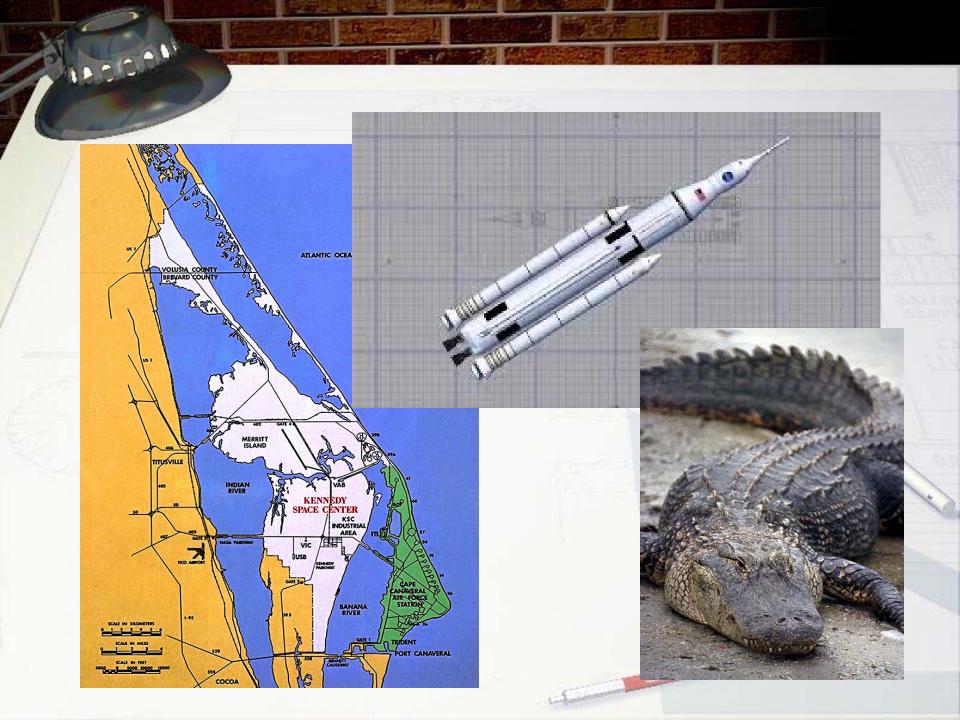
Hazard Communication and MSDS Management at the John F. Kennedy Space Center

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An effective hazard communication program is a core element of any successful workplace health and safety program.

Each contractor and Federal agency at KSC is required to have their own written Hazcom program



Program Management

The HazCom program for NASA Civil Service employees is addressed in a management policy document that assigns implementation responsibilities at the organizational level and in a work center safety and health guide that provides supervisory level instruction for HazCom compliance

KNPO 1888.2

Kennedy NASA Policy Directive

Mective Date: O

tx: October 22, 200

Responsible Office: Spaceport Services

KSC HAZARD COMMUNICATION PROGRAM

Rational Assessables and Space Administration

Julio F. Ravensky Spece Core

KDH-KSOF-2 CD Fee, Black

Page 1 of 10

RELEASED - Printed documents may be obsolete; validate prior to use

Program Management/Training

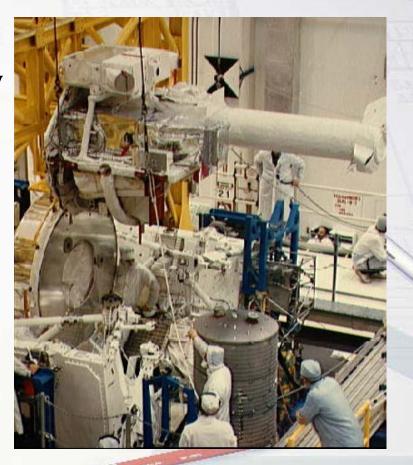
HazCom training for Civil Service employees is incorporated into classroom and interactive online training that is required for all NASA personnel at KSC

NASA employees assigned to work in a contractor-operated work area are also required to attend the contractor's HazCom training.



Program Management/SDS

NASA employees may be required to work in the vicinity of contractor operations where hazardous materials are used. NASA employees may review the SDSs through the KSC SDS Archive or by requesting the SDS from the operations contractor.



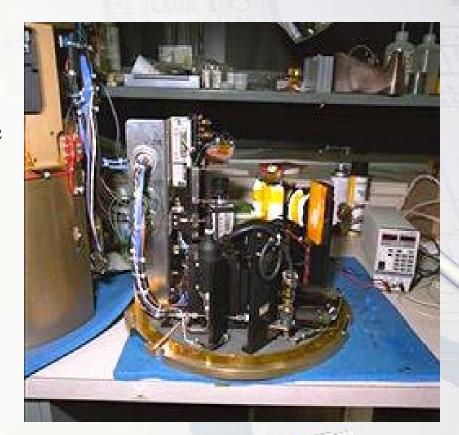
Program Management/SDS

Where an SDS is not available in the KSC SDS Archive, the work area supervisor is responsible for notifying the KSC SDS Coordinator to obtain the SDS and have it added to the Archive for Center-wide use

KSC Contractors have the option of using the KSC SDS Archive or operating their own SDS management system

Program Management/SDS

Payloads and flight experiments that are brought onto KSC by the **International Space** Agency, Universities, or other Government Agencies often require the use of chemicals as a part of ground processing operations.



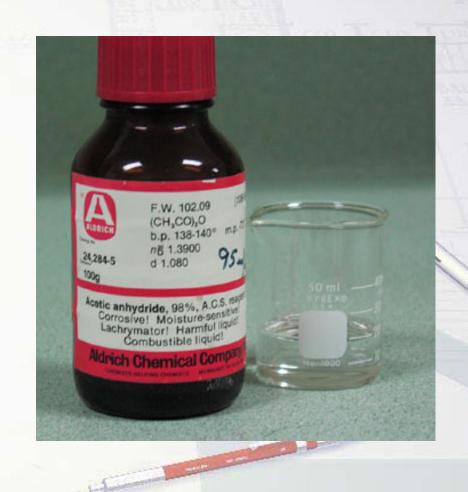
Program Management/SDS

Payload customers are required to submit SDSs prior to the arrival of the hazardous materials at KSC and ensure that SDS are available at their work locations.

Payload customers are not required to submit SDSs for materials supplied by NASA

Program Management/Container Labeling

NASA civil service and contractors organizations are responsible for ensuring the proper labeling of containers under their control.



Program Management/Container Labeling

NASA shop and lab supervisors are responsible for ensuring that containers in their area have adequate labeling.

- If labels on existing containers are missing or illegible, replacement must be obtained and applied to the container.
- Recontainerizing is discouraged.
- Where needed, environmental health assists in preparation of labels.

Program Management/Chemical Hygiene

NASA laboratories and contractors who operate labs at KSC are required to maintain their own Chemical Hygiene Plans.



Safety Data Sheets

- SDSs provide information on the chemical ingredients and hazards of every commercial product that contains hazardous chemicals.
- SDSs also provide information on safety precautions and what to do in an emergency, such as first aid.
- OSHA requires every manufacturer and importer to provide SDSs for their products.
- OSHA also requires employers to keep a list of SDSs and make them available to workers.

The Challenge

- 500+ work locations
- 200+ square miles
- 9000+ employees
- multi-employer worksite with 40-50 government and contractor organizations
- independent procurement and distribution
- 30000+ Safety Data Sheets
- add about 5000 new SDSs each year

How do you ensure effective hazard communication?

What OSHA Expects

- Make a list of all your chemicals (from liquid paper to rocket fuel)
- Get SDSs (all 30000 of them) from the vendors...and lots of file cabinets to keep them in.
- Make lots of copies
- Send a set to each work location
- Keep everything up to date
- Communicate between employers at worksite



SDS Management

KSC SDS System

- Resident on Internet Server
- Searchable Index on KSC SDS Home page
- SDS Accessible Using Web Browser
- SDSs stored as PDF images
- SDS Sharing among KSC organizations
- Direct SDS data transmittal from vendors

SDS Management

Website Security

KSC Access

- Protects server against intrusion
- Accessible by administrators for file management

Access List

Limit access to KSC users

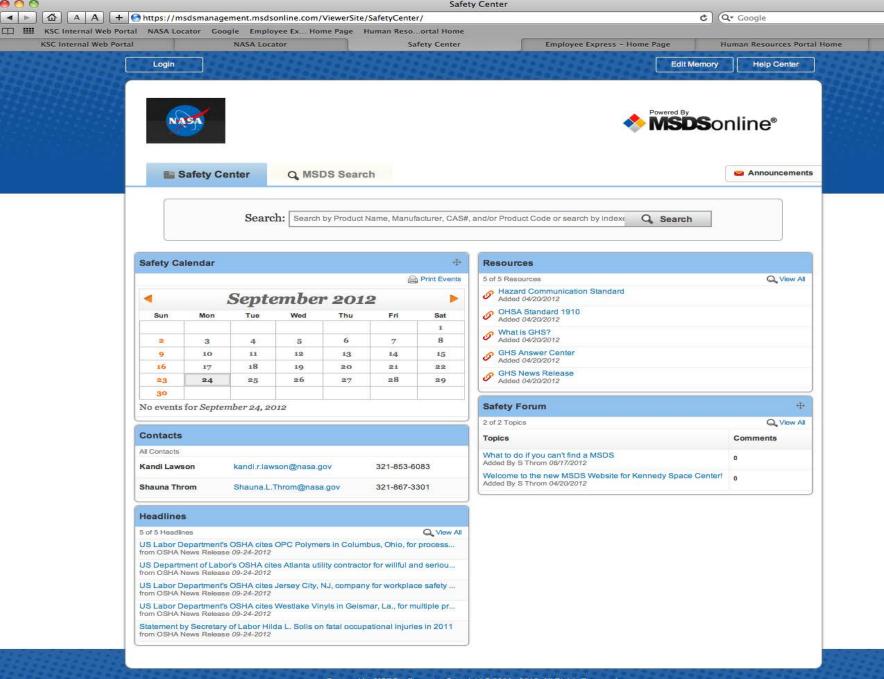
Data Backup

Service provided by SDS provider

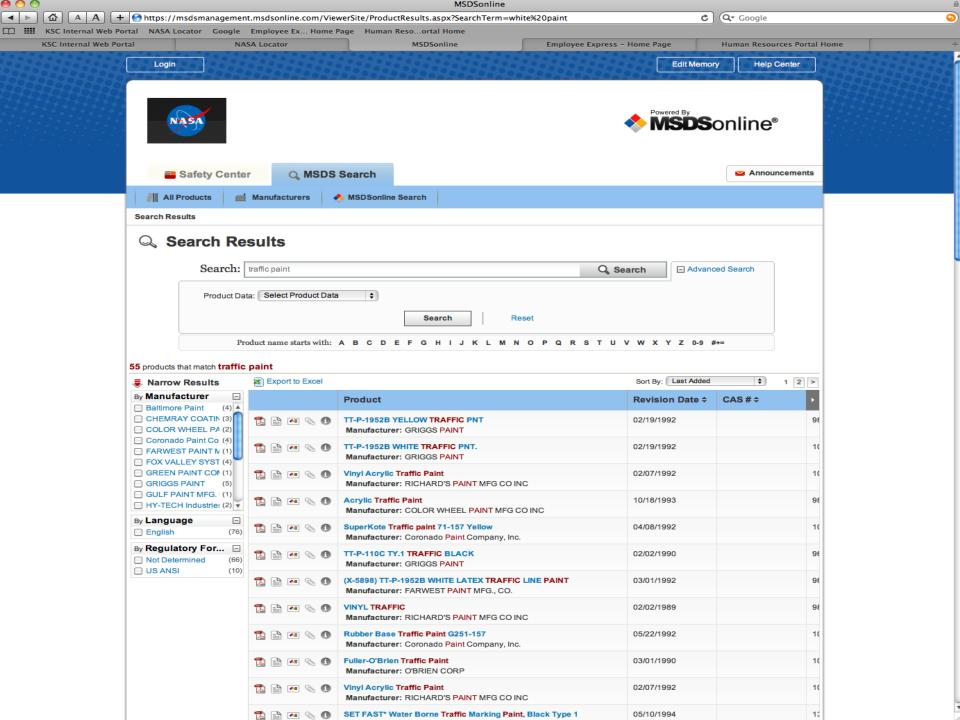
SDS Management

Process Improvements

- Centralized management of SDSs
- 24 hour access from any location
- Minimization of data management costs
- Elimination of time delays in SDS issuance
- Real-time availability to emergency responders
- SDS sharing among organizations



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MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS (Approved by U.S. Department of Lator "Essentially Smills" to Form OSHA 24)

Paint Division Ace Hardware Corporation 21901 South Central Avenue Matteson, Illinois 60443

DATE OF PREP 10/1/86 EMERGENCY TELEPHONE NO. 312/720-0600 INFORMATION TELEPHONE NO. 312/720-0600

SECTION !

PRODUCT NUMBER:

133A111

PRODUCT NAME:

5-Star Latex Exterior Redwood Stain *

JUN 2 8 1991

* Trade Mark

PRODUCT CLASS:

Latex Stain Paint

ENVIRONMENTAL HEALTH SERVICES

SECTION II - HAZARDOUS INGREDIENTES

INGREDIENT	CAS #	PERCENT	OCCUPATIONAL EXPOSURE LIMITS		VAPOR PRESSURE	TOXICITY DATA
2-Amino-2-Methyl~ 1-Propanol	124-68-5	<0.2	TLV 10pps	PEL 20ppm	mm Hg 0.8	
Ethylene Glycol	107-21-1	2.5	50ppm	50ppm	0.1	
Armonia -	7664-41-7	<0.1	25ppm	35ррт	290.0	
PH 8.5-9.0						

