL QUALITY



021149

HMC 2643

MATERIAL SAFETY DATA SHEET COATINGS AND RESINS GROUP

SECTION I - PRODUCT INFORMATION

MANUFACTURER'S NAME: PPG INDUSTRIES INC. CODE/IDENTITY : 54-306 (1115840)
 PRODUCT SAFETY LOC.: 250 KAPPA DRIVE TRADE NAME: BRILLIANT RED GLOSS ENAMEL
 PITTSBURGH, PA 15238 CHEMICAL FAMILY: ALKYD
 MSDS CONTACT: MANAGER, INDUSTRIAL HYGIENE AND PRODUCT SAFETY DOT CLS: PAINT, COMBUSTIBLE LIQUID
 (412) 963-5822 DATE OF PREPARATION: 3/06/86
 EMERGENCY TELEPHONE: (304) 843-1300

SECTION II - INGREDIENTS

INGREDIENTS	APPROX. % WT.	CAS NO.	EXPOSURE LIMITS		
			ACGIH TLV	OSHA PEL	PPG IPEL
ALUMINUM SILICATE	10	1335-38-4	N/A	N/A	N/A
ODORLESS MINERAL SPIRITS	20	8032-32-4	N/A	N/A	N/A
PROPYLENE CARBONATE	<1	108-32-7	N/A	N/A	N/A
METHYL ETHYL KETOXIME	<1	90-29-7	N/A	N/A	N/A
MINERAL SPIRITS	20	84742-88-7	N/A	N/A	N/A
ETHYL BENZENE	<1	100-41-4	100.00PPM	100.00PPM	100.00PPM
XYLENE	<1	1330-20-7	100.00PPM	100.00PPM	100.00PPM
FILM FORMERS, RESINS, AND ADDITIVES	50	PROPRIETARY	NOT EST.	NOT EST.	NOT EST.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE : 100 - 242 DEG.C SOLUBILITY IN WATER: 0.1 %
 VAPOR PRESSURE: 2.0 mmHg WT/GAL (LBS): 8.25
 VAPOR DENSITY : HEAVIER THAN AIR pH: N/A
 % VOL/VOLUME : 48.60 % SOLID BY WEIGHT: 61.9
 EVAP RATE(BuOAc=100): 4

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: COMBUSTIBLE FLAMMABLE LIMITS: LEL 0.9 UEL N/A
 FLASHPOINT: 101 DEG. F PMCC

EXTINGUISHING MEDIA:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL OR UNIVERSAL AQUEOUS FILM FORMING FOAM) DESIGNED TO EXTINGUISH NFPA CLASS IIIB COMBUSTIBLE LIQUID FIRES.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAMES. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLY ON HOT SURFACES. TOXIC GASES MAY FORM WHEN PRODUCT IS CONTACTED BY FLAME OR HOT SURFACES.

SPECIAL FIRE FIGHTING PROCEDURES:

WATER SPRAY MAY BE INEFFECTIVE. WATER SPRAY MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. FIRE-FIGHTERS SHOULD WEAR SELF CONTAINED BREATHING APPARATUS.

SECTION V - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: NOT EXPECTED TO OCCUR
 INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):

AVOID CONTACT WITH STRONG ALKALIES, STRONG MINERAL ACIDS, OR STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:

MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS WHEN HEATED, WELDING, BRAZING, OR FLAME-CUTTING ON SURFACES COATED WITH THIS PRODUCT MAY PRODUCE FUMES INCLUDING: Carbon Monoxide.

SECTION VI - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

PROVIDE MAXIMUM VENTILATION. ONLY PERSONNEL EQUIPPED WITH PROPER RESPIRATORY AND SKIN AND EYE PROTECTION SHOULD BE PERMITTED IN THE AREA. REMOVE ALL SOURCES OF IGNITION. TAKE UP SPILLED MATERIAL WITH SAWDUST, VERMICULITE, OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR DISPOSAL.

WASTE DISPOSAL METHOD:

WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS. EMPTY CONTAINERS SHOULD BE RECYCLED OR DISPOSED OF THROUGH AN APPROVED WASTE MANAGEMENT FACILITY.

SECTION VII - HEALTH HAZARD DATA**EFFECTS OF OVEREXPOSURE FROM:****INGESTION:**

HARMFUL OR FATAL IF SWALLOWED.
DRIED FILM OF THIS PAINT MAY BE HARMFUL IF EATEN OR CHEWED.

EYE CONTACT:

CAUSES SEVERE EYE IRRITATION.

SKIN CONTACT:

MAY CAUSE MODERATE SKIN IRRITATION.
MAY BE ABSORBED THROUGH THE SKIN.
PROLONGED OR REPEATED CONTACT MAY CAUSE AN ALLERGIC SKIN REACTION.

INHALATION:

VAPOR AND SPRAY MIST MAY BE HARMFUL IF INHALED.
MAY CAUSE LUNG IRRITATION AND ALLERGIC RESPIRATORY REACTION.
REPEATED EXPOSURE TO HIGH VAPOR CONCENTRATIONS MAY CAUSE IRRITATION OF THE RESPIRATORY SYSTEM AND PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE.
INTENTIONAL ABUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.

REPEATED EXPOSURE:

AVOID LONG-TERM AND REPEATED CONTACT.

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

EYE WATERING, HEADACHES, NAUSEA, DIZZINESS, AND LOSS OF COORDINATION ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH.
REDNESS, ITCHING, BURNING SENSATIONS AND VISUAL DISTURBANCES MAY BE INDICATIONS THAT EXCESSIVE EYE CONTACT HAS OCCURRED.
DRYNESS, ITCHING, CRACKING, BURNING, REDNESS, AND SWELLING ARE CONDITIONS ASSOCIATED WITH EXCESSIVE SKIN CONTACT.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NOT APPLICABLE

SECTION VIII - FIRST AID PROCEDURES**INGESTION:**

IF SWALLOWED, DO NOT INDUCE VOMITING.

EYE CONTACT:

IN CASE OF EYE CONTACT, FLUSH EYES IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

SKIN CONTACT:

IN CASE OF SKIN CONTACT, REMOVE PROMPTLY BY WIPING, FOLLOWED BY WATERLESS HAND CLEANER AND SOAP AND WATER.

INHALATION:

IF AFFECTED BY INHALATION OF VAPOR OR SPRAY MIST, REMOVE TO FRESH AIR. APPLY ARTIFICIAL RESPIRATION AND OTHER SUPPORTIVE MEASURES AS REQUIRED.

OTHER:

IF ANY OF THE FOLLOWING OCCUR DURING OR FOLLOWING USE OF THIS PRODUCT, CONTACT A POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN IMMEDIATELY; HAVE MATERIAL SAFETY DATA SHEET INFORMATION AVAILABLE. *INGESTION, * EXCESSIVE EXPOSURE TO A CORROSIVE MATERIAL.
* PERSISTENT SKIN/EYE IRRITATION OR BREATHING DIFFICULTIES.

Continued on Page 2

SECTION IX - PROTECTION INFORMATION**PERSONAL PROTECTIVE EQUIPMENT FOR:****EYE PROTECTION:**

WEAR CHEMICAL-TYPE SPLASH GOGGLES OR FULL FACE SHIELD.

SKIN PROTECTION:

WEAR PROTECTIVE CLOTHING, INCLUDING IMPERMEABLE APRON AND GLOVES CONSTRUCTED OF:
NITRILE RUBBER, NEOPRENE RUBBER OR POLYVINYL ALCOHOL

RESPIRATORY PROTECTION:

OVEREXPOSURE TO VAPORS MAY BE PREVENTED BY ENSURING VENTILATION CONTROLS, VAPOR EXHAUST OR FRESH AIR ENTRY. NIOSH/MSHA APPROVED (TC-23C-) PAINT SPRAY OR AIR SUPPLIED (TC-19C-) RESPIRATORS MAY ALSO REDUCE EXPOSURE. IN ALL CASES, READ RESPIRATOR MANUFACTURER'S INSTRUCTIONS AND LITERATURE CAREFULLY TO DETERMINE THE TYPE OF AIRBORNE CONTAMINANTS AGAINST WHICH THE RESPIRATOR IS EFFECTIVE AND HOW IT IS TO BE PROPERLY FITTED.

OTHER EQUIPMENT:

CLEAN OR DISCARD CONTAMINATED CLOTHING AND SHOES.

VENTILATION REQUIREMENTS:

PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE CONCENTRATION OF INGREDIENTS LISTED IN SECTION II BELOW THE LOWEST SUGGESTED EXPOSURE LIMITS, THE LEL IN SECTION IV BELOW THE STATED LIMIT, AND TO REMOVE DECOMPOSITION PRODUCTS DURING WELDING OR FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT.

SECTION X - SPECIAL PRECAUTIONS**HANDLING AND STORAGE PRECAUTIONS:**

DO NOT STORE ABOVE 120 DEGREES F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NFPA CLASS III B COMBUSTIBLE LIQUIDS.

OTHER PRECAUTIONS:

IF THIS MATERIAL IS PART OF A MULTIPLE COMPONENT COATING SYSTEM, READ THE MATERIAL SAFETY DATA SHEET(S) FOR THE OTHER COMPONENT OR COMPONENTS BEFORE BLENDING AS THE RESULTING MIXTURE MAY HAVE THE HAZARDS OF ALL OF ITS PARTS.

CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF LIQUIDS IN EXCESS OF A FEW INCHES.

ALL CHEMICAL SUBSTANCES IN THIS PRODUCT COMPLY WITH ALL APPLICABLE RULES OR ORDERS UNDER THE ENVIRONMENTAL PROTECTION AGENCY'S TOXIC SUBSTANCE CONTROL ACT.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

COATING/THINNER DATA FORM

Company Name: SEEDSVIAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY
 Applicable APCB Certificate #: CONST. SAND BLAST & PAINT SHOP W/ TWO BLDG ROOF EXHST
 Product Name: Q-D ENAMEL, SAFETY YELLOW
 Product Manufacturer: PPG INDUSTRIES INC

Usage Data

Daily (gal/day): 2/260 = 0.008
 Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 8.79
 Solids % by Weight: 61.8 % by Volume: 48.2
 VOC % by Weight: 38.2 % by Volume: 51.80
 Water % by Weight: 0 % by Volume: 0

As Applied (Diluted):

SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____
 Solids % by Weight: _____ % by Volume: _____
 VOC % by Weight: _____ % by Volume: _____
 Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA
 Density (lbs/gal): _____
 Mfr. Data Sheet or Certification is attached. Yes No _____

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Signature]
 Title: MANAGER OF ENVIRONMENTAL QUALITY

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MATERIAL SAFETY DATA SHEET
COATINGS AND RESINS GROUP

SECTION I - PRODUCT INFORMATION

MANUFACTURER'S NAME: PPG INDUSTRIES INC. CODE/IDENTITY : 54-308 (0129865)
 PRODUCT SAFETY LOC.: 260 KAPPA DRIVE TRADE NAME: O-D ENAMEL, SAFETY YELLOW
 PITTSBURGH, PA 15238 CHEMICAL FAMILY: ALKYD
 MSDS CONTACT: MANAGER, INDUSTRIAL HYGIENE AND PRODUCT SAFETY DOT CLS: PAINT, COMBUSTIBLE LIQUID
 (412) 963-5822 DATE OF PREPARATION: 9/11/86
 EMERGENCY TELEPHONE: (304) 843-1300 CUSTOMER PART #:

SECTION II - INGREDIENTS

INGREDIENTS	APPROX. % WT.	CAS NO.	EXPOSURE LIMITS		
			ACGIH TLV	OSHA PEL	PPG IPEL
TITANIUM DIOXIDE	5	13463-67-7	10.00mg/M3	15.00mg/M3	10.00mg/M3
ALUMINUM SILICATE	10	1335-30-4	NOT EST.	NOT EST.	NOT EST.
HYDROTREATED HEAVY NAPHTHA	15	64742-48-9	NOT EST.	NOT EST.	NOT EST.
MEDIUM ALIPHATIC SOLVENT NAPHTHA	20	64742-88-7	NOT EST.	NOT EST.	NOT EST.
FILM FORMERS, RESINS, AND ADDITIVES	40	PROPRIETARY	NOT EST.	NOT EST.	NOT EST.

RECEIVED
SQN
SEP 15 1986

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE : 100 - 242 DEG.C SOLUBILITY IN WATER: 0.1 %
 VAPOR PRESSURE: 0.5 mmHg WT/GAL (LBS): 8.79
 VAPOR DENSITY : HEAVIER THAN AIR pH: U/I
 % VOL/VOLUME : 51.80 % SOLID BY WEIGHT: 61.6
 EVAP RATE(BUOAC=100): 11

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: COMBUSTIBLE FLAMMABLE LIMITS: LEL 0.8 UEL U/I
 FLASHPOINT: 103 DEG. F PHCC

EXTINGUISHING MEDIA:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL, OR UNIVERSAL AQUEOUS FILM FORMING FOAM) DESIGNED TO EXTINGUISH NFPA CLASS II COMBUSTIBLE LIQUID FIRES.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAMES. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLY ON HOT SURFACES. TOXIC GASES MAY FORM WHEN PRODUCT IS CONTACTED BY FLAME OR HOT SURFACES.

SPECIAL FIRE FIGHTING PROCEDURES:

WATER SPRAY MAY BE INEFFECTIVE. WATER SPRAY MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. FIRE-FIGHTERS SHOULD WEAR SELF CONTAINED BREATHING APPARATUS.

SECTION V - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: NOT EXPECTED TO OCCUR
 INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):
 AVOID CONTACT WITH STRONG ALKALIES, STRONG MINERAL ACIDS, OR STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:

MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS WHEN HEATED. WELDING, BRAZING, OR FLAME-CUTTING ON SURFACES COATED WITH THIS PRODUCT MAY PRODUCE FUMES INCLUDING:
 Carbon Monoxide.

SECTION VI - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

PROVIDE MAXIMUM VENTILATION. ONLY PERSONNEL EQUIPPED WITH PROPER RESPIRATORY AND SKIN AND EYE PROTECTION SHOULD BE PERMITTED IN THE AREA. REMOVE ALL SOURCES OF IGNITION. TAKE UP SPILLED MATERIAL WITH SAND, VERMICULITE, OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR DISPOSAL.

WASTE DISPOSAL METHOD:

WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS. EMPTY CONTAINERS SHOULD BE RECYCLED OR DISPOSED OF THROUGH AN APPROVED WASTE MANAGEMENT FACILITY.

SECTION VII - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: RCM:

INGESTION: HARMFUL OR FATAL IF SWALLOWED.
 EYE CONTACT: CAUSE: EYE IRRITATION.
 SKIN CONTACT: MAY CAUSE MODERATE SKIN IRRITATION.
 INHALATION: VAPOR AND SPRAY MIST MAY BE HARMFUL IF INHALED. REPEATED EXPOSURE TO HIGH VAPOR CONCENTRATIONS MAY CAUSE IRRITATION OF THE RESPIRATORY

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SYSTEM AND PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE.
INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.

CHRONIC OVEREXPOSURE:
AVOID LONG-TERM AND REPEATED CONTACT.

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

EYE WATERING, HEADACHES, NAUSEA, DIZZINESS, AND LOSS OF COORDINATION ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH.
REDNESS, ITCHING, BURNING SENSATIONS AND VISUAL DISTURBANCES MAY BE INDICATIONS THAT EXCESSIVE EYE CONTACT HAS OCCURED.
DRYNESS, ITCHING, CRACKING, BURNING, REDNESS, AND SWELLING ARE CONDITIONS ASSOCIATED WITH EXCESSIVE SKIN CONTACT.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NOT APPLICABLE

SECTION VIII - FIRST AID PROCEDURES

INGESTION:

IF SWALLOWED, DO NOT INDUCE VOMITING.

EYE CONTACT:

IN CASE OF EYE CONTACT, FLUSH EYES IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

SKIN CONTACT:

IN CASE OF SKIN CONTACT, REMOVE PROMPTLY BY WIPING, FOLLOWED BY WATERLESS HAND CLEANER AND SOAP AND WATER.

INHALATION:

IF AFFECTED BY INHALATION OF VAPOR OR SPRAY MIST, REMOVE TO FRESH AIR. APPLY ARTIFICIAL RESPIRATION AND OTHER SUPPORTIVE MEASURES AS REQUIRED.

OTHER:

IF ANY OF THE FOLLOWING OCCUR DURING OR FOLLOWING USE OF THIS PRODUCT, CONTACT A POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN IMMEDIATELY; HAVE MATERIAL SAFETY DATA SHEET INFORMATION AVAILABLE. *INGESTION *EXCESSIVE EXPOSURE TO A CORROSIVE MATERIAL.
* PERSISTENT SKIN/EYE IRRITATION OR BREATHING DIFFICULTIES.

SECTION IX - PROTECTION INFORMATION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION:

WEAR CHEMICAL-TYPE SPLASH GOGGLES OR FULL FACE SHIELD.

SKIN PROTECTION:

WEAR PROTECTIVE CLOTHING, INCLUDING IMPERMEABLE APRON AND GLOVES CONSTRUCTED OF: NITRILE RUBBER, NEOPRENE RUBBER OR POLYVINYL ALCOHOL

RESPIRATORY PROTECTION:

OVEREXPOSURE TO VAPORS MAY BE PREVENTED BY ENSURING VENTILATION CONTROLS, VAPOR EXHAUST OR FRESH AIR ENTRY. NIOSH/MSHA-APPROVED (TC-23C-) PAINT SPRAY OR AIR SUPPLIED (TC-19C-) RESPIRATORS MAY ALSO REDUCE EXPOSURE. IN ALL CASES, READ RESPIRATOR MANUFACTURER'S INSTRUCTIONS AND LITERATURE CAREFULLY TO DETERMINE THE TYPE OF AIRBORNE CONTAMINANTS AGAINST WHICH THE RESPIRATOR IS EFFECTIVE AND HOW IT IS TO BE PROPERLY FITTED.

OTHER EQUIPMENT:

CLEAN OR DISCARD CONTAMINATED CLOTHING AND SHOES.

VENTILATION REQUIREMENTS:

PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE CONCENTRATION OF INGREDIENTS LISTED IN SECTION II BELOW THE LOWEST SUGGESTED EXPOSURE LIMITS, THE LEL IN SECTION IV BELOW THE STATED LIMIT, AND TO REMOVE DECOMPOSITION PRODUCTS DURING WELDING OR FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT.

SECTION X - SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS:

DO NOT STORE ABOVE 120 DEGREES F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NFPA CLASS II COMBUSTIBLE LIQUIDS.

OTHER PRECAUTIONS:

IF THIS MATERIAL IS PART OF A MULTIPLE COMPONENT COATING SYSTEM, READ THE MATERIAL SAFETY DATA SHEET(S) FOR THE OTHER COMPONENT OR COMPONENTS BEFORE BLENDING AS THE RESULTING MIXTURE MAY HAVE THE HAZARDS OF ALL OF ITS PARTS.
CONTAINERS SHOULD BE GROUNDDED WHEN POURING. AVOID FREE FALL OF LIQUIDS IN EXCESS OF A FEW INCHES.
ALL CHEMICAL SUBSTANCES IN THIS PRODUCT COMPLY WITH ALL APPLICABLE RULES OR ORDERS UNDER THE ENVIRONMENTAL PROTECTION AGENCY'S TOXIC SUBSTANCE CONTROL ACT.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

U/I = UNKNOWN INFORMATION N/A = NOT APPLICABLE NOT EST. = NOT ESTABLISHED

PPIC 1120 (CUSTOMER NO.) LOCATION : 0809 8654/308/////911

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (CONST SAND BLASTING & PAINT SHOP)

Product Name: QUICK DRY ENAMEL SAFETY GREEN

Product Manufacturer: PPG INDUSTRIES INC

Usage Data

Daily (gal/day): 2/260 = 0.008

Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 8.3

Solids % by Weight: 57.19 % by Volume: 45.3

VOC % by Weight: 42.81 % by Volume: 54.70

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No _____

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: M Paul Kinneloch
Title: MANAGER OF ENVIRONMENTAL QUALITY

MATERIAL SAFETY DATA SHEET
COATINGS AND RESINS GROUP



SECTION I - PRODUCT INFORMATION

MANUFACTURER'S NAME: PPG INDUSTRIES INC. CODE/IDENTITY: 54-311 (0526870)
 PRODUCT SAFETY LOC.: 260 KAPPA DRIVE TRADE NAME: QUICK DRY ENAMEL SAFETY GREEN
 PITTSBURGH, PA 15238 CHEMICAL FAMILY: ALKYL
 MSDS CONTACT: MANAGER, INDUSTRIAL HYGIENE AND PRODUCT SAFETY US-DOT: PAINT, COMBUSTIBLE LIQUID
 (412), 963-5822 DATE OF PREPARATION: 1/28/88
 EMERGENCY TELEPHONE: (304) 843-1300 CUSTOMER PART #: HMC 2415

SECTION II - INGREDIENTS

APPROX. %WT.	CAS NO.	EXPOSURE LIMITS			
		ACGIH TLV	OSHA PEL	PPG IPEL	
TITANIUM DIOXIDE, #	5	13463-67-7	10.00Mg/M3	15.00Mg/M3	10.00Mg/M3
ZINC OXIDE	5	1335-30-4	10.00Mg/M3	NOT EST.	10.00Mg/M3
UNUSUAL AROMATIC SOLVENT NAPHTHA	30	64742-88-7	NOT EST.	NOT EST.	NOT EST.
UNUSUAL AROMATIC SOLVENT NAPHTHA	10	64742-48-9	NOT EST.	NOT EST.	NOT EST.
FORMERS, RESINS, AND ADDITIVES	40	PROPRIETARY	NOT EST.	NOT EST.	NOT EST.

CARCINOGENIC ACCORDING TO CRITERIA ESTABLISHED BY: * = NTP ** = IARC a = OSHA # = OTHER

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: 136 - 242 DEG.C SOLUBILITY IN WATER: 0.0 %
 VAPOR PRESSURE: 1.7 mmHg WT/GAL (LBS): 8.30 (U.S.)
 VAPOR DENSITY: HEAVIER THAN AIR pH: U/I
 % VOL/VOLUME: 54.70 % SOLID BY WEIGHT: 57.19
 EVAP RATE(BUOAc=100): 17 SPECIFIC GRAVITY: 1.00

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

US-DOT CATEGORY: COMBUSTIBLE FLAMMABLE LIMITS: LEL 0.9 UEL U/I
 FLASHPOINT: 112 DEG. F PMCC

EXTINGUISHING MEDIA:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL, OR UNIVERSAL AQUEOUS FILM FORMING FOAM) DESIGNED TO EXTINGUISH NFPA CLASS II COMBUSTIBLE LIQUID FIRES.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAMES. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLY ON HOT SURFACES. TOXIC GASES MAY FORM WHEN PRODUCT IS CONTACTED BY FLAME OR HOT SURFACES.

SPECIAL FIRE FIGHTING PROCEDURES:

WATER SPRAY MAY BE INEFFECTIVE. WATER SPRAY MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. FIRE-FIGHTERS SHOULD WEAR SELF CONTAINED BREATHING APPARATUS.

SECTION V - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: NOT EXPECTED TO OCCUR

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):

AVOID CONTACT WITH STRONG ALKALIES, STRONG MINERAL ACIDS, OR STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:

MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS WHEN HEATED. WELDING, BRAZING, OR FLAME-CUTTING ON SURFACES COATED WITH THIS PRODUCT MAY PRODUCE FUMES INCLUDING:

Carbon Monoxide

SECTION VI - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

PROVIDE MAXIMUM VENTILATION. ONLY PERSONNEL EQUIPPED WITH PROPER RESPIRATORY AND SKIN AND EYE PROTECTION SHOULD BE PERMITTED IN THE AREA. REMOVE ALL SOURCES OF IGNITION. TAKE SPILLED MATERIAL WITH SAWDUST, VERMICULITE, OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR DISPOSAL.

WASTE DISPOSAL METHOD:

WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS. EMPTY CONTAINERS SHOULD BE RECYCLED OR DISPOSED OF THROUGH AN APPROVED WASTE MANAGEMENT FACILITY.

SECTION VII - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE FROM:

INGESTION:

HARMFUL OR FATAL IF SWALLOWED

EYE CONTACT:

CAUSES EYE IRRITATION

SKIN CONTACT:

MAY CAUSE MODERATE SKIN IRRITATION

INHALATION:

VAPOR AND SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT.



REPEATED EXPOSURE TO HIGH VAPOR CONCENTRATIONS MAY CAUSE IRRITATION OF THE RESPIRATORY SYSTEM AND PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.

CHRONIC OVEREXPOSURE:

AVOID LONG-TERM AND REPEATED CONTACT. THIS PRODUCT CONTAINS TITANIUM DIOXIDE. ANIMALS INHALING MASSIVE QUANTITIES OF TITANIUM DIOXIDE DUST IN A LONG-TERM STUDY DEVELOPED LUNG TUMORS. STUDIES WITH HUMANS INVOLVED IN MANUFACTURE OF THIS PIGMENT INDICATE NO INCREASED RISK OF CANCER FROM EXPOSURE. POTENTIAL FOR INHALATION OF TITANIUM DIOXIDE DUSTS FROM COATINGS IS VERY LIMITED. SINCE OVEREXPOSURES ARE NOT EXPECTED, THERE IS NO SIGNIFICANT HAZARD FOR MAN.

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

EYE WATERING, HEADACHES, NAUSEA, DIZZINESS, AND LOSS OF COORDINATION ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH. REDNESS, ITCHING, BURNING SENSATION AND VISUAL DISTURBANCES MAY INDICATE EXCESSIVE EYE CONTACT. DRYNESS, ITCHING, CRACKING, BURNING, REDNESS, AND SWELLING ARE CONDITIONS ASSOCIATED WITH EXCESSIVE SKIN CONTACT.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NOT APPLICABLE**SECTION VIII - FIRST AID PROCEDURES**INGESTION:

IF SWALLOWED, DO NOT INDUCE VOMITING.

EYE CONTACT:

IN CASE OF EYE CONTACT, FLUSH EYES IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

SKIN CONTACT:

IN CASE OF SKIN CONTACT, REMOVE PROMPTLY BY WIPING, FOLLOWED BY WATERLESS HAND CLEANER AND SOAP AND WATER.

INHALATION:

IF AFFECTED BY INHALATION OF VAPOR OR SPRAY MIST, REMOVE TO FRESH AIR. APPLY ARTIFICIAL RESPIRATION AND OTHER SUPPORTIVE MEASURES AS REQUIRED.

OTHER:

IF ANY OF THE FOLLOWING OCCUR DURING OR FOLLOWING USE OF THIS PRODUCT, CONTACT A POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN IMMEDIATELY; HAVE MATERIAL SAFETY DATA SHEET INFORMATION AVAILABLE. *INGESTION *EXCESSIVE EXPOSURE TO A CORROSIVE MATERIAL. * PERSISTENT SKIN/EYE IRRITATION OR BREATHING DIFFICULTIES.

SECTION IX - PROTECTION INFORMATIONPERSONAL PROTECTIVE EQUIPMENT FOR:EYE PROTECTION:

WEAR CHEMICAL-TYPE SPLASH GOGGLES OR FULL FACE SHIELD.

SKIN PROTECTION:

WEAR PROTECTIVE CLOTHING, INCLUDING IMPERMEABLE APRON AND GLOVES CONSTRUCTED OF: NITRILE RUBBER, NEOPRENE RUBBER OR POLYVINYL ALCOHOL.

RESPIRATORY PROTECTION:

OVEREXPOSURE TO VAPORS MAY BE PREVENTED BY ENSURING VENTILATION CONTROLS, VAPOR EXHAUST OR FRESH AIR ENTRY. NIOSH/MSHA-APPROVED (TC-23C-) PAINT SPRAY OR AIR SUPPLIED (TC-19C-) RESPIRATORS MAY ALSO REDUCE EXPOSURE. READ RESPIRATOR MANUFACTURER'S INSTRUCTIONS AND LITERATURE CAREFULLY TO DETERMINE THE TYPE OF AIRBORNE CONTAMINANTS AGAINST WHICH THE RESPIRATOR IS EFFECTIVE AND HOW IT IS TO BE PROPERLY FITTED.

OTHER EQUIPMENT:

CLEAN OR DISCARD CONTAMINATED CLOTHING AND SHOES.

VENTILATION REQUIREMENTS:

PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE CONCENTRATION OF INGREDIENTS LISTED IN SECTION II BELOW THE LOWEST SUGGESTED EXPOSURE LIMITS, THE LEL IN SECTION IV BELOW THE STATED LIMIT, AND TO REMOVE DECOMPOSITION PRODUCTS DURING WELDING OR FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT.

SECTION X - SPECIAL PRECAUTIONSHANDLING AND STORAGE PRECAUTIONS:

DO NOT STORE ABOVE 120 DEGREES F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NFPA CLASS II COMBUSTIBLE LIQUIDS.

OTHER PRECAUTIONS:

IF THIS MATERIAL IS PART OF A MULTIPLE COMPONENT COATING SYSTEM, READ THE MATERIAL SAFETY DATA SHEET(S) FOR THE OTHER COMPONENT OR COMPONENTS BEFORE BLENDING AS THE RESULTING MIXTURE MAY HAVE THE HAZARDS OF ALL OF ITS PARTS. CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF LIQUIDS IN EXCESS OF A FEW INCHES. ALL CHEMICAL SUBSTANCES IN THIS PRODUCT COMPLY WITH ALL APPLICABLE RULES OR ORDERS UNDER THE ENVIRONMENTAL PROTECTION AGENCY'S TOXIC SUBSTANCES CONTROL ACT.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

U/I = UNKNOWN INFORMATION

N/A = NOT APPLICABLE

NOT EST. = NOT ESTABLISHED

CERT. LTR. = CHEMICAL O.K. ON TSCA INVENTORY; CAS NO. NOT AVAILABLE
PPIC 5635 (CUSTOMER NO.) LOCATION : 0809 8854/31111111/128

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY
 Applicable APCB Certificate #: (CONST SAND BUSTING & PAINT SHOP)
 Product Name: PITTS-PTS QUICK DRY AUTUMN BROWN ENAMEL
 Product Manufacturer: PPG INDUSTRIES INC

Usage Data

Daily (gal/day): 2/260 = 0.008

Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 8.19

Solids % by Weight: 54.8 % by Volume: 43.1

VOC % by Weight: 45.2 % by Volume: 56.90

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted):

SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No _____

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: M. Paul Schumacher
 Title: MANAGER OF ENVIRONMENTAL QUALITY



MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

SECTION I - PRODUCT INFORMATION

HMC 2642

MANUFACTURER'S NAME: PPG INDUSTRIES, INC. CODE/IDENTITY: 154-32 (100184E)
 PRODUCT SAFETY LOC.: 260 KAPPA DRIVE TRADE NAME: PPG 5-PTS. QUICK DRY AUTUMN BROWN ENAMEL
 PITTSBURGH, PA 15238 CHEMICAL FAMILY: ALKYD
 MSDS CONTACT: MANAGER; INDUSTRIAL HYGIENE AND PRODUCT SAFETY DOT CLS: PAINT, COMBUSTIBLE LIQUID.
 (412) 963-5822 DATE OF PREPARATION: 3/06/86
 EMERGENCY TELEPHONE: (304) 843-1300

SECTION II - INGREDIENTS

INGREDIENTS	APPROX. % WT.	CAS NO.	EXPOSURE LIMITS		
			ACGIH TLV	OSHA PEL	PPG IPEL
IRON OXIDE	5	1309-37-1	15.00Mg/M3	N/A	15.00Mg/M3
IRON OXIDE	5	NOT EST.	10.00Mg/M3	N/A	10.00Mg/M3
ALUMINUM SILICATE	5	1335-30-4	N/A	N/A	N/A
ODORLESS MINERAL SPIRITS	15	8032-32-4	N/A	N/A	N/A
PROPYLENE CARBONATE	<1	108-12-7	N/A	N/A	N/A
METHYL ETHYL KETOXIME	<1	96-29-7	N/A	N/A	N/A
XYLENE	<1	1030-20-7	100.00PPM	100.00PPM	100.00PPM
MINERAL SPIRITS--RULE 66	30	8032-32-4	N/A	N/A	N/A
ETHYL BENZENE	1	100-41-4	100.00PPM	100.00PPM	100.00PPM
FILM FORMERS, RESINS, AND ADDITIVES	40	PROPRIETARY	NOT EST.	NOT EST.	NOT EST.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE : 100 - 242 DEG.C SOLUBILITY IN WATER: 0.2 %
 VAPOR PRESSURE: 1.8 mmHg WT/GAL (LBS): 8.19
 VAPOR DENSITY : HEAVIER THAN AIR pH: N/A
 % VOL/VOLUME : 56.90 % SOLID BY WEIGHT: 54.8
 EVAP RATE(BuOAc=100): 12

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: COMBUSTIBLE
 FLASHPOINT: 110 DEG.F PMCC FLAMMABLE LIMITS: LEL 0.9 UEL N/A

EXTINGUISHING MEDIA:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL, OR UNIVERSAL AQUEOUS FILM FORMING FOAM) DESIGNED TO EXTINGUISH NFFPA CLASS II COMBUSTIBLE LIQUID FIRES.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAMES. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT PIPER FOR HOT SURFACES. TOXIC GASES MAY FORM WHEN PRODUCT IS CONTACTED BY FLAME OR HOT SURFACES.

SPECIAL FIRE FIGHTING PROCEDURES:

WATER SPRAY MAY BE INEFFECTIVE. WATER SPRAY MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. FIRE-FIGHTERS SHOULD WEAR SELF CONTAINED BREATHING APPARATUS.

SECTION V - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: NOT EXPECTED TO OCCUR

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):

AVOID CONTACT WITH STRONG ALKALIES, STRONG MINERAL ACIDS, OR STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:

MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS WHEN HEATED. WELDING, BRAZING, OR FLAME-CUTTING ON SURFACES COATED WITH THIS PRODUCT MAY PRODUCE FUMES INCLUDING:
 Carbon Monoxide.

SECTION VI - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

PROVIDE MAXIMUM VENTILATION. ONLY PERSONNEL EQUIPPED WITH PROPER RESPIRATORY AND SKIN AND EYE PROTECTION SHOULD BE PERMITTED IN THE AREA. REMOVE ALL SOURCES OF IGNITION. TAKE UP SPILLED MATERIAL WITH SAWDUST, VERMICULITE, OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR DISPOSAL.

WASTE DISPOSAL METHOD:

WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS. EMPTY CONTAINERS SHOULD BE RECYCLED OR DISPOSED OF THROUGH AN APPROVED WASTE MANAGEMENT FACILITY.

SECTION VII - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE FROM:

INGESTION:

HARMFUL OR FATAL IF SWALLOWED.
DRIED FILM OF THIS PAINT MAY BE HARMFUL IF EATEN OR CHEWED.

EYE CONTACT:

CAUSES EYE IRRITATION.

SKIN CONTACT:

MAY CAUSE MODERATE SKIN IRRITATION.
MAY BE ABSORBED THROUGH THE SKIN.
PROLONGED OR REPEATED CONTACT MAY CAUSE AN ALLERGIC SKIN REACTION.

INHALATION:

VAPOR AND SPRAY MIST MAY BE HARMFUL IF INHALED.
MAY CAUSE LUNG IRRITATION AND ALLERGIC RESPIRATORY REACTION.
REPEATED EXPOSURE TO HIGH VAPOR CONCENTRATIONS MAY CAUSE IRRITATION OF THE RESPIRATORY SYSTEM AND PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE.
INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.

REPEATED EXPOSURE:

AVOID LONG-TERM AND REPEATED CONTACT.

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

EYE WATERING, HEADACHES, NAUSEA, DIZZINESS, AND LOSS OF COORDINATION ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH.
REDNESS, ITCHING, BURNING SENSATIONS AND VISUAL DISTURBANCES MAY BE INDICATIONS THAT EXCESSIVE EYE CONTACT HAS OCCURED.
DRYNESS, ITCHING, CRACKING, BURNING, REDNESS, AND SWELLING ARE CONDITIONS ASSOCIATED WITH EXCESSIVE SKIN CONTACT.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NOT APPLICABLE

SECTION VIII - FIRST AID PROCEDURES

INGESTION:

IF SWALLOWED, DO NOT INDUCE VOMITING.

EYE CONTACT:

IN CASE OF EYE CONTACT, FLUSH EYES IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

SKIN CONTACT:

IN CASE OF SKIN CONTACT, REMOVE PROMPTLY BY WIPING, FOLLOWED BY WATERLESS HAND CLEANSER AND SOAP AND WATER.

INHALATION:

IF AFFECTED BY INHALATION OF VAPOR OR SPRAY MIST, REMOVE TO FRESH AIR. APPLY ARTIFICIAL RESPIRATION AND OTHER SUPPORTIVE MEASURES AS REQUIRED.

OTHER:

IF ANY OF THE FOLLOWING OCCUR DURING OR FOLLOWING USE OF THIS PRODUCT, CONTACT A POISON

Continued on Page 2

Continuation of Manufacturer's Code - 54-321

DATE OF PREP: 3/06/86

CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN IMMEDIATELY; HAVE MATERIAL SAFETY DATA SHEET INFORMATION AVAILABLE. *INGESTION*. * EXCESSIVE EXPOSURE TO A CORROSIVE MATERIAL.
* PERSISTENT SKIN/EYE IRRITATION OR BREATHING DIFFICULTIES.

SECTION IX - PROTECTION INFORMATION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION:

WEAR CHEMICAL-TYPE SPLASH GOGGLES OR FULL FACE SHIELD.

SKIN PROTECTION:

WEAR PROTECTIVE CLOTHING, INCLUDING IMPERMEABLE APRON AND GLOVES CONSTRUCTED OF:
NITRILE RUBBER, NEOPRENE RUBBER OR POLYVINYL ALCOHOL

RESPIRATORY PROTECTION:

OVEREXPOSURE TO VAPORS MAY BE PREVENTED BY ENSURING VENTILATION CONTROLS, VAPOR EXHAUST OR FRESH AIR ENTRY. NIOSH/MSHA APPROVED (TC-23C-) PAINT SPRAY OR AIR SUPPLIED (TC-19C-) RESPIRATORS MAY ALSO REDUCE EXPOSURE. IN ALL CASES, READ RESPIRATOR MANUFACTURER'S INSTRUCTIONS AND LITERATURE CAREFULLY TO DETERMINE THE TYPE OF AIRBORNE CONTAMINANTS AGAINST WHICH THE RESPIRATOR IS EFFECTIVE AND HOW IT IS TO BE PROPERLY FITTED.

OTHER EQUIPMENT:

CLEAN OR DISCARD CONTAMINATED CLOTHING AND SHOES.

VENTILATION REQUIREMENTS:

PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE CONCENTRATION OF INGREDIENTS LISTED IN SECTION II BELOW THE LOWEST SUGGESTED EXPOSURE LIMITS, THE LEL IN SECTION IV BELOW THE STATED LIMIT, AND TO REMOVE DECOMPOSITION PRODUCTS DURING WELDING OR FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT.

SECTION X - SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS:

DO NOT STORE ABOVE 120 DEGREES F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NFPA CLASS II COMBUSTIBLE LIQUIDS.

OTHER PRECAUTIONS:

IF THIS MATERIAL IS PART OF A MULTIPLE COMPONENT COATING SYSTEM, READ THE MATERIAL SAFETY DATA SHEET(S) FOR THE OTHER COMPONENT OR COMPONENTS BEFORE BLENDING AS THE RESULTING MIXTURE MAY HAVE THE HAZARDS OF ALL OF ITS PARTS.

CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF LIQUIDS IN EXCESS OF A FEW INCHES.

ALL CHEMICAL SUBSTANCES IN THIS PRODUCT COMPLY WITH ALL APPLICABLE RULES OR ORDERS UNDER THE ENVIRONMENTAL PROTECTION AGENCY'S TOXIC SUBSTANCE CONTROL ACT.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (CONST SAND BLASTING & PAINT SHOP)

Product Name: QUICK DRY ENAMELS

Product Manufacturer: PPG INDUSTRIES INC

Usage Data

Daily (gal/day): 2/260 = 0.008

Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 9

Solids % by Weight: 55 % by Volume: 40

VOC % by Weight: 45 % by Volume: 60

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: M. Bulthuis
Title: MANAGER OF ENVIRONMENTAL QUALITY

SECTION I - PRODUCT INFORMATION

MANUFACTURER'S NAME: PPG INDUSTRIES INC.
 PRODUCT SAFETY LOC.: 260 KAPPA DRIVE
 PITTSBURGH, PA 15238
 MSDS CONTACT: MANAGER, INDUSTRIAL HYGIENE
 AND PRODUCT SAFETY
 (412) 963-5822
 EMERGENCY TELEPHONE: (304) 843-1300

CODE/IDENTITY : 54-B
 TRADE NAME: QUICK DRY ENAMELS
 CHEMICAL FAMILY: ALKYO
 US-DOT: PAINT, COMBUSTIBLE LIQUID
 DATE OF PREPARATION: 11/09/87
 CUSTOMER PART #:

54-B			
54-130	54-310	54-352C	54-129C
54-130C	54-311	54-110	54-138C
54-200C	54-313	54-110C	54-200
54-302	54-321	54-120C	
54-308	54-332	54-124C	

SECTION II - INGREDIENTS

MAXIMUM %WT.	CAS NO.:	EXPOSURE LIMITS			
		ACGIH TLV	OSHA PEL	PPG PEL	OSHA PEL
15	51274-00-1	5.00Mg/M3	NOT EST.	5.00Mg/M3	NOT EST.
10	NOT EST.	NOT EST.	NOT EST.	NOT EST.	NOT EST.
30	13463-67-7	10.00Mg/M3	15.00Mg/M3	10.00Mg/M3	10.00Mg/M3
10	1335-30-4	10.00Mg/M3	NOT EST.	10.00Mg/M3	NOT EST.
50	64742-88-7	NOT EST.	NOT EST.	NOT EST.	NOT EST.
1	1330-20-7	100.00PPM	100.00PPM	100.00PPM	100.00PPM
1	100-41-4	100.00PPM	100.00PPM	100.00PPM	100.00PPM
40	PROPRIETARY	NOT EST.	NOT EST.	NOT EST.	NOT EST.

CARCINOGENIC ACCORDING TO CRITERIA ESTABLISHED BY: * = NTP ** = IARC @ = OSHA # = OTHER

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE : 136 - 242 DEG.C
 VAPOR PRESSURE : <3 mmHg
 VAPOR DENSITY : HEAVIER THAN AIR
 % VOL/VOLUME : 48.72
 EVAP RATE(BUOAc=100): <20

SOLUBILITY IN WATER: <1 %
 WT/GAL (LBS): 8-10 (U.S.)
 pH: U/I
 % SOLID BY WEIGHT: 46-63
 SPECIFIC GRAVITY: 1.0 - 1.2

RECEIVED
SON

SEP 16 1988

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

US-DOT CATEGORY: COMBUSTIBLE
 FLASHPOINT: 102 DEG. F PMCC
 FLAMMABLE LIMITS. LEL 0.9 UEL U/I

EXTINGUISHING MEDIA:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL, OR UNIVERSAL AQUEOUS FILM FORMING FOAM) DESIGNED TO EXTINGUISH NFPA CLASS II COMBUSTIBLE LIQUID FIRES.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAMES. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLY ON HOT SURFACES. TOXIC GASES MAY FORM WHEN PRODUCT IS CONTACTED BY FLAME OR HOT SURFACES.

SPECIAL FIRE FIGHTING PROCEDURES:

WATER SPRAY MAY BE INEFFECTIVE. WATER SPRAY MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. FIRE-FIGHTERS SHOULD WEAR SELF CONTAINED BREATHING APPARATUS.

SECTION V - REACTIVITY DATA

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: NOT EXPECTED TO OCCUR

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):

AVOID CONTACT WITH STRONG ALKALIES, STRONG MINERAL ACIDS, OR STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:

MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS WHEN HEATED. WELDING, BRAZING, OR FLAME-CUTTING ON SURFACES COATED WITH THIS PRODUCT MAY PRODUCE FUMES, INCLUDING:

Carbon Monoxide.

SECTION VI - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

PROVIDE MAXIMUM VENTILATION. ONLY PERSONNEL EQUIPPED WITH PROPER RESPIRATORY AND SKIN AND EYE PROTECTION SHOULD BE PERMITTED IN THE AREA. REMOVE ALL SOURCES OF IGNITION. TAKE UP SPILLED MATERIAL WITH SAWDUST, VERMICULITE, OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR DISPOSAL.

WASTE DISPOSAL METHOD:

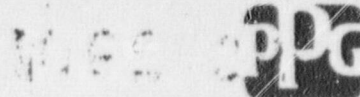
WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS. EMPTY CONTAINERS SHOULD BE RECYCLED OR DISPOSED OF THROUGH AN APPROVED WASTE MANAGEMENT FACILITY.

SECTION VII - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: HARMFUL OR FATAL IF SWALLOWED.
 EYE CONTACT: CAUSES EYE IRRITATION.
 SKIN CONTACT: MAY CAUSE MODERATE SKIN IRRITATION.
 INHALATION:

IN-PLANT HAZARD RATING	
HEALTH	2
FLAMMABILITY	2
REACTIVITY	0
PROTECTIVE EQUIPMENT	



VAPOR AND SPRAY MIST MAY BE HARMFUL IF INHALED.
 VAPOR IRRITATES EYES, NOSE, AND THROAT.
 REPEATED EXPOSURE TO HIGH VAPOR CONCENTRATIONS MAY CAUSE IRRITATION OF THE RESPIRATORY SYSTEM AND PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE.
 INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.

CHRONIC OVEREXPOSURE:

AVOID LONG-TERM AND REPEATED CONTACT.
 THIS PRODUCT CONTAINS TITANIUM DIOXIDE. ANIMALS INHALING MASSIVE QUANTITIES OF TITANIUM DIOXIDE DUST IN A LONG-TERM STUDY DEVELOPED LUNG TUMORS. STUDIES WITH HUMANS INVOLVED IN MANUFACTURE OF THIS PIGMENT INDICATE NO INCREASED RISK OF CANCER FROM EXPOSURE. POTENTIAL FOR INHALATION OF TITANIUM DIOXIDE DUSTS FROM COATINGS IS VERY LIMITED AND OVEREXPOSURES ARE NOT EXPECTED.

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

EYE WATERING, HEADACHES, NAUSEA, DIZZINESS, AND LOSS OF COORDINATION ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH.
 REDNESS, ITCHING, BURNING SENSATION AND VISUAL DISTURBANCES MAY INDICATE EXCESSIVE EYE CONTACT.
 DRYNESS, ITCHING, CRACKING, BURNING, REDNESS, AND SWELLING ARE CONDITIONS ASSOCIATED WITH EXCESSIVE SKIN CONTACT.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NOT APPLICABLE**SECTION VIII - FIRST AID PROCEDURES**INGESTION:

IF SWALLOWED, DO NOT INDUCE VOMITING.

EYE CONTACT:

IN CASE OF EYE CONTACT, FLUSH EYES IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

SKIN CONTACT:

IN CASE OF SKIN CONTACT, REMOVE PROMPTLY BY WIPING, FOLLOWED BY WATERLESS HAND CLEANER AND SOAP AND WATER.

INHALATION:

IF AFFECTED BY INHALATION OF VAPOR OR SPRAY MIST, REMOVE TO FRESH AIR. APPLY ARTIFICIAL RESPIRATION AND OTHER SUPPORTIVE MEASURES AS REQUIRED.

OTHER:

IF ANY OF THE FOLLOWING OCCUR DURING OR FOLLOWING USE OF THIS PRODUCT, CONTACT A POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN IMMEDIATELY; HAVE MATERIAL SAFETY DATA SHEET INFORMATION AVAILABLE. *INGESTION *EXCESSIVE EXPOSURE TO A CORROSIVE MATERIAL.
 * PERSISTENT SKIN/EYE IRRITATION OR BREATHING DIFFICULTIES.

SECTION IX - PROTECTION INFORMATIONPERSONAL PROTECTIVE EQUIPMENT FOR:EYE PROTECTION:

WEAR CHEMICAL-TYPE SPLASH GOGGLES OR FULL FACE SHIELD.

SKIN PROTECTION:

WEAR PROTECTIVE CLOTHING, INCLUDING IMPERMEABLE APRON AND GLOVES CONSTRUCTED OF:
 NITRILE RUBBER, NEOPRENE RUBBER OR POLYVINYL ALCOHOL

RESPIRATORY PROTECTION:

OVEREXPOSURE TO VAPORS MAY BE PREVENTED BY ENSURING VENTILATION CONTROLS, VAPOR EXHAUST OR FRESH AIR ENTRY. NIOSH/MSHA-APPROVED (TC-23C-) PAINT SPRAY OR AIR SUPPLIED (TC-19C-) RESPIRATORS MAY ALSO REDUCE EXPOSURE. READ RESPIRATOR MANUFACTURER'S INSTRUCTIONS AND LITERATURE CAREFULLY TO DETERMINE THE TYPE OF AIRBORNE CONTAMINANTS AGAINST WHICH THE RESPIRATOR IS EFFECTIVE AND HOW IT IS TO BE PROPERLY FITTED.

OTHER EQUIPMENT:

CLEAN OR DISCARD CONTAMINATED CLOTHING AND SHOES.

VENTILATION REQUIREMENTS:

PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE CONCENTRATION OF INGREDIENTS LISTED IN SECTION II BELOW THE LOWEST SUGGESTED EXPOSURE LIMITS, THE LEL IN SECTION IV BELOW THE STATED LIMIT, AND TO REMOVE DECOMPOSITION PRODUCTS DURING WELDING OR FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT.

SECTION X - SPECIAL PRECAUTIONSHANDLING AND STORAGE PRECAUTIONS:

DO NOT STORE ABOVE 120 DEGREES F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NFPA CLASS II COMBUSTIBLE LIQUIDS.

OTHER PRECAUTIONS:

IF THIS MATERIAL IS PART OF A MULTIPLE COMPONENT COATING SYSTEM, READ THE MATERIAL SAFETY DATA SHEET(S) FOR THE OTHER COMPONENT OR COMPONENTS BEFORE BLENDING AS THE RESULTING MIXTURE MAY HAVE THE HAZARDS OF ALL OF ITS PARTS.
 CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF LIQUIDS IN EXCESS OF A FEW INCHES.

ALL CHEMICAL SUBSTANCES IN THIS PRODUCT COMPLY WITH ALL APPLICABLE RULES OR ORDERS UNDER THE ENVIRONMENTAL PROTECTION AGENCY'S TOXIC SUBSTANCES CONTROL ACT.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

U/I = UNKNOWN INFORMATION

N/A = NOT APPLICABLE

NOT EST. = NOT ESTABLISHED

(CUSTOMER NO.) LOCATION : 8754/B/////1109

COATING/THINNER DATA FORM

Company Name: SEVVOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (CONST SAND BUSTING & PAINT SHOP)

Product Name: IVY GREEN ENAMEL

Product Manufacturer: PPG INDUSTRIES INC

Usage Data

Daily (gal/day): 2/260 = 0.008

Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 7.35

Solids % by Weight: 25 % by Volume: 17

VOC % by Weight: 75 % by Volume: 83

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: _____

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Handwritten Signature]
Title: MANAGER OF ENVIRONMENTAL QUALITY

MATERIAL SAFETY DATA SHEET

1646

FOR COATINGS, RESINS AND RELATED MATERIALS

NPCA 1-72

Date of PREP: 09/28/82

(Similar to Form OSHA-20)

SECTION I

HMC-1646

Manufacturer's Name: PPG Industries, Inc. Coatings & Resins Group
 Address: 260 Kappa Drive Pittsburgh, Pa 15238
 Attn: Manager, Industrial Hygiene and Product Safety
 Emergency Telephone: (304) 843-1300
 Product Class: AEROSOL SPRAY PAINT
 Trade Name: IVY GREEN ENAMEL
 Manufacturer Code: 55-305

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENTS	% WT.	*TLV(1984)	**PPG IPEL	CASNO	LEL	V.P.
2-PROPANONE	35	750.00	PPM	67-64-1	2.6	186.0
HYDROCARBON PROPELLANTS	25	N.E.		N.E.	2.2	80
ETHYL ALCOHOL	10	1000.00	PPM	64-17-5	3.3	44
4-HYDROXY-4-METHYL-2-PENTANONE	5	50.00	PPM	123-42-2	1.8	6.8
XYLENE	< 5	100.00	PPM	1330-20-7	1.1	6.3
ETHYL ACETATE	< 5	400.00	PPM	141-78-6	2.5	76
2-BUTANONE	< 5	200.00	PPM	78-93-3	1.8	71.2

NOTE * = Threshold Limit Value established by American Conference of Governmental Industrial Hygienists
 ** = PPG'S Internal Permissible Exposure Limit

SECTION III - PHYSICAL DATA

Boiling Range: 56-164 DEG.C. Vapor Density - HEAVIER THAN AIR
 Evaporation Rate = SLOWER THAN ETHER % Volatile/Vol: 83 Wt/Gal: 7.35

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

DOT Category: EXTREMELY FLAMMABLE Flashpoint: -156 DEG.F. TOC LEL: 1.8 RECEIVED SQN

Extinguishing Media:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL OR FOAM) DESIGNED TO EXTINGUISH NFPA CLASS IA FLAMMABLE LIQUID FIRES.

MAY 27 1986

Unusual Fire & Explosion Hazards:

AEROSOL CONTAINERS HOLDING EXTREMELY FLAMMABLE GAS AND FLAMMABLE LIQUID. CONTENTS UNDER PRESSURE. CONTAINERS SHOULD BE ISOLATED FROM HEAT, SPARKS, AND OPEN FLAME. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLY TO HOT SURFACES.

Special Fire Fighting Procedures:

WATER SPRAY MAY BE INEFFECTIVE. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE.

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value: SEE SEC. II

Effects of overexposure:

INHALATION: ANESTHETIC. IRRITATION OF THE RESPIRATORY TRACT OR ACUTE NERVOUS SYSTEM DEPRESSION CHARACTERIZED BY THE FOLLOWING PROGRESSIVE STEPS: HEADACHE, DIZZINESS, STAGGERING GAIT, CONFUSION, UNCONSCIOUSNESS, OR COMA.
 SKIN OR EYE CONTACT: PRIMARY IRRITATION.
 REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY CAUSE PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL. EYE WATERING, HEADACHES, NAUSEA, DIZZINESS, AND LOSS OF COORDINATION ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH.

Emergency and First Aid Procedures:

Continued on Back of Page

Continuation of Manufacturer's Code - 55-305

Date of Prep: 09/28/82

HMC-1646

TOWARD HEAT, SPARKS OR OPEN FLAME.

LEAKING CONTAINERS WILL PERMIT THE ACCUMULATION OF AN EXPLOSIVE
CONCENTRATION OF VAPORS.
INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDIZING AGENTS.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (CONST SAND) BUSTING & PAINT SHOP

Product Name: SILVER ENAMEL

Product Manufacturer: PPG INDUSTRIES INC

Usage Data

Daily (gal/day): 2/260 = 0.008

Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 7.54

Solids % by Weight: 35 % by Volume: 15.5

VOC % by Weight: 65 % by Volume: 84.5

Water % by Weight: _____ % by Volume: _____

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Handwritten Signature]
Title: MANAGER OF ENVIRONMENTAL QUALITY

FOR COATINGS, RESINS AND RELATED MATERIALS
 Date of PREP: 07/20/83 (Similar to Form OSHA-20) RPCA 1-72

SECTION I

Manufacturer's Name: PPG Industries, Inc. Coatings & Resins Group
 Address: 260 Kappa Drive Pittsburgh, Pa 15238
 Attn: Manager, Industrial Hygiene and Product Safety
 Emergency Telephone: (304) 843-1300
 Product Class: AEROSOL SPRAY PAINT
 Trade Name: ~~SOLVENT~~ EMUL
 Manufacturer Code: 55-310

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENTS	% WT.	TLV(1988)	PPG IPEL	CAHNO	LEL	V.P.
EYLENE	66	100.00 PPM	.	1330-20-7	1.1	8.3
E-PROPANE	15	750.00 PPM	.	87-64-1	2.6	180.0
HYDROCARBON PROPELLANTS	< 25	.NE	.	N.E.	0.2	00

NOTE: * = Threshold Limit Value established by American Conference of Governmental Industrial Hygienists
 ** = PPG's Internal Permissible Exposure Limit

SECTION III - PHYSICAL DATA

Boiling Range: -42-145 DEG.C. Vapor Density - HEAVIER THAN AIR
 Evaporation Rate - FASTER THAN ETHER % Volatile/Vol: 84.5 Wt/Gal: 7.54

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

DOT Category: EXTREMELY FLAMMABLE Flashpoint: -156 DEG.F. TOC LEL: 2.2

Extinguishing Media:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL OR FOAM) DESIGNED TO EXTINGUISH NFPA CLASS IA FLAMMABLE LIQUID FIRES.

Unusual Fire & Explosion Hazards:

AEROSOL CONTAINERS HOLDING EXTREMELY FLAMMABLE GAS AND FLAMMABLE LIQUID. CONTENTS UNDER PRESSURE. CONTAINERS SHOULD BE ISOLATED FROM HEAT, SPARKS, AND OPEN FLAME. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLY TO HOT SURFACES.

Special Fire Fighting Procedures:

WATER SPRAY MAY BE INEFFECTIVE. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. RECEIVED SQN

SECTION V - HEALTH HAZARD DATA

MAY 27 1988

Threshold Limit Value: SEE SEC. II

Effects of Overexposure:

INHALATION: ANESTHETIC. IRRITATION OF THE RESPIRATORY TRACT OR ACUTE NERVOUS SYSTEM DEPRESSION CHARACTERIZED BY THE FOLLOWING PROGRESSIVE STEPS: HEADACHE, DIZZINESS, STAGGERING GAIT, CONFUSION, UNCONSCIOUSNESS, OR COMA.
 SKIN OR EYE CONTACT: PRIMARY IRRITATION.
 REPEATED OVEREXPOSURE TO SOLVENT VAPORS MAY CAUSE PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL. EYE WATERING, HEADACHES, NAUSEA, DIZZINESS, AND LOSS OF COORDINATION ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH.

Emergency and First Aid Procedures:

FLAMES: REMOVE FROM EXPOSURE. RESTORE BREATHING. KEEP WARM AND QUIET. NOTIFY A PHYSICIAN. SPLASH (EYES): FLUSH IMMEDIATELY WITH COPIOUS QUANTITIES OF RUNNING WATER FOR AT LEAST 15 MINUTES. TAKE TO A PHYSICIAN FOR DEFINITIVE MEDICAL TREATMENT. SPLASH (SKIN): WASH AFFECTED AREAS WITH WATER. REMOVE CONTAMINATED CLOTHING.

Continued on Back of Page

108000

CONSULT A PHYSICIAN
SECTION VI - REACTIVITY DATA

STABILITY: STABLE Conditions to Avoid: UNKNOWN

Incompatibility (Materials to Avoid):

OXIDIZING AGENTS

Hazardous Decomposition Products:

May produce hazardous fumes when heated to decomposition as in welding.

Fumes may contain: Carbon Monoxide

Hazardous Polymerization - WILL NOT OCCUR

CONDITIONS TO AVOID: UNKNOWN

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:

REMOVE ALL SOURCES OF IGNITION (FLAMES, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS). AVOID BREATHING VAPORS. VENTILATE AREA. REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS.

Waste Disposal Method:

DISPOSE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DO NOT PUNCTURE OR INCINERATE CONTAINERS.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection:

OUTDOOR/OPEN AREAS: USE FILTER TYPE RESPIRATORS (NIOSH/MSHA TC21C) TO REMOVE SOLID AIRBORNE PARTICULATES FROM OVERSPRAY. RESTRICTED VENTILATION AREAS: USE COMBINATION ORGANIC VAPOR-FILTER TYPE RESPIRATORS (NIOSH/MSHA TC23C) DESIGNED TO PURIFY THE AIR BY REMOVING SOLID AIRBORNE PARTICULATES AND ORGANIC VAPORS. CONFINED AREAS: USE SUPPLIED AIR RESPIRATORS OR HOODS (NIOSH/MSHA TC19C). IN ALL CASES, PLEASE READ MANUFACTURER'S INSTRUCTIONS CAREFULLY TO DETERMINE THE TYPE OF AIRBORNE CONTAMINANTS AGAINST WHICH THE RESPIRATOR IS EFFECTIVE, AND HOW IT IS TO BE PROPERLY FITTED.

Ventilation:

PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE CONCENTRATION OF HAZARDOUS INGREDIENTS LISTED IN SECTION II BELOW THE LOWEST SUGGESTED EXPOSURE LIMITS, THE LEL IN SECTION IV BELOW THE STATED LIMIT, AND TO REMOVE DECOMPOSITION PRODUCTS DURING WELDING OR FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT.

Protective Gloves:

REQUIRED FOR PROLONGED OR REPEATED CONTACT.

Eye Protection:

USE SAFETY EYEWEAR DESIGNED TO PROTECT AGAINST SPLASH OF LIQUIDS.

Other Protective Equipment:

PREVENT PROLONGED SKIN CONTACT TO CONTAMINATED CLOTHING.

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing:

(DANGER) EXTREMELY FLAMMABLE. DO NOT STORE NEAR FIRE OR OPEN FLAME. DO NOT STORE ABOVE 120 F. WARNING! CONTENTS UNDER PRESSURE. DO NOT PUNCTURE OR INCINERATE CONTAINER. EXPOSURE TO HEAT OR PROLONGED EXPOSURE TO SUN MAY CAUSE VIOLENT BURSTING OF CONTAINER

Other Precautions:

DO NOT TAKE INTERNALLY. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN AND BREATHING OF VAPOR OR SPRAY MIST. DO NOT WEAR CONTAMINATED CLOTHING, SHOES OR GLOVES. DO NOT SPRAY NEAR OR TOWARD HEAT, SPARKS OR OPEN FLAME.

LEAKING CONTAINERS WILL PERMIT THE ACCUMULATION OF AN EXPLOSIVE CONCENTRATION OF VAPOR.

COATING/THINNER DATA FORM

Company Name: SEQUOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY
 Applicable APCB Certificate #: (CONST SAND BUSTING & PAINT SHOP)
 Product Name: FLAT WHITE SPRAY ENAMEL
 Product Manufacturer: PPG INDUSTRIES INC

Usage Data

Daily (gal/day): 2/260 = 0.008
 Annual (gal/yr): 30/15 = 2

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 7.06
 Solids % by Weight: 23.6 % by Volume: 8.9
 VOC % by Weight: 76.4 % by Volume: 91.10
 Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____
 Solids % by Weight: _____ % by Volume: _____
 VOC % by Weight: _____ % by Volume: _____
 Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA
 Density (lbs/gal): _____
 Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: M. B. Krumholz
 Title: MANAGER OF ENVIRONMENTAL QUALITY

MATERIAL SAFETY DATA SHEET
COATINGS AND RESINS GROUP



SECTION I - PRODUCT INFORMATION

MANUFACTURER'S NAME: PPG INDUSTRIES INC. CODE/IDENTITY : 55-317 (030587M)
 PRODUCT SAFETY LOC.: 260 KAPPA DRIVE TRADE NAME: FLAT WHITE SPRAY ENAMEL
 PITTSBURGH, PA 15238 CHEMICAL FAMILY: ALKYD
 MSDS CONTACT: MANAGER, INDUSTRIAL HYGIENE AND PRODUCT SAFETY US-DOT: COMPRESSED GAS, N.O.S.
 (412) 963-5822 DATE OF PREPARATION: 1/28/88
 EMERGENCY TELEPHONE: (304) 843-1300 CUSTOMER PART #:

HMC 2411

SECTION II - INGREDIENTS

	APPROX. %WT.	CAS NO.	EXPOSURE LIMITS		
			ACGIH TLV	OSHA PEL	PPG IPEL
TITANIUM DIOXIDE #	10	13463-67-7	10.00Mg/M3	15.00Mg/M3	10.00Mg/M3
CALCIUM CARBONATE	10	1317-65-3	10.00Mg/M3	NOT EST.	10.00Mg/M3
METHYL ETHYL KETONE	10	78-93-3	200.00PPM	200.00PPM	200.00PPM
ACETONE	20	67-64-1	750.00PPM	1000.00PPM	750.00PPM
XYLENE	20	1330-20-7	100.00PPM	100.00PPM	100.00PPM
PROPANE	15	74-98-6	NOT EST.	NOT EST.	NOT EST.
ISOBUTANE	15	75-28-5	NOT EST.	NOT EST.	NOT EST.
FILM FORMERS, RESINS, AND ADDITIVES	5	PROPRIETARY	NOT EST.	NOT EST.	NOT EST.

CARCINOGENIC ACCORDING TO CRITERIA ESTABLISHED BY: * = NTP ** = IARC @ = OSHA # = OTHER

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE : -56 - 145 DEG.C SOLUBILITY IN WATER: 20.6 %
 VAPOR PRESSURE: 57.4 mmHg WT/GAL (LBS): 7.06 (U.S.)
 VAPOR DENSITY : HEAVIER THAN AIR pH: U/I
 % VOL/VOLUME : 91.10 % SOLID BY WEIGHT: 23.6
 EVAP RATE(BuOAc=100): 389 SPECIFIC GRAVITY: .85

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

US-DOT CATEGORY: EXTREMELY FLAMMABLE
 FLASHPOINT: 15 DEG. F PMCC FLAMMABLE LIMITS: LEL 2.3 UEL U/I

EXTINGUISHING MEDIA:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL, OR UNIVERSAL AQUEOUS FILM FORMING FOAM) DESIGNED TO EXTINGUISH NFPA CLASS IA FLAMMABLE LIQUID FIRES.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAMES. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLY ON HOT SURFACES. TOXIC GASES MAY FORM WHEN PRODUCT IS CONTACTED BY FLAME OR HOT SURFACES. AEROSOL-CONTAINERS HOLD EXTREMELY FLAMMABLE GAS AND FLAMMABLE LIQUID UNDER PRESSURE.

SPECIAL FIRE FIGHTING PROCEDURES:

WATER SPRAY MAY BE INEFFECTIVE. WATER SPRAY MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. FIRE-FIGHTERS SHOULD WEAR SELF CONTAINED BREATHING APPARATUS.

SECTION V - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: NOT EXPECTED TO OCCUR
 INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):
 AVOID CONTACT WITH STRONG ALKALIES, STRONG MINERAL ACIDS, OR STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:

MAY PRODUCE HAZARDOUS DECOMPOSITION PRODUCTS WHEN HEATED. WELDING, BRAZING, OR FLAME-CUTTING ON SURFACES COATED WITH THIS PRODUCT MAY PRODUCE FUMES INCLUDING:
 Carbon Monoxide,

SECTION VI - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

PROVIDE MAXIMUM VENTILATION. ONLY PERSONNEL EQUIPPED WITH PROPER RESPIRATORY AND SKIN AND EYE PROTECTION SHOULD BE PERMITTED IN THE AREA. REMOVE ALL SOURCES OF IGNITION. TAKE UP SPILLED MATERIAL WITH SAWDUST, VERMICULITE, OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR DISPOSAL.

WASTE DISPOSAL METHOD:

WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS. EMPTY CONTAINERS SHOULD BE RECYCLED OR DISPOSED OF THROUGH AN APPROVED WASTE MANAGEMENT FACILITY.

SECTION VII - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: HARMFUL OR FATAL IF SWALLOWED.
 EYE CONTACT: CAUSES EYE IRRITATION.
 SKIN CONTACT: MAY CAUSE MODERATE SKIN IRRITATION.
 INHALATION:



VAPOR AND SPRAY MIST MAY BE HARMFUL IF INHALED.
VAPOR IRRITATES EYES, NOSE, AND THROAT.
REPEATED EXPOSURE TO HIGH VAPOR CONCENTRATIONS MAY CAUSE IRRITATION OF THE RESPIRATORY SYSTEM AND PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE.
INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.

CHRONIC OVEREXPOSURE:

AVOID LONG-TERM AND REPEATED CONTACT.
THIS PRODUCT CONTAINS TITANIUM DIOXIDE. ANIMALS INHALING MASSIVE QUANTITIES OF TITANIUM DIOXIDE DUST IN A LONG-TERM STUDY DEVELOPED LUNG TUMORS. STUDIES WITH HUMANS INVOLVED IN MANUFACTURE OF THIS PIGMENT INDICATE NO INCREASED RISK OF CANCER FROM EXPOSURE. POTENTIAL FOR INHALATION OF TITANIUM DIOXIDE DUSTS FROM COATINGS IS VERY LIMITED. SINCE OVEREXPOSURES ARE NOT EXPECTED, THERE IS NO SIGNIFICANT HAZARD FOR MAN.

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

EYE WATERING, HEADACHES, NAUSEA, DIZZINESS, AND LOSS OF COORDINATION ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH.
REDNESS, ITCHING, BURNING SENSATION AND VISUAL DISTURBANCES MAY INDICATE EXCESSIVE EYE CONTACT.
DRYNESS, ITCHING, CRACKING, BURNING, REDNESS, AND SWELLING ARE CONDITIONS ASSOCIATED WITH EXCESSIVE SKIN CONTACT.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NOT APPLICABLE**SECTION VIII - FIRST AID PROCEDURES**INGESTION:

IF SWALLOWED, DO NOT INDUCE VOMITING.

EYE CONTACT:

IN CASE OF EYE CONTACT, FLUSH EYES IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

SKIN CONTACT:

IN CASE OF SKIN CONTACT, REMOVE PROMPTLY BY WIPING, FOLLOWED BY WATERLESS HAND CLEANER AND SOAP AND WATER.

INHALATION:

IF AFFECTED BY INHALATION OF VAPOR OR SPRAY MIST, REMOVE TO FRESH AIR. APPLY ARTIFICIAL RESPIRATION AND OTHER SUPPORTIVE MEASURES AS REQUIRED.

OTHER:

IF ANY OF THE FOLLOWING OCCUR DURING OR FOLLOWING USE OF THIS PRODUCT, CONTACT A POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN IMMEDIATELY; HAVE MATERIAL SAFETY DATA SHEET INFORMATION AVAILABLE. *INGESTION *EXCESSIVE EXPOSURE TO A CORROSIVE MATERIAL.
* PERSISTENT SKIN/EYE IRRITATION OR BREATHING DIFFICULTIES.

SECTION IX - PROTECTION INFORMATIONPERSONAL PROTECTIVE EQUIPMENT FOR:EYE PROTECTION:

WEAR CHEMICAL-TYPE SPLASH GOGGLES OR FULL FACE SHIELD.

SKIN PROTECTION:

WEAR PROTECTIVE CLOTHING, INCLUDING IMPERMEABLE APRON AND GLOVES CONSTRUCTED OF: POLYVINYL ALCOHOL, NEOPRENE RUBBER, NITRILE RUBBER OR LATEX RUBBER

RESPIRATORY PROTECTION:

OVEREXPOSURE TO VAPORS MAY BE PREVENTED BY ENSURING VENTILATION CONTROLS, VAPOR EXHAUST OR FRESH AIR ENTRY. NIOSH/MSHA-APPROVED (TC-23C-) PAINT SPRAY OR AIR SUPPLIED (TC-19C-) RESPIRATORS MAY ALSO REDUCE EXPOSURE. READ RESPIRATOR MANUFACTURER'S INSTRUCTIONS AND LITERATURE CAREFULLY TO DETERMINE THE TYPE OF AIRBORNE CONTAMINANTS AGAINST WHICH THE RESPIRATOR IS EFFECTIVE AND HOW IT IS TO BE PROPERLY FITTED.

OTHER EQUIPMENT:

CLEAN OR DISCARD CONTAMINATED CLOTHING AND SHOES.

VENTILATION REQUIREMENTS:

PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE CONCENTRATION OF INGREDIENTS LISTED IN SECTION II BELOW THE LOWEST SUGGESTED EXPOSURE LIMITS, THE LEL IN SECTION IV BELOW THE STATED LIMIT, AND TO REMOVE DECOMPOSITION PRODUCTS DURING WELDING OR FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT.

SECTION X - SPECIAL PRECAUTIONSHANDLING AND STORAGE PRECAUTIONS:

DO NOT STORE ABOVE 120 DEGREES F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NFPA CLASS IA FLAMMABLE LIQUIDS.

OTHER PRECAUTIONS:

IF THIS MATERIAL IS PART OF A MULTIPLE COMPONENT COATING SYSTEM, READ THE MATERIAL SAFETY DATA SHEET(S) FOR THE OTHER COMPONENT OR COMPONENTS BEFORE BLENDING AS THE RESULTING MIXTURE MAY HAVE THE HAZARDS OF ALL OF ITS PARTS.
ALL CHEMICAL SUBSTANCES IN THIS PRODUCT COMPLY WITH ALL APPLICABLE RULES OR ORDERS UNDER THE ENVIRONMENTAL PROTECTION AGENCY'S TOXIC SUBSTANCES CONTROL ACT.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

U/I = UNKNOWN INFORMATION

N/A = NOT APPLICABLE

NOT EST. = NOT ESTABLISHED

CERT. LTR. = CHEMICAL O.K. ON TSCA INVENTORY; CAS NO. NOT AVAILABLE
PPIC 5635 (CUSTOMER NO.) LOCATION : 0809 8855/317/////128

COATING/THINNER DATA FORM

Company Name: SEVVOYAH NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY

Applicable APCB Certificate #: (CONST. SAND BLASTING & PAINT SHOP)

Product Name: VARVOL 18

Product Manufacturer: EXXON COMPANY, USA

Usage Data

Daily (gal/day): 50/260 = 02

Annual (gal/yr): 50

Rule 25.43 & 25.44

Analysis or Manufacturers Certification Data*: SEE ATTACHED MSDS

As Received (Concentrated):

Density (lbs/gal): 6.5

Solids % by Weight: 0 % by Volume: 0

VOC % by Weight: 100 % by Volume: 100

Water % by Weight: 0 % by Volume: 0

As Applied (Diluted): SAME AS ABOVE

Density (lbs/gal): _____ % by Volume: _____

Solids % by Weight: _____ % by Volume: _____

VOC % by Weight: _____ % by Volume: _____

Water % by Weight: _____ % by Volume: _____

Thinner Data

Chemical Composition: NA

Density (lbs/gal): _____

Mfr. Data Sheet or Certification is attached. Yes No

*For NSPS Sources Method 24 must be used.

This is to certify that this information is true and complete to the best of my knowledge.

Signature: [Handwritten Signature]
Title: MANAGER OF ENVIRONMENTAL QUALITY

MAY 13 1988

VARSDL 18

HMC 417

EXXON COMPANY, U.S.A.
A DIVISION OF EXXON CORPORATION

DATE ISSUED 4/10/88

MATERIAL SAFETY DATA SHEET

EXXON COMPANY, U.S.A. P.O. BOX 2180 HOUSTON, TX 77232-2180

A. IDENTIFICATION AND EMERGENCY INFORMATION

PRODUCT NAME VARSDL 18	PRODUCT CODE 131624 - 00624
CHEMICAL NAME Petroleum Solvent	CAS NUMBER 8032-32-4
PRODUCT APPEARANCE AND ODOR Clear water-white liquid Mild mineral spirits odor	
EMERGENCY TELEPHONE NUMBER (713) 656-3424	

B. COMPONENTS AND HAZARD INFORMATION

COMPONENTS	CAS NO. OF COMPONENTS	APPROXIMATE CONCENTRATION
This product can be defined as: Mineral spirits		
	8032-32-4	100%
It consists predominantly of C7-C10 hydrocarbons.		
This product contains:		
C7-C10 saturated hydrocarbons	Mixture	Approximately 92%
Toluene	108-88-3	Approximately 0.4%
Xylene	1330-20-7	Approximately 0.5%
Ethylbenzene	100-41-4	Approximately 0.2%
C8+ Aromatics	Mixture	Approximately 6%
See Section E for Health and Hazard Information		
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)		
Health	Flammability	Reactivity
1	2	0
BASIS Recommended by Exxon		
EXPOSURE LIMIT FOR TOTAL PRODUCT		
100 ppm (590 mg/m3) for an 8-hour workday		BASIS Recommended by I.L.W. American Conference of Governmental Industrial Hygienists (ACGIH) for Stoddard Solvent

C. EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT
If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.

SKIN CONTACT
In case of skin contact, remove any contaminated clothing and wash skin thoroughly with soap and water.

INHALATION
If overcome by vapor, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, start resuscitation, administer oxygen, if available.

EFFECTS OF OVEREXPOSURE (Signs and symptoms of exposure)

High vapor concentrations (greater than approximately 1000 ppm) are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic, and may have other central nervous system effects.

NATURE OF HAZARD AND TOXICITY INFORMATION

Prolonged or repeated skin contact with this product tends to remove skin oils possibly leading to irritation and dermatitis; however, based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an "irritant" by OSHA criteria.

Product contacting the eyes may cause eye irritation.

Reports of animal studies using both sexes of several species have shown that kidney damage can occur in male rats after prolonged and repeated inhalation exposures to light hydrocarbon vapors of the general type present in this product. While the damage is of a low order of severity in animals, the implications of these results for humans have not yet been determined.

Product has a low order of acute oral and dermal toxicity, but minute amounts aspirated into the lungs during ingestion may cause mild to severe pulmonary injury and possibly death.

This product is judged to have an acute oral LD50 (rat) greater than 5 g/kg of body weight, and an acute dermal LD50 (rabbit) greater than 3.16 g/kg of body weight.

F. PHYSICAL DATA

The following data are approximate or typical values and should not be used for precise design purposes.

BOILING RANGE
Approximately 153-202°C (308-396°F)

VAPOR PRESSURE
Less than 10 mm Hg @ 25°C
ASTM D 2872

SPECIFIC GRAVITY (15.6 C/15.6 C)
0.78

VAPOR DENSITY (AIR = 1)
Approximately 5.0

MOLECULAR WEIGHT
145

PERCENT VOLATILE BY VOLUME
100 @ 1 atm. and 25°C (77°F)

pH
Essentially neutral

EVAPORATION RATE @ 1 ATM. AND 25 C (77 F)
(n-BUTYL ACETATE = 1)
0.1

POUR CONGEALING OR MELTING POINT
Less than -18°C (0°F)
Pour Point by ASTM D 97

SOLUBILITY IN WATER @ 1 ATM. AND 25 C (77 F)
Negligible; less than 0.1%

VISCOSITY
0.80 cP @ 25°C ASTM D 345

G. REACTIVITY

This product is stable and will not react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.

H. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Shut off and eliminate all ignition sources. Keep people away. Recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize breathing vapors. Minimize skin contact. Ventilate confined spaces. Open all windows and doors. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter

VARSDL 18

Criteria supplied by the developers of these rating systems, together with Exxon's interpretation of the available data.

FOR ADDITIONAL INFORMATION ON HEALTH
EFFECTS CONTACT:
DIRECTOR OF INDUSTRIAL HYGIENE
EXXON COMPANY, U.S.A.
P. O. BOX 2180 ROOM 2737
HOUSTON, TX 77252-2180
(713) 656-2443

FOR OTHER PRODUCT INFORMATION CONTACT:
MANAGER, MARKETING TECHNICAL SERVICES
EXXON COMPANY, U.S.A.
P. O. BOX 2180 ROOM 245b
HOUSTON, TX 77252-2180
(713) 656-8949

ENCLOSURE 8

ATTACHMENT 1 REFERENCED ON THE E106 FORM
FOR THE COSTRUCTION SANDBLAST AND PAINT SHOP

ATTACHMENT 1

POLLUTANT ESTIMATION CALCULATIONS
 FOR
 SEQUOYA NUCLEAR PLANT
 CONSTRUCTION SANDBLAST AND PAINT SHOP
 WITH TWO BUILDING ROOF EXHAUSTERS

Material: Carbo Zinc

Material Composition (as applied):

<u>Ingredient</u>	<u>Fraction of 1 Gallon</u>	<u>Density lbs/gal</u>	<u>Pounds in 1 Gallon</u>	<u>Percent by weight</u>
Thinner	0.25	9	2.25	18.4
Solids	0.30	23	7	57.1
Ethanol	0.45	6.5	3	24.5
Total	1.00		12.25	100.0

Density of paint as applied: 12.25 lbs/gallon

$$\begin{aligned}
 \text{RACT (lbs VOC/gallon)} &= (\text{Solvent fraction by weight})(\text{Paint Density}) \\
 &= (18.4\% + 24.5\%)(12.25 \text{ lbs/gallon}) \\
 &= 5.26 \text{ lbs VOC/gallon}
 \end{aligned}$$

Use 5.3 lbs VOC/gallon

ENCLOSURE 9

DRAWINGS OF LUBRICATING OIL SYSTEM AND ASSOCIATED VENTS

The following drawings are included as part of enclosure 9.

1. Flow Diagram Turbine Drains and Miscellaneous Piping 47W807 - 1
2. Flow Diagram Lubricating Oil Systems 47W816 - 1
3. Description and Diagram of Vapor Extractor System I.L. 1250-3743

VAPOR EXTRACTION SYSTEM



I.L. 1250-3743

Figure 1 is a diagrammatic illustration of the system used to remove oil vapor from the oil reservoir and the oil piping system. It also shows the system by which entrained hydrogen gas is removed to atmosphere. Two vapor extractors are used in this system.

The first vapor extractor is a motor-driven gas blower mounted on the oil reservoir. Its suction pipe is connected to the area above the oil level where vapors accumulate and are withdrawn by means of the blower. The volume of gas discharged by the blower can be varied by changing the opening of the butterfly valve installed in the discharge line. This is usually adjusted for continuous operation under normal conditions.

The discharge from the blower, which is mounted on the reservoir, is passed through a condensing type of apparatus, identified on the illustration as a "Demister." This is used to extract entrained liquid from the gas by a condensing principle, whereby the gas passes across a series of vertically installed, V-shaped, corrugated vanes of thin steel.

At each point where the individual vane changes the direction of the gas flow, a vane

pocket is formed. As the flowing gas is subjected to multiple changes of direction in its path through the demister, a semi-turbulence develops by the rolling of the vapors against the vane walls. As the entrained droplets carried in the gas contact the vane walls, they impinge and adhere to them. This liquid then moves to the vane pockets and is drained by gravity to the liquid reservoir.

The other blower may be installed either above or below the loop seal tank as shown in the illustration. This installation is to remove any hydrogen which may be entrained in the lubricating oil leaving the generator bearing housing. In this system, a check valve is mounted in the discharge line to prevent any back-flow from the pump discharge. The check-valve in this line is also arranged to allow for natural draft when the vapor extractors are out of service.

A flexible connection is used between the customer's connection to the vapor extractors.

The vapor extractor must be in service when starting and operating the unit.

Date
4-7-69

Illustration
724-J-355

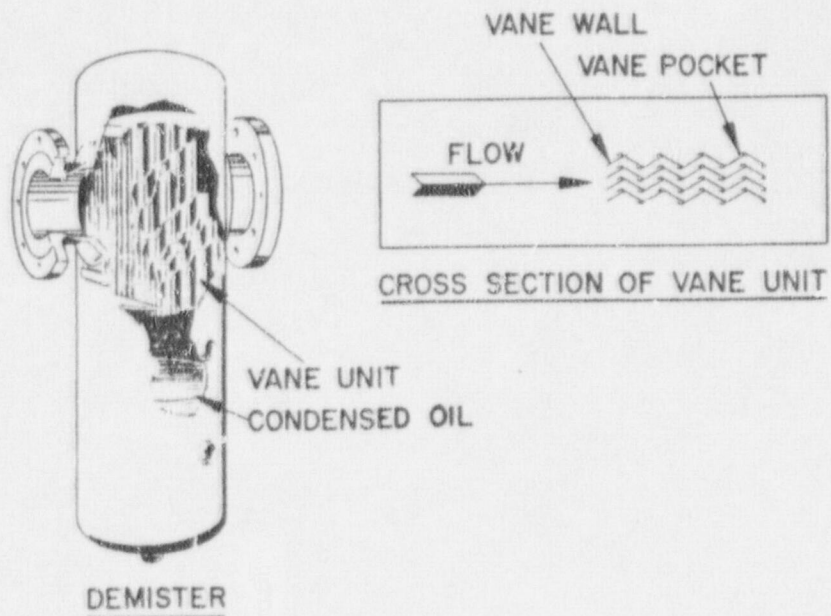
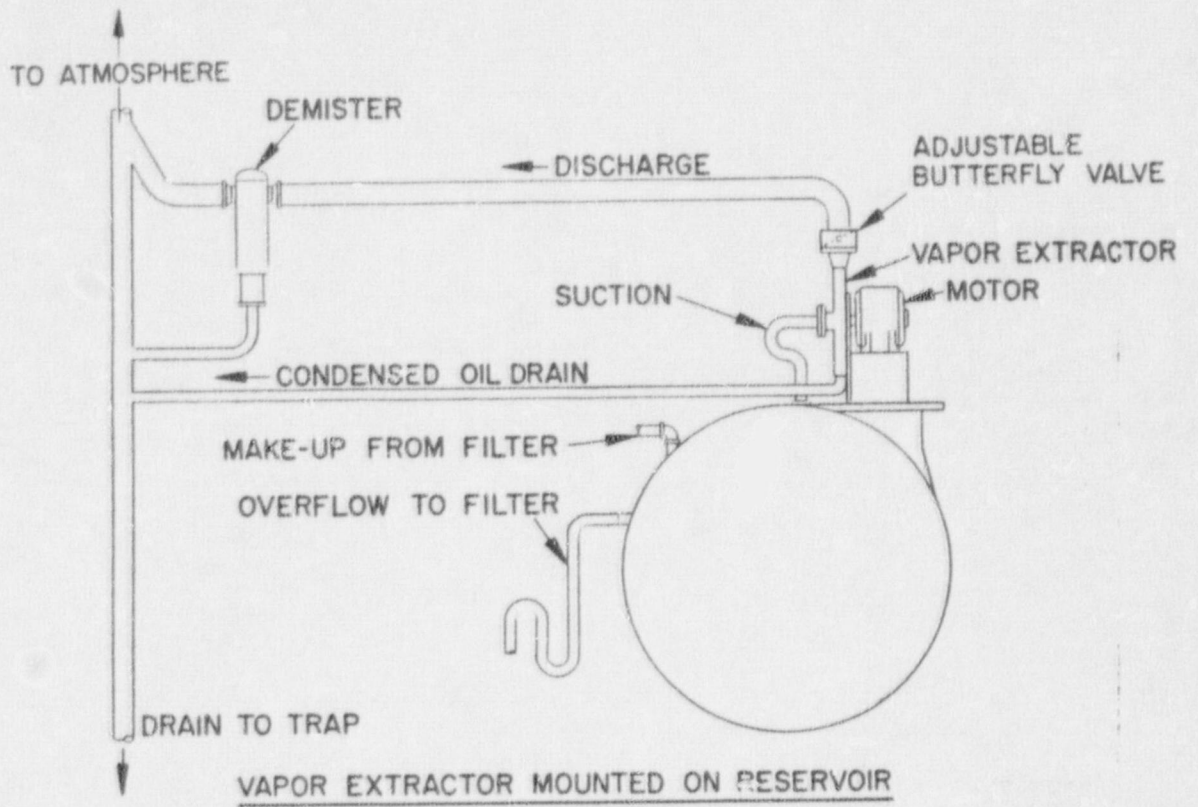
I.L.
1250-3743

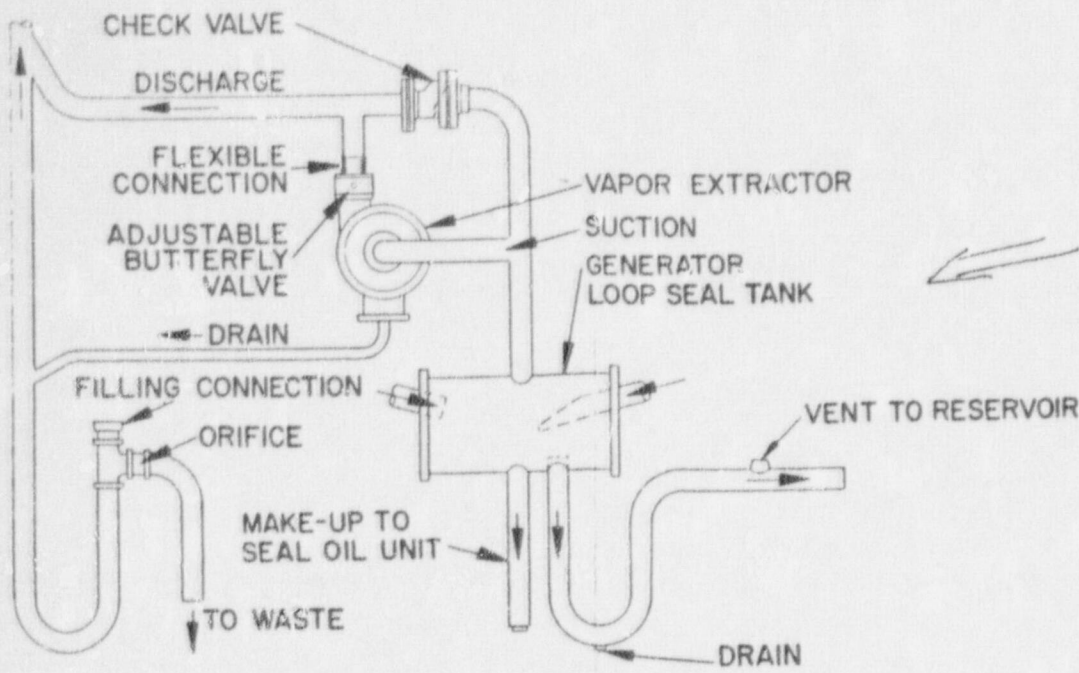
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Subs
1
2
3

Shop Dwgs.
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651-B-448
4477-D-26
683-J-017

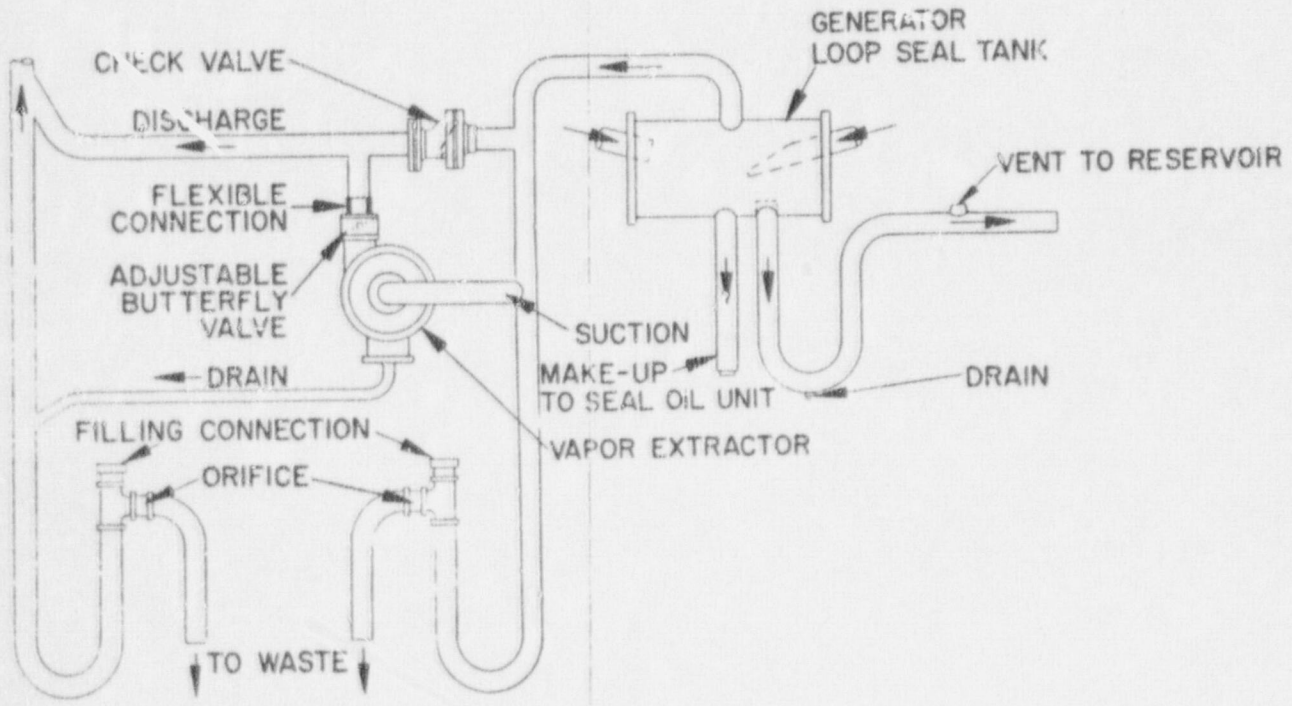
Shop Order
13-A-3169





Sequoyah Type

VAPOR EXTRACTOR LOCATION ABOVE LOOP SEAL TANK



VAPOR EXTRACTOR LOCATED BELOW LOOP SEAL TANK

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