UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 30 1995

Mr. Milton Krause
Sunshine Makers Inc.
15922 Pacific Coast Highway
Huntington Harbor, CA 92649

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

Dear Mr. Krause:

We have received the additional technical product data required by the revised National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, on the Surface Washing Agent "Simple Green" and have determined it satisfies the data submission requirements contained in Title 40 of the Code of Federal Regulations (CFR) section 300.915 of the National Contingency Plan (NCP). "Simple Green" will continue to be listed on the NCP Product Schedule under Surface Washing Agents and may be authorized for use by Federal On-Scene Coordinators in accordance with 40 CFR section 300.910. The technical data for this product will be maintained on file by the Emergency Response Division pursuant to 40 CFR section 300.920.

We have enclosed some of the relevant provisions in the NCP containing restrictions regarding the listing of your product. Please note that you are required to notify the Environmental Protection Agency (EPA) of any changes in composition, formulation, handling procedures, or application of your product. Based on this notice, EPA may require retesting of the product. Also, please be advised that the listing of "Simple Green" on the NCP Product Schedule does not constitute approval, certification, authorization, licensing or promotion of the product; nor does it imply compliance with any criteria or minimum standards for such agents. Failure to comply with these restrictions or the making of any improper reference to EPA in an attempt to demonstrate approval or acceptance of the product will constitute grounds for removal of the product from the schedule.

If you have any questions concerning this letter, please contact Ms. Gail Thomas in the Emergency Response Division at (703) 603-8736.

Sincerely,

John E. Riley

John E. Riley
Acting Director
Emergency Response Division

Enclosure

Enclosure

NCP Product Schedule Restrictions
(as Described in the National Contingency Plan
Subpart J Section 300.920)

Section 300.920(d)

The submitter must notify EPA of any changes in the composition, formulation, or application of the dispersant, surface washing agent, surface collecting agent, bioremediation agent, or miscellaneous oil spill control agent. On the basis of this data, EPA may require retesting of the product if the change is likely to affect the effectiveness or toxicity of the product.

Section 300.920(e)

The listing of a product on the NCP Product Schedule does not constitute approval of the product. To avoid possible misinterpretation or misrepresentation, any label, advertisement, or technical literature that refers to the placement of the product on the NCP Schedule must either reproduce in its entirety EPA's written statement that it will add the product to the NCP Product Schedule under § 300.920 (a)(2) or (b)(2), or include the disclaimer shown below. If the disclaimer is used, it must be conspicuous and must be fully reproduced. Failure to comply with these restrictions or any other improper attempt to demonstrate the approval of the product by any NRT or other U.S. Government agency shall constitute grounds for removing the product from the NCP Product Schedule.

Disclaimer

[Product Name] is on the U.S. Environmental Protection Agency's NCP Product Schedule. This listing does NOT mean that EPA approves, recommends, licenses, certifies, or authorizes the use of [Product Name] on an oil discharge. This listing means only that data have been submitted to EPA as required by subpart J of the National Contingency Plan, § 300.915.

http://epa.gov/OEM/content/ncp/product_schedule.htm
Last updated on Thursday, January 17th, 2008.

Emergency Management

National Contingency Plan Product Schedule

As required by Subpart J of the National Contingency Plan, EPA maintains the National Contingency Plan (NCP) Product Schedule.

- NCP Product Schedule (December 2007) (17 pp, 67K, About PDF) is also available in its entirety
- NCP Product Schedule Notebook (December 2007) (194 pp, 424K, About PDF) presents summary information on the conditions under which each of the products may be used

The table below shows all products currently listed in the NCP Product Schedule. To limit the view to a specific category, use the drop down box in the "Category" column.

- Product Categories under NCP Subpart J includes regulatory definitions of the product types used below.
- NCP Product Schedule Toxicity and Effectiveness Summaries of these products are also available.

For more information on the Product Schedule, contact the NCP Product Schedule Hotline.

Product	Category
	Surface Washing Agent
AQUACLEAN	Surface Washing Agent
BG-CLEAN™ 401	Surface Washing Agent
BIOSOLVE® HYDROCARBON MIGRATION TECHNOLOGY™	Surface Washing Agent
CLEAN SPLIT (see SPLIT DECISION SC)	Surface Washing Agent
CN-110	Surface Washing Agent
COREXIT® EC7664A (formerly COREXIT 7664)	Surface Washing Agent
COREXIT® EC9580A (formerly COREXIT 9580 SHORELINE CLEANER)	Surface Washing Agent
CYTOSOL	Surface Washing Agent
DO-ALL #18	Surface Washing Agent
DUO-SPLIT (see SPLIT DECISION SC)	Surface Washing Agent
ECP RESPONDER-SW (see GOLD CREW SW)	Surface Washing Agent
ENVIROCLEAN (formerly ENVIRO CLEAN 165)	Surface Washing Agent
E-SAFE©	Surface Washing Agent
F-500	Surface Washing Agent
GOLD CREW SW	Surface Washing Agent
MICRO CLEAN (see NATURE'S WAY HS)	Surface Washing Agent

NALE-IT	Surface Washing Agent
NATURE'S WAY HS	Surface Washing Agent
NATURE'S WAY PC (see NATURE'S WAY HS)	Surface Washing Agent
PETRO-CLEAN	Surface Washing Agent
PETRO-GREEN ADP-7 (formerly D-14)	Surface Washing Agent
PETROTECH 25	Surface Washing Agent
POWERCLEAN (see NATURE'S WAY HS)	Surface Washing Agent
PREMIER 99	Surface Washing Agent
SC-1000™	Surface Washing Agent
SHEEN-MAGIC©	Surface Washing Agent
SIMPLE GREEN®	Surface Washing Agent
SPLIT DECISION SC (formerly SPLIT DECISION)	Surface Washing Agent
SUPERALL #38 (see TOPSALL #30)	Surface Washing Agent
TOPSALL #30	Surface Washing Agent

http://epa.gov/OEM/content/ncp/products/simplegr.htm
Last updated on Thursday, January 17th, 2008.

Emergency Management

SIMPLE GREEN®

TECHNICAL PRODUCT BULLETIN #SW-15 (formerly D-46)
USEPA, OIL PROGRAM CENTER
ORIGINAL LISTING DATE: APRIL 23, 1990
REVISED LISTING DATE: AUGUST 30, 1995
"SIMPLE GREEN®"

I. NAME, BRAND, OR TRADEMARK

SIMPLE GREEN®
Type of Product: Surface Washing Agent (Water Based)

II. NAME, ADDRESS, AND TELEPHONE NUMBER OF MANUFACTURER/CONTACT

Sunshine Makers, Inc.
15922 Pacific Coast Highway
Huntington Harbor, CA 92649
Phone: (800) 228-0709
(562) 795-6000
Fax: (562) 592-3830
(Mr. Milton Krause)

III. NAME, ADDRESS, AND TELEPHONE NUMBER OF PRIMARY DISTRIBUTORS

Sunshine Makers, Inc.
15922 Pacific Highway
Huntington Harbor, CA 92649
Phone: (800) 228-0709
(562) 795-6000
Fax: (562) 592-3830
(Mr. Milton Krause)

IV. SPECIAL HANDLING AND WORKER PRECAUTIONS FOR STORAGE AND FIELD APPLICATION

1. Flammability:
Non-flammable
2. Ventilation:
Not required
3. Skin and eye contact; protective clothing; treatment in case of contact:
SIMPLE GREEN® is safe for use on skin and will not cause irritation in the majority of users. Avoid contact with eyes, irritation may result. Wear splash goggles or full face-shield and have eye washing equipment available in areas where potential is high for eye contact. No special precautions or additional protective equipment are required during handling or use. SIMPLE GREEN® is provided with a Material Safety Data Sheet (No. 1002).
4.a. Maximum storage temperature: 140°F
4.b. Minimum storage temperature: 34°F
4.c. Optimum storage temperature range: > 32°F and < 140°F
4.d. Temperatures of phase separations and chemical changes:
SIMPLE GREEN® is stable and phase separation will not occur at temperatures within the above storage range.

V. SHELF LIFE

SIMPLE GREEN® has an unlimited shelf life.

VI. RECOMMENDED APPLICATION PROCEDURE

1. Application Method:
Spray on oily surface.
2. Concentration/Application Rate:
For open water, spray concentrated product directly on surface of oil at a ratio of 4 parts of oil to 1 part of SIMPLE GREEN®. Site conditions may warrant alternative procedures to maintain effectiveness.
3. Conditions for Use:
Equally effective in fresh water, estuarine, and marine environments at all temperatures. SIMPLE GREEN® contains no known EPA Priority Pollutants.

VII. TOXICITY AND EFFECTIVENESS

a. Toxicity:

Material Tested	Species	LC50 (ppm)
SIMPLE GREEN®	Menidia beryllina	27.90 96-hr
	Mysidopsis bahia	77.60 48-hr
No. 2 Fuel Oil	Menidia beryllina	6.50 96-hr
	Mysidopsis bahia	3.70 48-hr
SIMPLE GREEN® & No. 2 Fuel Oil (1:10)	Menidia beryllina	8.30 96-hr
	Mysidopsis bahia	4.40 48-hr
Reference Toxicant (DSS)	Menidia beryllina	7.80 96-hr
	Mysidopsis bahia	21.20 48-hr

NOTE: This toxicity data was derived using the concentrated product. See Section VI of this bulletin for information regarding the manufacturer's recommendations for concentrations and application rates for field use.

b. Effectiveness:
NA

VIII. MICROBIOLOGICAL ANALYSIS

SIMPLE GREEN® contains no microorganisms, enzymes, or biological material.

IX. PHYSICAL PROPERTIES

1. Flash Point: > 200°F
2. Pour Point: None
3. Viscosity: 2.0 Centistokes at 78°F
4. Specific Gravity: 1.0257 g/ml at 72°F
5. pH: 9.5
6. Surface Active Agents: CONFIDENTIAL
7. Solvents: CONFIDENTIAL
8. Additives: CONFIDENTIAL
9. Solubility: Infinitely miscible.
(Increasing salt concentrations in marine ecosystems will lead to complexes with SIMPLE GREEN® that may become visible at rations above one part SIMPLE GREEN® to 99 parts seawater.)

X. ANALYSIS FOR HEAVY METALS, CYANIDE, AND CHLORINATED HYDROCARBONS

Compound	Concentration (ppm)
Aluminium	10.0000
Arsenic	< 5.0000
Cadmium	< 0.0233
Chromium	0.1150
Copper	< 0.7500
Lead	0.0776
Mercury	< 0.0125
Nickel	< 2.3000
Selenium	< 1.0000
Zinc	< 4.4000
Cyanide	< 1.0000
Chlorinated Hydrocarbons	< 1.0

Selection Guide for Oil Spill Applied Technologies

Volume I – Decision Making

NOTE: This revision of Volume I of the "Selection Guide for Oil Spill Applied Technologies" reflects many changes from the previous versions.

Scientific and Environmental Associates, Incorporated and the Members of the 2002 Selection Guide Development Committee.

Current updates were funded under contract by the US Coast Guard, District 7.

Scientific and Environmental Associates, Inc.
325 Mason Avenue
Cape Charles, Virginia 23310
Tel. 757-331-1787, fax –1788, email seahq@erols.com

SELECTION GUIDE REFERENCE MATERIALS

The information contained within this selection guide was primarily developed from data supplied to the authors by the product vendors, as well as from the following sources:

USEPA, National Contingency Plan Product Schedule Notebook, October 1998, December 1998, February 1999, May 1999, August 1999, December 1999, April 2000, and September 2002 revisions. Accessible from the USEPA website **www.epa.gov/oilspill/** or by calling (202) 260-2342 or (703) 603-9918.

Walker, A.H., J. Michel, G. Canevari, J. Kucklick, D. Scholz, C.A. Benson, E. Overton, and B. Shane. 1993. Chemical Oil Spill Treating Agents. Marine Spill Response Corporation,Washington, DC. MSRC Technical Report Series 93-015. 328 p.

Harless Performance Guild, Inc. 1995. Human Performance Technology. Newnan, GA.

Any additional reference materials specific to a product/technology category are provided at the conclusion of the Category summaries within Part 2 of this Selection Guide: Review/Selection of Options.

ACKNOWLEDGEMENTS

The authors would also like to gratefully acknowledge the assistance of the many individuals for the development and refinement of this Selection Guide. The editors made every effort to respond to all comments received. Individuals who participated in the initial development and this subsequent update of this document are detailed in Appendix L.

FRONT COVER PHOTO CREDITS

National Oceanic and Atmospheric Administration Web Page Photo Gallery
US Coast Guard Web Page Photo Gallery
Hyattsville, MD, Volunteer Fire Department Web Page Photo Gallery
Boise, ID Fire Department Web Page Photo Gallery

SURFACE WASHING AGENTS

(This is a Category on the NCP Product Schedule)

Disclaimer: Decisions for Public Safety Issues for Fires are under the Purview of the Lead Public Emergency Response Agency.

Mechanism of Action

- These products contain surfactants, solvents, and/or other additives that work to clean oil from substrates.
- Many products are essentially industrial cleaners that emulsify the oil, much in the same way that dishwashing soap cleans the grease off dishes. The treated oil is broken into small droplets that are kept in suspension by the surfactant (soap).

"Lift and disperse" products are those for which the product literature states that the oil is dispersed, emulsified, or encapsulated. Thus, the washwater from these products should not be flushed into waterbodies or left untreated, but must be contained, recovered, and properly treated.

"Lift and float" products are those where the released oil is not dispersed but readily floats on the water surface and is recoverable. Thus, the washwater from these products should not be flushed into waterbodies, but should be contained, recovered, and properly treated.

When to Use

- On hard-surface shorelines where there is a strong desire to remove residual oils.
- When the oil has weathered so that it cannot be removed from a substrate using ambient water temperatures and low pressures.
- When the oil is trapped in areas inaccessible to physical removal but which can be flushed and the washwaters contained, such as in sewers, storm drains, and ravines.
- For volatile fuel spills that have entered sewers, for vapor suppression, and to enhance flushing recovery, as long as all washwaters are recovered and prevented from being discharged into the environment.

Authority Required

- Incident-specific RRT approval is required to use surface washing agents in any manner that would cause for them to be released to the environment.
- Verify state requirements for discharge and waste management.

- **NOTE**: As of September, 2002, there were 21 surface washing agents listed on the NCP Product Schedule. **For this Selection Guide, PES-51 and PX-700 (listed on the NCP Product Schedule as Miscellaneous Oil Spill Control Agents) are classified as surface washing agents due to their mechanism of action**. Only products listed on the NCP Product Schedule are reported in Table 24.
- Fire Departments and HAZMAT teams have the authority to "hose down" a spill using a chemical countermeasure if they determine that the spilled oil could cause an explosion and/or threaten human health.

CONTAINMENT AND RECOVERY SHOULD BE THE NORM, NOT THE EXCEPTION

Availability

- Varies widely by product. See Table 24 for specific products.

General Application Requirements

- Products are sprayed either neat or diluted with water. For small applications, hand-held units such as hudson sprayers are used; larger, diluted applications use eduction systems coupled with fire hoses, power washers, etc.
- Application rates vary widely and may be difficult to monitor and control.
- There is some period for soaking or scrubbing, and then the area is flushed with water. Heated water (in both spray and flush) is sometimes required for very sticky oils.
- All released oil must be recovered, so systems are needed to contain and treat the washwater from "lift and disperse" products, which can require considerable operational support.
- Washwaters from using "lift and float" products may be discharged after oil separation, **though** there will be site-specific requirements.

Health and Safety Issues

- All products required Level D personal protection with splash protection.
- Slips, trips, and falls from working on oily surfaces may be of concern.

Limiting Factors/Environmental Constraints

- On shorelines, there are usually restrictions on direct spraying of intertidal biota and flushing across sensitive substrates.
- Only those products which have been documented to be safe to use on vegetation should be applied to vegetated areas.
- Under no conditions should washwaters from land surfaces be allowed to enter waterbodies without proper treatment. Check with wastewater plant operators before washwaters are flushed into sewers to make sure that they can accept the wastes.

- Use lift and float products in open-water settings, to allow oil recovery. Exception would be in high energy environments where the oil cannot be recovered (so it would be better to let it disperse rather than re-oil adjacent areas).

Monitoring Requirements/Suggestions

- Conduct effectiveness testing of selected products to determine the best one for the spill conditions.
- May need effects monitoring if sensitive resources are at risk during use.
- On shorelines, "first use" monitoring of sensitive biota should be conducted to make sure that adverse effects are not occurring under actual use conditions.
- For land application, monitor downstream waterbodies to detect fish kills or other impacts from inadvertent discharges from the cleanup area. Immediately contain any discharges.

Waste Generation and Disposal Issues

- Because released oil must be recovered, waste generation is a function of recovery method. Sorbents are often used with "lift and float" products. Local conditions will determine whether the water must also be collected and treated, or can be discharged safely.
- When the oil is dispersed, all of the washwater must be contained and treated prior to discharge, often to wastewater treatment plants if the oil concentrations are low. For high oil concentrations, oil recovery can be increased by the use of emulsion-breaking agents.

References

Michel, J. and B.L. Benggio. 1995. Testing and use of shoreline cleaning agents during the *Morris J. Berman* spill. In: Proc. 1995 Intl. Oil Spill Conference, API Publication No. 4620, American Petroleum Institute, Washington, DC. pp. 197-202.

Who to Call for More Information and Additional Resources

USEPA-ORD, Cincinnati, OH 48256 Phone: 513-569-7668

USEPA-ERT, Edison, NJ 08837 Phone: 732-321-6740

NOAA-HAZMAT, Seattle, WA 98115 Phone: 206-526-6317

Environment Canada, Emergencies Sciences Division, Ottawa, Canada Phone: (613) 988-9622

This page intentionally left blank.

Table 24. Continued.

	SX-100	Simple Green	Split Decision	Topsail #30
General Description	NP	Green water-based detergent concentrate	Water-based concentrate	Alkaline, pink water-based detergent concentrate
Availability (amount per location)	Distributor in Colorado Springs, CO	Distributor- Sunshine Makers; Huntington Harbor, CA	3 Distributors in Texas	Distributors in FL and LA
Application Rate	Up to 1:200 product to water, contact manufacturer for specific rates	1:4 product to oil; Dilution of concentrate with water ranges from 1:50 to full strength	Dilution of concentrate with water ranges from 1:3 product to water to as little as 1:50.	1:5 product to oil
Application Method	Contact manufacturer for specific application methods	Spray solution on oiled area, let soak for 5-10 minutes, then rinse with water	Spray diluted concentration (with water) on oiled surface or water	Spray/mop .2-20% solution on oiled area, scrub, then rinse well
Soak Time	NP	5-10 minutes	None	3 minutes
Temperature Limitations	32°-130°F	Keep from freezing	Keep from freezing	Air and water temp above freezing
Effectiveness in Environment Canada lab test	NP	Not tested	Not tested	Fresh water: not tested Salt water: 14%
Use in Fresh Water?	Yes	Yes	Yes	Yes
Use in Salt Water?	Yes	Yes	Yes	Yes
Toxicity (LC-50, ppm) **Note: a low value = high toxicity**	Did not enhance toxicity of No.2 fuel oil for shrimp of silversides	Mummichug 1,690 (48h); Brine shrimp 610 (48h); Grass shrimp 270 (48h); Green lipped mussel 220 (48h); Mud snail 410 (48h) Did not enhance toxicity of No. 2 fuel oil		Rainbow trout 354 (96h) Did not enhance toxicity of No. 2 fuel oil
Inland silversides 96 h	32	28	8.3	157
Mysid shrimp 48 h	32	78	8.2	116

	SX-100	Simple Green	Split Decision	Topsall #30
Solubility in water	100% soluble	100% soluble	100% soluble	100% soluble
Other Information	Effective on spills where landfall has occurred or for soil remediation efforts	Extensive use on ships, boats, boom, pilings, survival gear, breathing apparatus, tools, shoreline flora and fauna, etc.	Works best when applied with pressure washing equipment. Can be diluted up to 1 oz per gallon of water. Mild agitation is usually necessary if applied without pressure.	pH = 12.6 Product is not recommended for open-water oil dispersant use.
Is Treated Oil Recoverable?	NP	No; the oil is dispersed	Yes, forms a loose emulsion with oil that separates within seconds; treated oil can be skimmed from the rinse water or absorbed with an oil sorbent	No; the oil is dispersed
Application Assistance Information*	X Products and Services 719-576-8047	Sunshine Makers, Inc. 800-228-0709 562-795-6000	Mantek 972-438-0202	Stutton North Corporation 504-626-3900
Unit Cost**	NP	$8-$12 per gallon	$27.50 - $32.50 per gal.	$13.95 - $16.95 per gal
Photograph of Product (photos are added as they become available)				

* For additional technical assistance on product application, contact the supplier listed on the NCP Product Schedule Notebook.

** Unit costs are based on 2002 information supplied by the vendors, where provided. For a more up-to-date cost estimate, contact the supplier listed in the NCP Product Schedule. Generally, product prices decrease as purchase volume increase, and may also vary between distributors. Product application rates often vary greatly depending on use.

NP Not Provided