

Green Seal™ Environmental Standard for Paints and Coatings  
(GS-11)  
**Summary of Requirements<sup>1</sup>**  
**August 2008**

**Abbreviated List of Product-Specific Performance Requirements:**

- Adhesion (paints and coatings)
- Applicability or flow and leveling (paints and coatings)
- Hiding Power or opacity (paints and coatings)
- Corrosion Resistance (anti-corrosive coatings)
- Alkali Resistance (floor paints)
- Scrubbability (floor paints, interior topcoats)
- Washability or stain removal (interior topcoats)
- Fade Resistance (exterior topcoats)
- Flexibility (exterior topcoats)
- etc...

**Abbreviated List of Product-Specific Health and Environmental Requirements:**

- Compound Prohibitions

The product shall not contain any ingredients that are carcinogens, mutagens, reproductive toxins, hazardous air pollutants or ozone-depleting compounds.  
Exception for titanium dioxide and carbon black in pre-tinted products

- Specific Compound Prohibitions

The product shall not contain the following ingredients:

- 1,2-dichlorobenzene
- Alkylphenol ethoxylates (APEs)
- Formaldehyde-donors
- Heavy metals, including lead, mercury, cadmium, hexavalent chromium and antimony in the elemental form or compounds
- Phthalates
- Triphenyl tins (TPT) and tributyl tins (TBT)

- Volatile Aromatic Compound Content Limit

The product shall contain no more than 0.5% by weight of sum total of volatile aromatic compounds.

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<sup>1</sup> The Green Seal standard has been summarized and abbreviated solely for the purpose of this course. For the full text of the most recent standard, please refer to:

<http://www.greenseal.org/certification/standards/gs11paintscoatings.cfm>

- Volatile Organic Compound (VOC) Content Limit

The VOC concentration of the product shall not exceed ...limits differ based on the product type.

- Colorant Added at the Point-of-Sale VOC Content Limit

Effective as of January 1, 2010, Colorant Added at the Point-of-Sale VOC Content Limit. The VOC concentration of the product including the colorant added at the point-of-sale shall not exceed those listed...limits differ based on the product type.

**Other Requirements:**

- End-of-life management
  - Consumer Education
- Packaging Requirements
  - Recycled content or take-back Packaging
  - Heavy Metal Restrictions
  - Other Restrictions

**Green Seal™ Environmental Standard for General-Purpose, Bathroom, Glass, and  
Carpet Cleaners Used for Industrial and Institutional Purposes  
(GS-37)**

**Summary of Requirements<sup>1</sup>  
August 2008**

**Abbreviated List of Product-Specific Health and Environmental Requirements**

- No compounds that are toxic to humans
- No carcinogens and reproductive toxins
- Not corrosive to the skin or eyes (Skin and Eye Irritation)
- No skin sensitizer
- Not combustible
- No ingredients that significantly contribute to photochemical smog, tropospheric ozone production, & indoor air quality
- Not toxic to aquatic Life
- Readily biodegradable (aquatic biodegradability)
- The product *as used* shall not contain more than 0.5% by weight of total phosphorus (Eutrophication)
- Packaging should be recyclable, refillable or represent significant reduction in material use
- Must be a concentrate (except for FIFRA-registered bathroom cleaners)
- List fragrances in MSDS's and follow the Code of Practice of the International Fragrance Association.
- Prohibited Ingredients
  - Alkylphenol ethoxylates
  - Dibutyl phthalate
  - Heavy metals including arsenic, lead, cadmium, cobalt, chromium, mercury, nickel, or selenium
  - Ozone-depleting compounds
  - Optical brighteners
- Manufacturer, distributor or 3<sup>rd</sup> party must offer training or training materials in the proper use of the product.
- Discourages animal testing and will accept the results of past peer-reviewed or standard tests demonstrating compliance with a criterion.

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<sup>1</sup> The Green Seal standard has been summarized and abbreviated solely for the purpose of this course. For the full text of the most recent standard, please refer to:

[http://www.greenseal.org/certification/gs37\\_iicleaners.cfm](http://www.greenseal.org/certification/gs37_iicleaners.cfm)



# Pictured Rocks Natl. Lakeshore Environmental Leadership

Presented by

Chris V. Case, Facility Manager





# Green Procurement



**We have choices!**

# Reduced Toxins



**Safer for Employees and  
the Environment**





# How Low Can You Go!

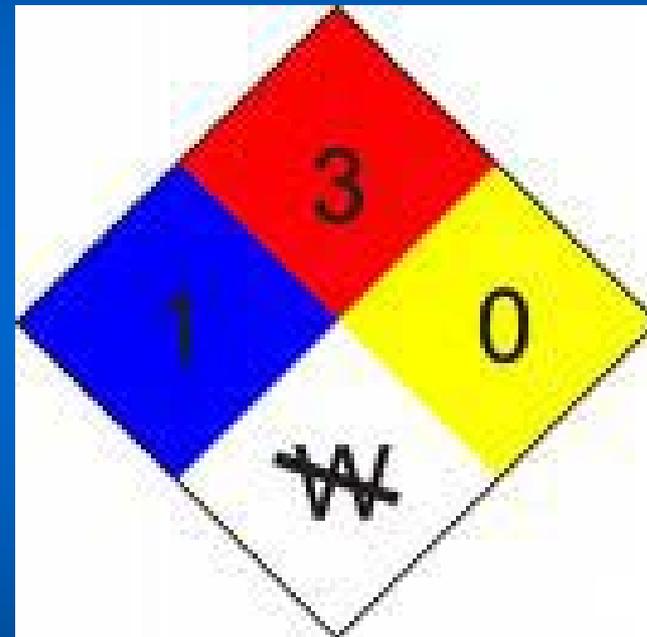
**Ammonium Hydroxide**

<b>HEALTH</b>	2
<b>FLAMMABILITY</b>	0
<b>REACTIVITY</b>	0

**Personal Protection** J

- 0 Minimal Hazard
- 1 Slight Hazard
- 2 Moderate Hazard
- 3 Serious Hazard
- 4 Severe Hazard

Get those numbers down



Try to "Zero Out"



# Pictured Rocks Natl. Lakeshore Environmental Leadership

## Bio-Fluids Substitution Program

# Bio-Diesel (B-20)

- Diesel Trucks and Heavy Equipment (6)
- Diesel Engine Pickup Trucks (6)



# Soy Hydraulic Fluid

- Dump Trucks (3)
- Snow Plows (4)
- Backhoe/loaders (2)
- Vehicle Lifts (2)



# Soy Trans-hydraulic Fluid

- Backhoe/Grader and Crawler/Dozer (4)
- Utility Tractors (2)



# Soy Trans-hydrostatic Fluid

- Garden Tractor/Mowers (3)



# Soy 2-Cycle Engine Oil

- Mower/Trimmers
- Snowmobiles
- Patrol Boats
- Chainsaws



# Soy Bar and Chain Oil



Chain oil goes directly from the chain into the environment!

# Soy #2 Chassis Lubricant



# Soy Parts Washing Fluid

- 300 degree flash point
- Low VOC and health hazard
- Performance equal to petroleum solvents



# Soy Penetrating Lubricant

- Penetrates between threads
- High flash point
- Low evaporation
- Residual lubrication
- Water displacing



# Soy Cleaners and Solvents

A wide variety of soy-based products are now available



# Soy Crankcase Oil

**Pictured Rocks is successfully testing soy-based engine oil in seven park vehicles.**

**(Industry efforts are underway to bring this product to consumers in the near future.)**





For additional information contact:

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Check out our “Sustainable is Attainable” web link at

**[www.nps.gov/piro/parkmgmt/green.htm](http://www.nps.gov/piro/parkmgmt/green.htm)**

**APPENDIX 2**

**WASO & REGIONAL POINTS OF CONTACT**

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# NPS ENVIRONMENTAL COMPLIANCE & RESPONSE BRANCH SUSTAINABLE OPERATIONS & CLIMATE CHANGE BRANCH

*WASO & REGIONAL CONTACTS* (last updated: 01/05/10)

REGION		Environmental Auditing/ECA	Sustainable Practices	Fuel Storage Tanks	Contaminated Site Assessment and Cleanup	States
Address	Support					
Alaska Region 240 West Fifth Ave. Anchorage, AK 99501	Alaska Support Office 240 West Fifth Ave. Room 114 Anchorage, AK 99501	Bill Heubner Civil Engineer Ph: 907-257-2675 Fax: 907-257-2499	Bill Heubner	Bill Heubner	Program/Policy: Linda Stromquist Geologist Ph: (907) 257-2619 Fax: (907) 257-2448	AK
Intermountain Region P.O. Box 25287 12795 W. Alameda Pkwy Denver, CO 80225-0287 FTS: 969-2920	Denver SO P.O. Box 25287 Denver, CO 80225-0287	Jay Boisseau, Civil Engineer Ph: 303-969-2671 Fax: 303-969-2063	Christopher Reel Environmental Protection Specialist Ph: 303-969-2643 Fax: 303-969-2063	Phil Clark Civil Engineer (IMSF) Ph: 505-988-6033 Fax: 505-988-6123	Jay Boisseau, Civil Engineer Ph: 303-969-2671 Fax: 303-969-2063	AZ, UT, NM, CO, MT, OK, TX, WY
Midwest Region 601 Riverfront Drive Omaha, NE 68102	Midwest SO 601 Riverfront Drive. Omaha, NE 68102	Jim Conroy Environmental Engineer Ph: (402) 661-1708 Fax: (402) 661-1983  Vern Hurt, Safety Ph: (402) 661-1710	Mary Rozmajzl Environmental Specialist Ph: (402) 661-1714 Fax: (402) 661-1715	Jim Conroy	Jim Conroy	IL, IN, MI, MN OH, WI, AR, IO, MO, ND, NE, KS, SD
Southeast Region 100 Alabama Street Atlanta, GA 30303 FTS:841-3835	Atlanta SO 100 Alabama Street Atlanta, GA 30303	Brian Cook Environmental Management Program Coordinator Ph: (404) 562-3124 ext. 697 Cell: (404) 226-6741 Fax: (404) 562-3257	Brian Cook	Brian Cook	Brian Cook	AL, FL, GA, KY, LA, MS, NC, PR, SC, TN, and VI.
National Capital Region 1100 Ohio Dr., SW Washington, DC 20242 FTS: 523-5067	National Capital SO 1100 Ohio Dr., SW Washington, DC 20242	Julia Hewitt Environmental Protection Specialists. Ph: (202) 619-7083 Fax: (202) 619-7169	Mike McMahon Landscape Architect Specialists. Ph: (202) 619-76387 Fax: (202) 287-7177	Julia Hewitt	Julia Hewitt	DC, MD, VA, WV

REGION		Environmental Auditing/ECA	Sustainable Practices	Fuel Storage Tanks	Contaminated Site Assessment and Cleanup	States
Address	Support					
Northeast Region 200 Chestnut Street Philadelphia, PA 19106	Northeast Region 200 Chestnut Street Philadelphia, PA 1910	Dave Schuller Acting Audit Program Coordinator Ph: (215) 597-5368 Fax: (215) 597-0351	Dave Schuller	Dave Schuller	Dave Schuller	CT, ME, MA, NH, NJ, NY, VT
	Philadelphia SO 200 Chestnut Street Philadelphia, PA 19106			Mark Spadea Ph: (215) 597-0043 Fax: (215) 597-1561	Patricia Bentley assisted by Michele Batcheller Ph: (814) 863-9414 Fax: (814) 863-2621	DE, MD, PA, VA, WV
Pacific West Region 1111 Jackson Street Oakland, CA 94607-4807	Columbia Cascades SO 909 First Avenue Seattle, WA 98104-1060	Steve Mitchell Ph: (510) 817- 1376 Fax: (510) 817-1489	Sonya Capek Ph: (206) 220-4271 fax: (206) 220-4160	Steve Mitchell	Steve Mitchell	ID, OR, WA
	Pacific Great Basin SO 1111 Jackson Street, Oakland, CA 94607-4807	Steve Mitchell	Sonya Capek	Steve Mitchell	Steve Mitchell	CA, NV
	Pacific Islands SO 300 Ala Moana Blvd., #6305 Honolulu, HI 96850	Steve Mitchell	Sonya Capek	Steve Mitchell	Steve Mitchell	GU, HI
WASO Concession Program 1201 Eye Street, NW Washington DC 20005	Concession Program Center 12795 W. Alameda Pkwy Lakewood, CO 80228	Kurt Rausch Senior Operations Analyst Ph: (202) 513-7202 Fax: (202) 371-2190	Kurt Rausch	Kurt Rausch	Kurt Rausch	All

**NPS HAZARDOUS WASTE MANAGEMENT & ENVIRONMENTAL AUDITING PROGRAM**  
**ADDITIONAL CONTACTS**

DIVISION/PROGRAM	NAME	TELEPHONE NUMBER
AIR RESOURCES	Chris Shaver	303-969-2074
CONCESSION PROGRAM	Jo Pendry	202-513-7156

CULTURAL RESOURCES	Janet Snyder Matthews	202-208-7625
DSC CONTRACTING DIVISION	Ed Tafoya	303-969-2116
ENVIRONMENTAL AUDIT PROGRAM	Carl Wang	202-565-1261
GEOLOGIC RESOURCES	David Shaver	303-969-2074
ENVIRONMENTAL MANAGEMENT PROGRAM TEAM LEADER	Carl Wang	202-565-1261
INTEGRATE PEST MANAGEMENT	Terry Cacek	970-225-3542
INTERPRETATION AND EDUCATION	Charles W. Mayo	202-513-7137
LAND ACQUISITION	Bill Shaddox	202-354-6943
POLICY	Marcia Keener	202-208-4298
PROCUREMENT	Janet Morris	303-987-6739
PUBLIC HEALTH	Charles Higgins	202-513-7217
RANGER ACTIVITIES	Don Coelho	202-513-7084
RESPONSE, PLANNING, AND ASSESSMENT UNIT	Dan Hamson	202-513-7194
RISK MANAGEMENT	Dick Powell	202-513-7218
WATER RESOURCES	Dan Kimball	970-225-3501