

ManageMen (OS1)[®] and the Environment

"The Number One Cleaning Operating System In The World!"



ManageMen (OS1)[®] and the Environment

Environmental protection is a priority for the the continued health of people and our planet. ManageMen recognizes its responsibility as a global citizen and is continually striving to reduce the environmental impact of the work cleaners do and the services we provide.

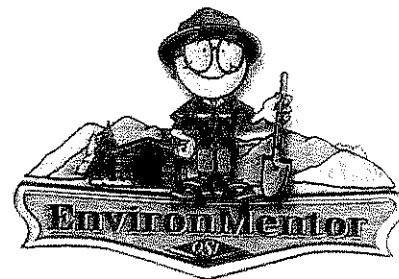
ManageMen and the Global Environment

ManageMen takes pride in its history of innovation and thoughtful cleaning programs. How we impact the environment is very important to us. Environmental considerations are an integral part of ManageMen's business practices. From the earliest stages of cleaning system design through training, implementation, and recycling, we take care to keep the activities of (OS1) users and our information products environmentally sound.

Five areas of particular attention are cleaning for health, protecting the built environment, safe cleaning practices, environmentally responsible chemicals, indoor air quality improvement, and recycling. Each aspect of the design cycle provides significant challenges, yet our efforts in these areas have resulted in some impressive results.

Cleaning for Health

It all begins here. Cleaning is all about removing unwanted matter and putting it in its proper place. Health is a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity. Cleaning an environment creates a sense of well being for those in the environment. ManageMen (OS1) recognizes that there are tremendous benefits from cleaning for people who spend more than 90% of their life in built environments.



Protecting the Built Environment

When the State of Washington wanted to clean up the environment for their own environmental scientists (all 1,100 of them) they chose ManageMen to develop their program for cleaning. (OS1) was used as the Deep Cleaning Protocol in the Washington State Ecology building recommissioning project. This project is cited by the U.S. Green Building Council as a model program for LEED EB. Of all the components that were part of this pioneering environmental project the (OS1) Deep Clean was recognized as the most noticeable improvement and the one most favorably regarded, even by the harshest critics of the project.

Safe Cleaning Practices

Reducing the environmental impact of our cleaning starts with the process engineering. Process design dictates the quantity and packaging of chemicals, ergonomic aspects of tools, impact of materials and procedures, energy consumption and the ease of recycling. For example, our decision to eliminate the use of upright vacuums makes our cleaning process more environmentally friendly. Our training programs emphasize training all workers in the cleaning language of "(OS1)ian" to eliminate confusion and a lack of communication among cleaning workers. (OS1) continually improves by benchmarking best practices among the cleaning industry's best cleaning





programs. (OS1) users work to maximize efficiency while minimizing waste. They utilize the benefits of programs such as the (OS1) Audit Program and the (OS1) Users Symposium to practice continuous quality improvement.

Olympic Winner

The 2002 Winter Olympics in Salt Lake City had to utilize world class cleaning. The goal was zero impact on the environment, before, during and after the games. ManageMen was selected to provide a gold medal program over all other proposals worldwide. We developed the cleaning process, wrote the cleaning specifications and scheduling, recruited project management, evaluated the bidders, produced all training materials including an Olympics venue cleaning video and written materials and conducted the training. When it was all over, the Salt Lake City Winter Games were recognized as the cleanest and the most environmentally friendly Olympics, ever.



Energy Efficiency

A cleaning program's greatest environmental impact is often its energy consumption over time. ManageMen has made great strides in recent years to optimize energy efficiency of our tools, and workloading. Since 1993, all ManageMen projects have utilized the team cleaning approach to reduce energy consumption over area or zone cleaning programs.

Incineration

While incineration does not completely eliminate solid waste, it drastically reduces the mass of waste being sent to landfills. Because most incineration produces steam for heat and electricity, this method is often called waste-to-energy conversion. Yet, incineration still is under close scrutiny by environmental groups throughout the United States for contributing to air pollution.

Also, incineration burns off the non-toxic material of waste, leaving a high concentration of the toxic material. Unrecoverable waste—waste that hasn't been source separated for recycling—is the most likely to be incinerated. There are also some materials, such as glass and metal, which are not normally incinerated. Products which can be neither recycled nor incinerated are destined for landfills. The plastic PortionPac chemical pack is one of the rare containers that adds to the fuel in an incinerator.

Environmentally Responsible Chemicals

In (OS1) we use chemical concentrates, source them without excess packaging, dispose of hazardous waste intelligently, and train workers to be responsible. (OS1) has completely eliminated the use of dangerous cleaning chemicals from all daily cleaning functions. 100% of the daily use cleaning chemicals are Green Seal Certified. The single daily germicide used to reduce pathogenic microorganisms is a neutral pH detergent that is U.S. Environmental Protection Agency (EPA) approved.

Additionally, each of the three daily use chemicals are issued in pre-measured packages Each is inventoried at the beginning and end of each shift. The three chemicals are color-coded to the package label, MSDS, (OS1) training





materials, Job Cards and Scouting Reports. No individual (OS1) cleaning team specialist uses more than one chemical to perform their daily cleaning tasks.

(OS1) has removed the use of dangerous, high pH cleaning chemicals for the carpet cleaning process. All of the required carpet cleaning chemicals are neutral pH @ +-7. On the OSHA hazard placarding chart the hazard is listed as Toxic Hazard 0, Flammable Hazard 0, Reactive Hazard 0 and Corrosive Hazard 0.

ManageMen helps to safeguard the environment — as well as users' safety — by restricting the use of environmentally harmful compounds in our cleaning processes. For example, our (OS1) Restricted Materials policy limits the use of abrasives, ammonia, bleach, peroxide (halogens), straight hydrochloric acid bowl cleaner, eye drain opener and abrasive powders in our processes and programs.

Source Reduction

(OS1) recognizes that the key to source reduction is to use less and reuse more. Source reduction means lessening the amount of waste produced. This includes avoiding products that have excess packaging, and buying concentrates whenever possible. It also involves reducing the toxicity of waste and cutting down on the use of hazardous chemicals.

In (OS1) we insist on responsible packaging and fewer hazardous products. (OS1) users work to purchase from distributors that carry products that reflect environmental concerns, and who will assist in getting the waste management message out to their personnel. In an (OS1) study conducted at Qualcomm the (OS1) chemical inventory, packaging reduction program reduces chemical packaging to the landfill by more than 97%.



The (OS1) Just-in-Time inventory system based on Lean manufacturing processes further reduces the amount of items that are disposed of due to the cleaning function. These are just a few ways to get waste management under control.

IAQ & IEQ

From the inception of the (OS1) concept Indoor Air Quality (IAQ) and Indoor Environmental Quality (IEQ) have been fundamentals of the process. Most vacuum cleaners throw dust particles emissions throughout buildings. Not in the (OS1) process. Michael A. Berry, PhD, documented, in a landmark cleaning study conducted at the University of North Carolina at Chapel Hill, that cleaning programs at an 80% (OS1) Audit reduce indoor air particles to a safe level. Traditional housekeeping in the same study was documented as producing twenty times more particle emission than is allowed by EPA's National Ambient Air Standards-OUTSIDE.

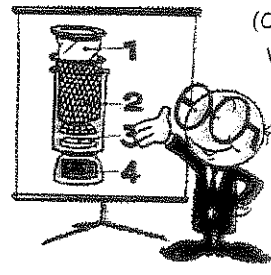
The significant reduction of indoor dust was attributed to (OS1) training, tracking, equipment usage and the use of a CRI Green Label certified vacuum, the ProTeam Super CoachVac. (OS1) users pioneered daily filter cleaning





and logging frequent and regular filter exchanges which facilitate the outstanding results noted in the UNC study by Dr. Berry.

The (OS1) specified back pack vacuum provides four-level filtration which starts with a special micro-filter at the first level. Micro filters greatly increase vacuum efficiency. One study showed that a standard paper filter bag removed only 39.9 percent of debris 10 microns in size, while a micro filter bag removed over 99% percent of these particles. Likewise, a standard paper filter bag removed only 16.3% of one micron particles, whereas micro filters removed 95% of one micron debris.



(OS1) Back Pack Vacuum with four-level filtration removes over 99% of debris 10 microns in size.

The 3 R's - Reduce, Reuse, Recycle

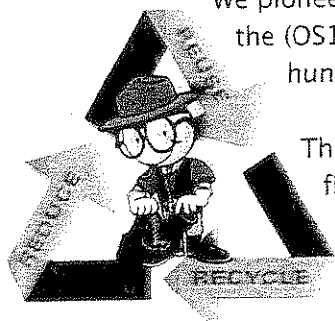
(OS1) has a holistic approach to recycling — encompassing a cleaning product's entire life cycle — includes extensive take-back programs that enable janitors and businesses to dispose of used cleaning equipment in an environmentally sound manner. Our (OS1) cleaners use chemicals that are packaged in special pre-measured packs.

No attempt at waste management is complete without a recycling program. Recycling provides raw materials for manufacturing, and it keeps a large amount of the solid waste stream from being sent to already overburdened landfills.

Secondary use bottles come with screened bottles made from recycled milk bottles. The (OS1) team approach supports customers who want to separate recyclable waste in their landfills.

Reduced water use is fundamental to (OS1). We have eliminated traditional mopping with "string" mops and large quantities of dirty mop solution and replaced it with flat micro-fiber mops and two-sided buckets. This has reduced the amount of water usage for restroom cleaning functions by 75% and the amount of polluted solution mopping by nearly 100%.

We pioneered eliminating cleaning cloths made from trees by the introduction of the concept of the (OS1) Laundry. High efficiency, Energy Star laundry programs recycle cleaning cloths for hundreds of uses before sending them to a landfill.



The (OS1) Floor care carpet care programs extend the life cycle of building surfaces and finishes of hard floors, carpet, fixtures and furniture. The opportunities of cleaning organizations contributing to a solution for the solid waste problem are virtually endless. Once the idea is planted, "green" programs begin to sprout. But, first, someone needs to sow the field.

ManageMen recognizes the need to provide a safe environment for our children and grandchildren. We'll all breathe easier as a result.



A History of Sound Environmental Practices

Year after year, ManageMen has set and met important goals to phase out environmentally dangerous substances, create recycling programs nation-wide and improve energy efficiency. Here are some of the most important milestones in our quest for environmental responsibility:

1989

ManageMen developed a cleaning industry operating system, based on engineering principles, to standardize cleaning operations at Delta Airlines facilities in Atlanta, New York City, Los Angeles, San Francisco and Salt Lake City.

1990

Introduced the ManageMen "Beyond Compliance" program to improve program effectiveness to federal OSHA HazCom and Right to Know laws.

1990

Introduced reduced water usage in restroom and stair cleaning procedures by adopting the use of flat mops and mini buckets in the (OS1) program.

1991

Piloted the operating system, now branded as (OS1), at the Delta Center in Salt Lake City. Process based on only performing "cleaning practices that cause facilities to be clean."

1992

Introduced the leading environmental-friendly, pre measured chemical dispensing system from PortionPac® for daily cleaning and disinfecting products as (OS1) approved.

1993

(OS1) adopts team cleaning and standardizes on high air-flow, four level filtration backpack vacuum from ProTeam® to improve IAQ in the built environment.

1993

Established Janitor University to implement the (OS1) program to the Clark County School District (Las Vegas) in how to save 750 union janitor jobs.

1993

Created the Janitor University Philosophy of Cleaning which enunciates "Clean for Health First, Then Appearance" and "Minimize Environmental Harm" as two of the seven philosophical foundations of Janitor University and (OS1).

1993

Created first (OS1) video to train a custodial organization to deliver an environmentally superior workloading system based on team cleaning. Video

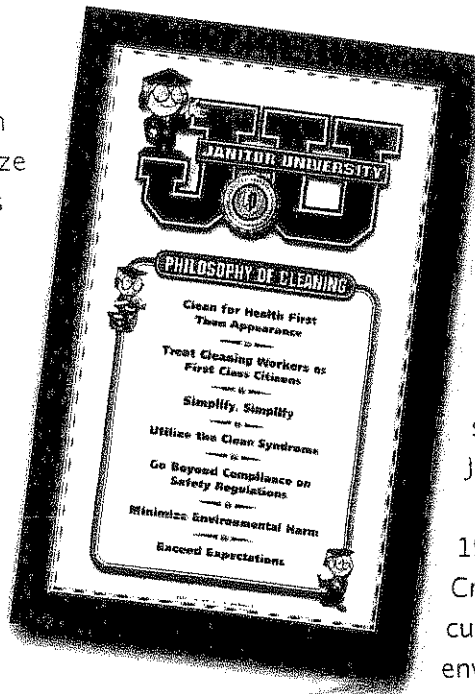
wins TELLY Award.

1994

Introduced the concept of "Site-based Training Kits to make standardized training available to all cleaning workers, including remote sites, based on the effective use of less cleaning materials and functions.

1995

(OS1) Boot Camp developed to standardize training of custodians at the University of Massachusetts at Amherst.



ManageMen.



1996

Outside, third party Audit of (OS1) program introduced by ManageMen and field tested at the University of Massachusetts.

1996

Inventory Control System Introduced. The (OS1) just in time inventory management system eliminates over-ordering of chemicals and waste due to mismanagement of supplies. (OS1) Organizations report regular inventory reductions ranging between a minimum of 25% to a maximum of 75%.

1997

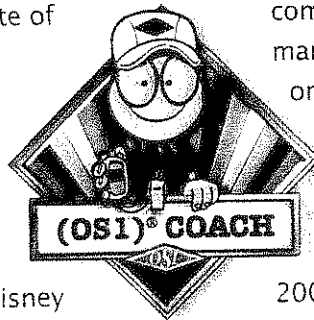
ManageMen awarded second TELLY for the ManageMen Vacuum Specialist training video which teaches principles of IEQ in vacuuming.

1998

The Battelle Memorial Institute and the Department of Surgery Division of Orthopedics at Ohio State University finds that the vacuum used in (OS1) is better for workers health. The backpacks enable alternating between forward-backward and side-to-side movements with the lightweight cleaning wand. Also it reduces bending and increases the rate of cleaning effectiveness.

1999

Janitor University introduces the cleaning industry's first Train the Trainer course at Disneyland and Certified Coaching Program at Walt Disney World. The courses trains trainers in the cleaning industry and is based on cleaning for health and reducing environmental harm.



2000

Presents results of the (OS1) transition at the University of New Mexico to the APPA International Convention in Montreal, Canada. Reports the UNM reduction of the use of hazardous chemicals by 75% in the first year of (OS1).

2001

Selected by the State of Washington to develop the Deep Cleaning Protocol for the Washington Ecology building in Olympia, Washington.

2002

ManageMen adds (OS1) Laundry system to eliminate paper towel usage in cleaning functions. (OS1) organizations report 25% reductions in use of paper towels and wipers.

2002

Selected to design the environmentally neutral cleaning program for the Salt Lake Winter games.

2002

ManageMen (OS1) is certified by The Boeing Company Quality Management (BQMG) group as an ISO 9001 compliant quality program suitable for aerospace manufacturing sites in ISO 9000 certified organizations worldwide, signifying that (OS1) has a structured environmental management system (EMS) in place to manage the environmental impact of cleaning operations.

2002

(OS1) vacuum manufacturer ProTeam enters a partnership with the American Lung Association to educate the public about indoor air quality, the first full-scale partnership of its kind between the American Lung Association and a vacuum cleaner manufacturer.

ManageMen.





2002

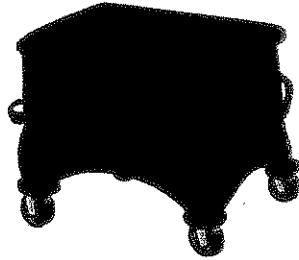
Sandia National Labs wins the New Mexico Green Zia Award. Custodial operations cited for "Environmental Leadership" for the entire State.

2003

(OS1) introduces the Unger® two-compartment, microfiber flat mopping system. This provides reduced polluted substances mopping and increased ergonomics for cleaning workers.

2003

Double-sided bucket with microfiber flat mop was introduced into the (OS1) process to allow cleaning workers the ability to separate sewage from clean solution in the mopping process.



2004

(OS1) adopts Six Sigma documentation program following application in Sandia National Labs Malcolm Baldrige Award program submission.

2004

Introduced the (OS1) Green Certified Program award recognizing the leaders in the cleaning industry in practical efforts to "Minimize Environmental Harm."

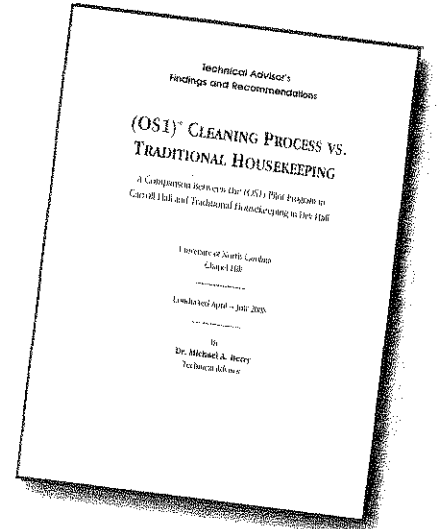
2005

The Boeing Company's Safety Health and the Environment (SHEA) organization recognizes the (OS1) Enterprise-wide transition team with first ever "Innovation Award."

2006

A landmark cleaning study titled (OS1) vs. Traditional Cleaning by Dr. Michael A. Berry at the University of

North Carolina at Chapel Hill documents that (OS1) provides superior IAQ in built environments. Dr. Berry observes that traditional methods of housekeeping are "polluting" and (OS1) can be documented as a "cleaning" program.



2006

Commonwealth of Massachusetts recognizes (OS1) program at University of Massachusetts at Amherst as contributing to the Higher Education Environmental Purchasing and Sustainability Award.

2006

Phase-out of non "Green Seal, GS-37" chemicals from daily (OS1) cleaning while adding neutral pH disinfectant.

2007

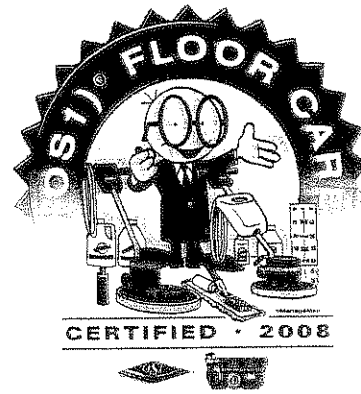
Introduction of the ManageMen (OS1) EnvironMentor™ Program to cleaning industry trainers.

ManageMen.



2008

Introduced ManageMen's Floor Care Technician Certification training program. All chemical products used in (OS1) floor care are either Green Seal Certified or DfE Approved. Heavy metals were removed from the Green Seal Certified (GS-40 Floor Finish). ManageMen (OS1) training programs introduce a "Never Strip Floors Again" preventative maintenance protocol to eliminate the cleaning slurry and stripped metal-cross linked floor finishes that are disposed down drains during custodial cleaning projects.



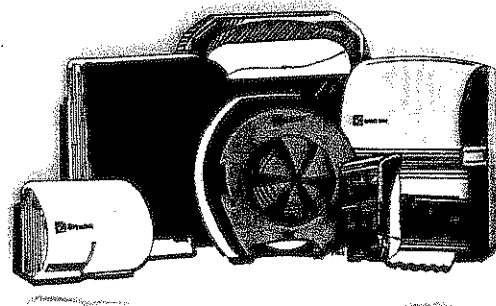
2009

Ohio Environmental Council officially supports Ohio HB 229, the (OS1) Clean Schools bill, sponsored by Representative Dan Stewart citing "This legislation will on balance benefit Ohio's environment."



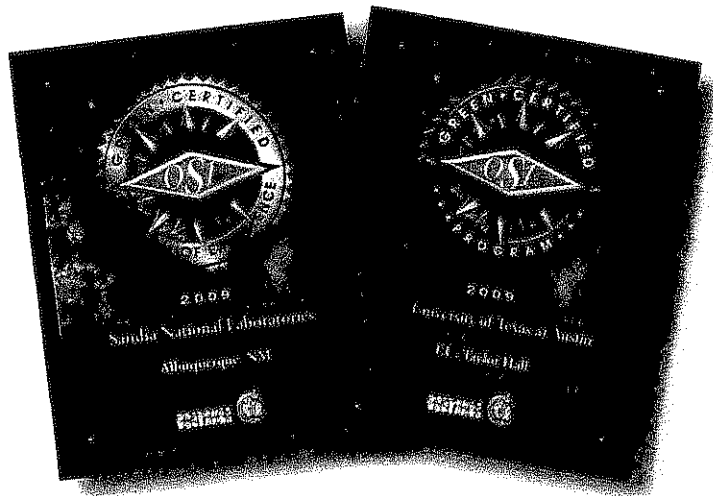
2009

Added an environmentally sustainable consumable products recycling program to (OS1). Bay West restroom products are added to the (OS1) program. The approved products provide that no trees are cut down to make any of the paper products including shipping cartons, product wrappers and roll cores. Printing inks are all soy ink. All (OS1) approved consumable products are Green Seal Certified. Tissue paper is GS-1, Towels GS-9, Lotion Soap GS-41. In addition most dispensers are ADA compliant and touch (fomite) free. The manufacturing processes are completely chlorine-free.



Printed on recycled paper.





**2005 Green Certified Program Awards
Presented at GMI, San Diego, California**

The Boeing Company | Two Facilities
GMI Building Services, Inc. | Two Facilities
Sandia National Laboratories, Albuquerque, NM
USSI | Two Facilities
Washington State General Administration

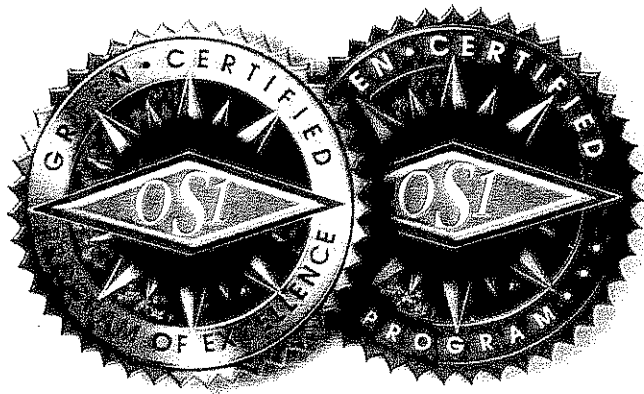
**2006 Green Certified Program Awards
Presented at The Homestead, Midway, Utah**

The Boeing Company | Four Facilities
Clean-Tech Company
PARC, Clearfield, UT - Hill Air Force Base
Sandia National Laboratories, Albuquerque, NM
Southeast Alaska Regional Healthcare Consortium (SEARHC) - Alicia Roberts Medical Center
University of Massachusetts at Amherst | Two Facilities
University of North Carolina at Chapel Hill

**2007 Green Certified Program Awards
Presented at Colonial Williamsburg, Williamsburg, Virginia**

University of Massachusetts at Amherst | Five Facilities
University of North Carolina at Chapel Hill | Three Facilities
Sandia National Laboratories, Albuquerque, NM
Qualcomm, Inc.
The University of Texas at Austin | Ten Facilities
USSI - Florida | Two Facilities





**2008 Green Certified Program Awards
Presented at Durango, Colorado**

The University of Texas at Austin | Ten Facilities

Qualcomm, Inc. | Three Facilities

*Sandia National Laboratories, Albuquerque, NM

Professional Janitorial Service of Houston

University of North Carolina at Chapel Hill | Three Facilities

University of Massachusetts at Amherst | Six Facilities

Service Point, Portland, Oregon

*The Kings, St. Louis, Missouri

Southeast Alaska Regional Healthcare Consortium (SEARHC) – Alicia Roberts Medical Center

USSI, Lee County, Florida | Two Buildings

GMI Building Services, Inc.

**2009 Green Certified Program Awards
Presented at Savannah, Georgia**

*GMI Building Services, Inc., San Diego, California

*Sandia National laboratories

*Service Point, Portland, Oregon

*University of Massachusetts at Amherst | Six Facilities

*The University of Texas at Austin | Seven Facilities

KBM Facility Solutions, San Diego, California | Four Facilities

The King's, St. Louis, Missouri

Professional Janitorial Service of Houston

Rappahannock Goodwill Industries

Southeast Alaska Regional Healthcare Consortium (SEARHC) – Alicia Roberts Medical Center

University of North Carolina at Chapel Hill | Three Facilities

*(OS1) Green Program of Excellence is awarded to organizations or buildings achieving an audit score of 90% and above.



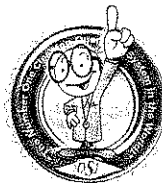


“The Number One Cleaning Operating System In The World!”

The (OS1) Cleaning Process is used in schools, universities, and all types of facilities throughout North America. It improve safety, reduces cost, and improves the quality of cleaning. It has positively impacted the health and wellness of those doing custodial work as well as the building occupants.



ManageMen®

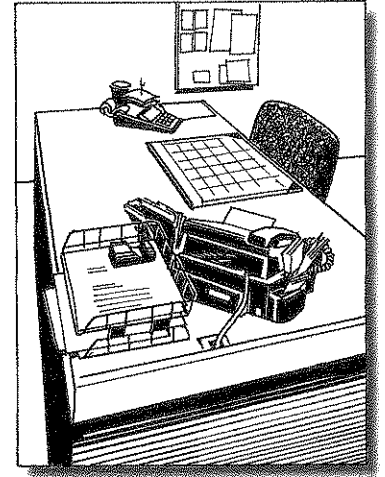


The (OS1) Program and Audit

Thirty factors have been identified that destroy the effectiveness and productivity of virtually any cleaning organization. The (OS1) Process is a unique program that transforms custodial programs through training, scheduling, reallocation of labor, cleaning frequencies and automation. By focusing on these key factors we are able to efficiently reduce many problems associated with custodial operations.

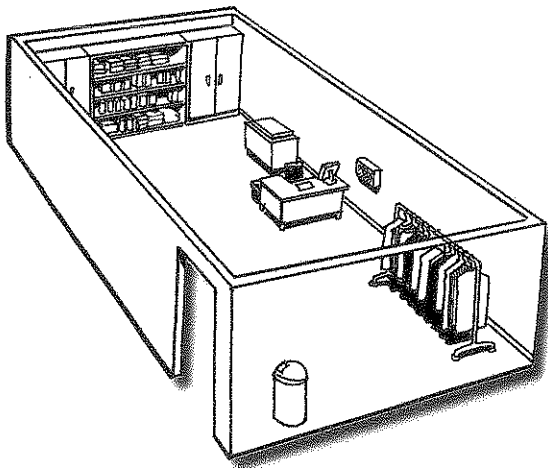
Custodial Manager's Office

Custodial operations are important to the health, appearance and safety of any organization. Custodial Managers plan operations that take place throughout the organization on a daily basis. They need to work out of a professional office with adequate space and proper furnishings to add an air of importance and professionalism to the activities of the custodial department. The manager's office should tell a visual story about company standards.



Custodial Manager's Computer

In the (OS1) program the Custodial Manager has a computer in his or her office.

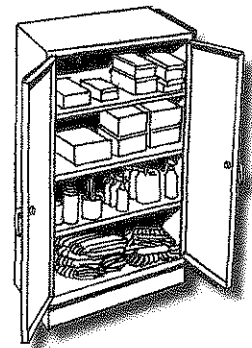


Check-In Area

Custodial workers should be able to go to work immediately upon reporting to work. For them to be able to do this they should have the check-in area near the time clock where all materials are ready each working day.

Staging Area

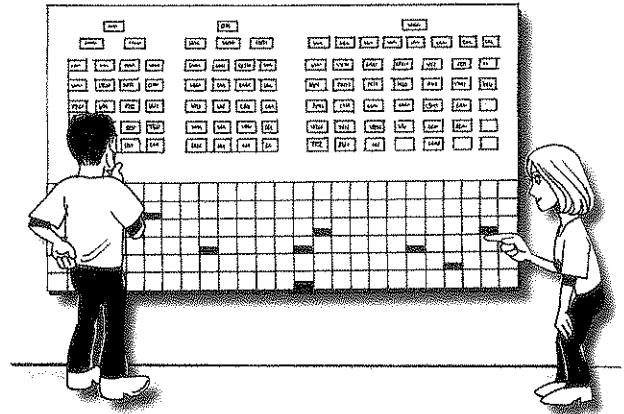
The staging area is where the check-in is prepared each day. Clean mops and cloths are issued and supplies are assembled.



The (OS1) Program and Audit

Flow Chart and Organization Board

Custodial operations are a complex mixture of people, schedules and procedures. Frequently the operations occur over a wide geographic area. The (OS1) Program has a simple color-coded organization board that gives the custodial manager a clear picture of the custodial operations at a glance.



Information Boards

Information Boards should be informational, colorful and usable by readers and non-readers. The (OS1) Program provides safety and other compliance information that fits this criterion for custodial workers.

MSDS Wall Mounted Stations

Federal law provides that workers have the right to know about the hazardous chemicals they use at work. The information needs to be in the workers heads and in easy access in case of an emergency. The (OS1) MSDS program is a simple, color coded, easy access program that provides compliance to Federal safety regulations.



Beyond Compliance

The (OS1) Program provides simple safety training and reminder information at the point where workers are using the materials. It is color coded, written in English and has icon based instructions. The materials are a concise instruction guide in the actual work place.

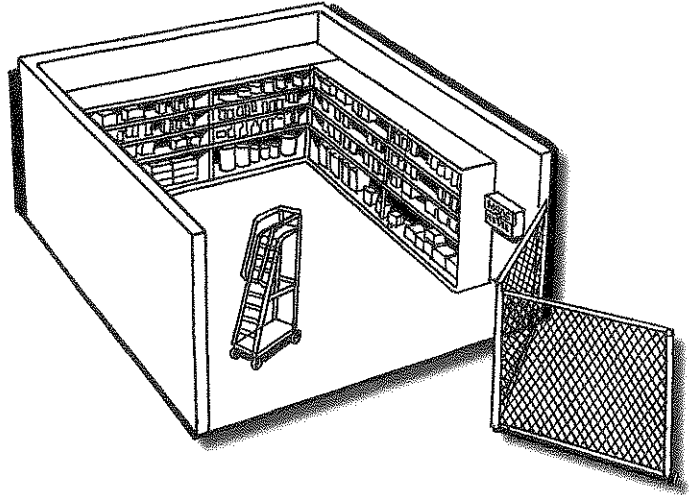
(OS1) Bloodborne Pathogens

Training Custodians are regularly trained on handling potentially infected bodily fluids and substances.

The (OS1) Program and Audit

(OS1) Bulk Storage

Most custodial operations use too many products and change the products too frequently without regard to the ultimate cost. In the (OS1) Program, cleaning workers perform over 90% of the daily cleaning with four products in a pre-measured exact mix system.

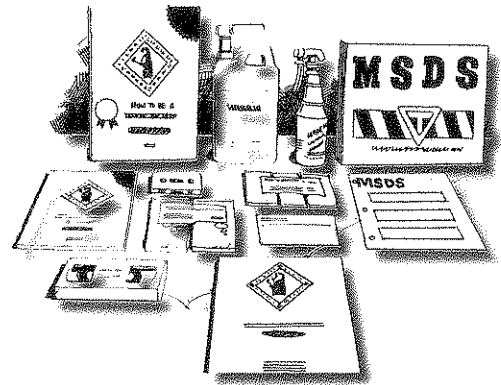


Inventory

The (OS1) Program utilizes a simple “just-in-time” system that reduces stored inventory and increases turns. We work to minimize the investment in inventory.

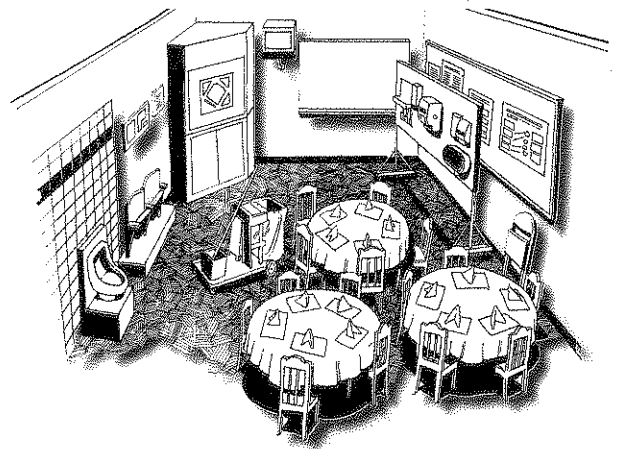
(OS1) Color-coding

Color coding is an important management tool in the custodial department. The (OS1) program uses a simple color-coding system that ties the proper color of a chemical with the instruction materials, “Beyond Compliance,” the Material Safety Data Sheets (MSDS), secondary mixture bottles, and classroom training materials.



(OS1) Supervisor Training

The (OS1) Program uses a simple, effective, motivational training program that has been developed for custodial departments. Supervisor programs are associated with Janitor University®, and both of ManageMen’s Train the Trainer Courses.



(OS1) Training Program

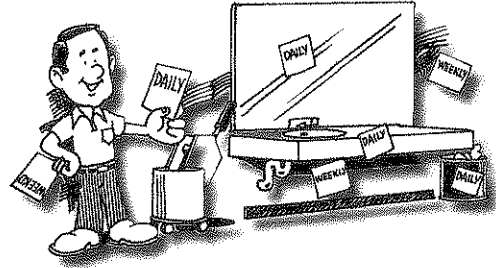
In (OS1) the training program provides results and is effective. The program is

The (OS1) Program and Audit

a hands on approach and is supplemented with a wide array of award winning learning tools. These tools include individual training workbooks, videos, flow-charts, tests with certification and lesson outlines. Many of the training programs were developed under State Board of Education productivity grants.

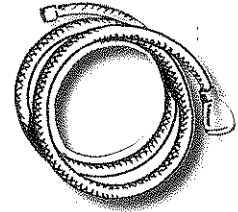
Restroom Cleaning

(OS1) training provides the proper tools so that restrooms are cleaned and disinfected daily.



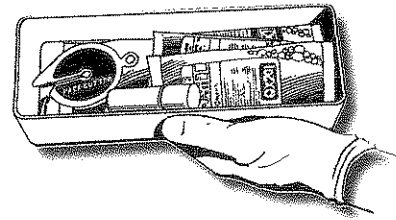
(OS1) Point of Use Mixing

An important element of the (OS1) System is "point of use mixing." This means that when a custodial worker uses all of the cleaning material up a new batch of material is mixed near the area of work. Each Pac of chemical that is mixed generates an empty package for tracking and measuring purposes.



Chemical Distribution System

In (OS1) 90% of the daily use chemicals are in pre-measured pouches in a distribution tray. Trays are assigned to each employee.



Safe Janitorial Closets

Safety is the most important principle of the (OS1) System. We reduce the amount of materials in custodial closets and develop an attitude of safety in custodial workers.

Clean Equipment

The (OS1) principle is "you can't clean with a dirty machine, tool or cloth."

Worker Motivation

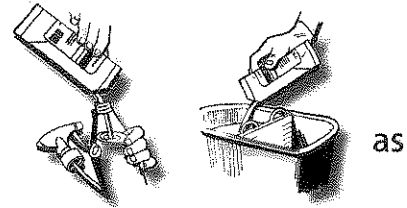
Cleaning workers are dedicated employees who work hard and are frequently treated like second-class citizens. In (OS1) cleaning up the indoor environment is

The (OS1) Program and Audit

a job for first class workers. We work with janitors to develop their skills, which leads to increased appreciation from their customers.

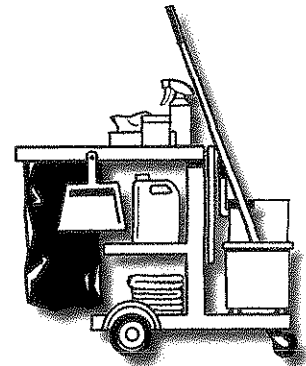
Rule of One

Exact measure is fundamental when handling products that are under federal regulation for hazardous chemicals. We use the simple "Rule of One" the primary measuring instruction.



Flat Mops

The (OS1) program utilizes flat mops for many cleaning functions. This means that cleaning workers can clean and disinfect floors walls and stalls all in one pass.



Custodial Carts

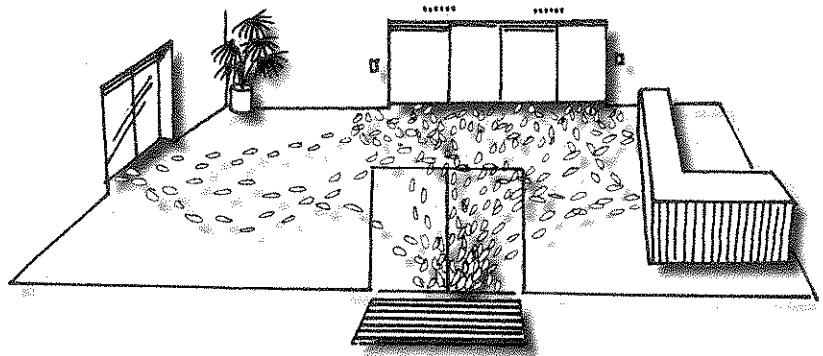
In the (OS1) Program custodial carts are productivity tools that pay for themselves quickly. It is important to match the cart to the productivity function.

(OS1) Program: Productivity

Productivity increases are a function of strategic planning and functional management. ManageMen provides long term strategic planning services based on industry analysis, and proven operating systems, and scientific studies.

High Traffic-High Visibility Areas

Are important and need to be identified and maintained on a high level.



Customer Satisfaction

The (OS1) cleaning program generates measurable increases in your customer satisfaction.

The (OS1) Program and Audit

Cleaning Different Surfaces

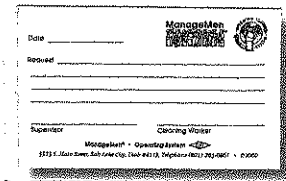
Stainless steel, chrome, and other metal surfaces are part of scheduled effective cleaning with safety acids.

(OS1) Approach to Cleaning Teams

Better results are achieved in congested carpet areas by the use of cleaning teams, and high productivity backpack vacuums.

Request/Complaint Tracking

Simple three part complaint tracking and file system that has built-in back-ups and checks.

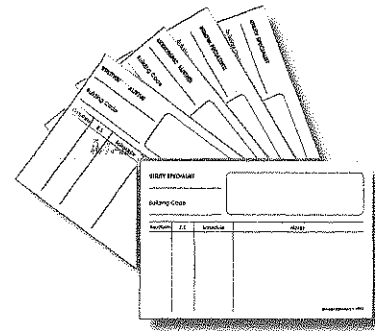


Management Evaluation Tool

Icon based, user-friendly multi-purpose checklist that can be used in training, follow-up, inspections and performance rating.

The (OS1) Audit

Organizations making the transition to (OS1) need a method to determine the following:



- Are we making progress?
- At what point will we see results?
- Who needs direction in the process?
- What are the critical elements of the program?
- Who is responsible for the various components of the program?
- Who is functioning properly during transition?
- What are the benchmarks?
- What are documented as best practices?
- How does the organization compare to other (OS1) programs?
- What is necessary to be successful?

To assist an organization in answering these questions, the (OS1) Audit contains approximately 333 key factors that are predictors of success in a cleaning operation. Buildings are not evaluated in a traditional "white glove" inspection. Rather

The (OS1) Program and Audit

than look at the symptoms of the cleaning process, the elements that are in place are measured to determine the basis in which to grow the operation. The audit determines what is missing and needs installation or re-tuning in order for the organization to progress.

A Baseline Audit is conducted at the beginning of the transition to the (OS1) Program. The Progress Audit follows every 6 or 12 months. This audit contains the same criteria as the Baseline Audit. There is a set formula for the scoring of the audit. Simple "yes" or "no" questions about the installed elements. The report is a "To-Do" list documentation of the various levels of organizational responsibility.

The Audit Report contains four major sections:

Audit Criteria Checklist

The total number of responses on the checklist represent the percentage scores for each job category.

Organizational Responsibility Score

The scoring comparison chart for cleaning workers, supervision, management, training, purchasing and senior management or administration.

Composite Score

The overall composite score for the cleaning organization in comparison to the (OS1) Standard of 80%. Organizations with a score of 80% earn the distinction of (OS1) Green Certified Program for the audit period. The Green designation must be earned each audit year to retain this designation.

Comparison Scores

A comparison chart of Progress Audit scores from other organizations in various stages of progress. This is key to (OS1) Benchmarking Best Practices.

The (OS1) Program and Audit

Conclusion

(OS1) Cleaning is the Science of Cleaning and is synonymous with cleaning for health, high productivity, work quality, worker satisfaction and has been benchmarked as a best practice in the cleaning industry by world class organizations and leading scientists.¹

(OS1) is a standardized and simplified approach achieved by design to serve the interest of people in creating a clean, healthy and safe environment at the lowest possible cost.

¹ Dr. Michael Berry, *The Science of Cleaning, 2006* and *Technical Advisors Findings and Recommendations (OS1) Cleaning v. Traditional Housekeeping, University of North Carolina at Chapel Hill, 2006*

Jeffrey L. Campbell, PhD, *A Baseline Study of the Effects of the ManageMen® (OS1)® Program on Custodial Safety, A Facility Management Research Capstone Project, Brigham Young University, 2003*

MSDS



Mt. San Antonio College Policy

under the direction of

Kenneth McAlpin

Manager, Custodial Services

11/15/09

Mt. San Antonio College policy is to inform all employees of the hazards associated with the materials that they use on the job. In addition we are committed to providing the appropriate personal protective equipment necessary to safely work with potentially hazardous materials. We have selected a specific cleaning system with a limited number of cleaning chemicals. These have been selected both for their cleaning effectiveness as well as for their low toxicity.

All employees are expected to use appropriate personal protective equipment. Employees are also expected to follow correct work practices in using the materials provided. Any chemical not contained on the chemical inventory sheet in the "Inventory" section of the *MSDS Beyond Compliance* manual will not be used in this building.

List of Hazardous Materials

The hazardous material inventory for this building can be found in the "Inventory" section in this book. This list is compiled and maintained by Joseph E. Garcia. The list is reviewed at least once every six months. If you find any material in use in your area that is not included on the list please contact Joseph E. Garcia whose telephone number is 909.594.5611 Ext. 6430.



MSDS



Material Safety Data Sheets.

Material Safety Data Sheets (MSDS) provide detailed information on health hazards, physical hazards, personal protective equipment and proper emergency response measures. These sheets are contained in the *MSDS Beyond Compliance HAZCOM* book in the following locations:

- Building 9B Student Services
- Building 7 Natural Sciences
- Building 48 Custodial Shop
- Building 48 Warehouse

This book is available to you at all times during working hours. The MSD sheets are arranged in alphabetical order by manufacturer name. The only exception is the three (OSI) DAILY use chemicals from PortionPac. These three products, each on color-coded paper will be the first MSDS located in each tab section. In tab section A-K the first MSDS in the section will be "Germicidal Detergent" (pink sheet) from PortionPac. In tab section L-R the first MSDS in the section is "MopPac Lite" (yellow sheet) from PortionPac. In the S-Z section the first MSDS is "ScrubPac" (green sheet) from PortionPac.

Some terms in the MSDS may not be familiar. The *MSDS Beyond Compliance* book includes a set of definitions common to many MSDS in the "Glossary" section of the manual.

The Material Safety Data Sheets are checked against the chemical inventory at least once every six months by Joseph E. Garcia. He can be reached at the following telephone number 909.594.5611 Ext. 5170. If you find that a MSDS is missing please contact Joseph E. Garcia as soon as possible.

We place color-coded MSD sheets in the manual with all of the PortionPac cleaners that we use. The MSDS sheet is color coded to the



MSDS

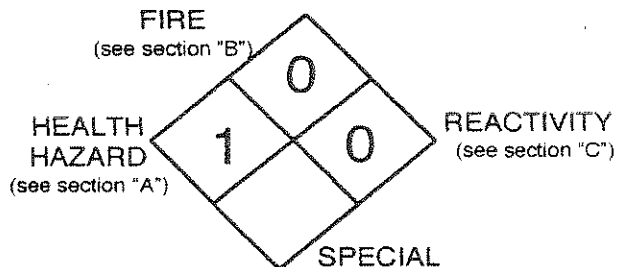


color of the product in use. It is also color coded to the color of the printing on the label of the secondary use bottle. If, for instance, an accident occurs with the green PortionPac liquid material in a green labeled bottle, the HAZCOM information would be found on a green MSD sheet.

Labels

Each label also has standard warning system. The numbering system indicates the level of hazard. This label appears as follows. There is a numbered rating system with 0 representing minimal or no hazard, 1 represents slight hazard, 2 represents moderate hazard, a 3 indicates serious hazard and a 4 would be an extremely dangerous material.

HAZARD RATING
4 - DEADLY
3 - EXTREME DANGER
2 - DANGEROUS
1 - SLIGHT
0 - NO HAZARD



Section A represents the health hazard associated with the chemical.

- 0 No Hazard. Exposure to this substance offers no significant risk to health
- 1 Slight Hazard: irritation or minor injury would result from exposure to this substance. Protective measures as indicated.
- 2 Dangerous: exposure to this substance would be hazardous to health. Protective measures are indicated.
- 3 Extreme Danger: serious injury would result from exposure to this substance. Do not expose any body surface to these materials. Full protective measures should be taken.
- 4 Deadly: even the slightest exposure to this substance would be life threatening. Only specialized protective clothing, for these material, should be worn.



M S D S



Section B represents the flammability hazard posed by the material.

- 0 Will not burn. No flammability hazard.
- 1 Flash Point above 200° F. Low hazard, the material must be heated to achieve ignition.
- 2 Flash Point below 200° F. Moderately heated material may ignite. Caution should be used in handling this material.
- 3 Flash Point below 100° F. May burn or form explosive vapor mixtures with air under normal conditions. Exercise great caution.
- 4 Flash Point below 73° F. This substance is very flammable at all normal temperatures. Will readily form explosive vapors. Extreme caution must be used.

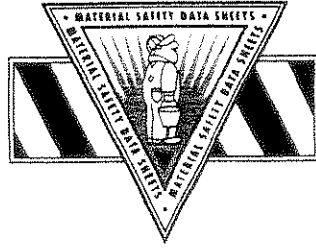
Section C represents reactivity hazards associated with the labeled material.

- 0 Stable material, no known reactions under normal conditions
- 1 Normally stable, may react if combined with other strongly reactive materials or if heated.
- 2 Unstable. Known violent or explosive reactions with common substances.
- 3 Explosive, materials that will detonate if triggered by heat, significant shock or water. Handle only with specific training and personal protective equipment.
- 4 May explode with little provocation. These materials should only be handled by specially trained individuals.

ManageMen



MSDS



Secondary Labels

Mt. San Antonio College has strict rules about the use of materials in Secondary labeled containers (materials poured, mixed, or diluted into containers other than its primary shipping container). Secondary labeled containers must follow our strict label guidelines.

All Secondary labeled containers must carry a full direction label for use. This direction label must display:

- Filling and Use Instructions in English
- Cautions in English
- Ingredients of the mixed product in the secondary labeled container
- A 24 hour (1-800) number for emergency response information
- A method for supervisors to determine if the material is mixed according to directions
- Color coding of mixed material to Secondary bottle label, MSDS, and product
- A "fill line" or "feel line" for accurate mixing
- A method of tracking the mixing of hazardous chemicals in various areas of Mt. San Antonio College

Each container of PortionPac material is color coded to the color of the corresponding MSDS and the color of the material to be used. If these colors don't match, notify your supervisor. For instance if you have a green labeled bottle with a pink material inside notify your supervisor.

You should note that the hazard presented by concentrated material in the MSDS may be significantly higher than the hazard associated with the diluted cleaning material in use.



MSDS



Training

Training will be conducted under the supervision of the Custodial Manager whose telephone number is 909.594.5611 Ext 4280. It is a supervisory responsibility to ensure that training on hazardous materials has been accomplished prior to any assignment involving work with hazardous materials.

Employees will be trained in the following areas.

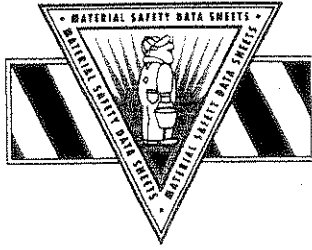
1. The requirements and meaning of the Hazard Communication Standard. A copy of this federal regulation is included in the section "OSHA Standard."
2. The work tasks that involve use or exposure to hazardous materials.
3. The location and availability of this *MSDS Beyond Compliance* Written Hazard Communication Program.
4. Methods and observations that may be used to detect the presence or release of a hazardous chemical.
5. Hazards associated with the chemicals in the work-place.
6. Proper work procedures and personal protective equipment.
7. Emergency response information. To include the name or telephone number of the person to notify in case of an emergency.

Non-routine Tasks

A non-routine task is a job that is performed infrequently involving special or unusual hazards. It is Mt. San Antonio College policy that any non-routine task involving the use of a hazardous material will be



MSDS



performed with the permission of a supervisor following specific training on the procedures and safety. The supervisor will insure the completion of appropriate training and the availability of necessary personal protective equipment.

Other Employers Working at Mt. San Antonio College

Whenever any other employer brings hazardous materials to Mt. San Antonio College, that employer will give Mt. San Antonio College, a copy of their Written Hazard Communication Program, that will include their labeling system, a copy of applicable MSDS, and an inventory of the materials brought on to our facility. The outside employer will furnish a written statement indicating any precautions that our employees should take to avoid illness or injury due to the materials use or storage.

We will furnish a copy of our Written Program to contractors who could be exposed materials we maintain at this facility.

WORK PRACTICES

Mt. San Antonio College has initiated the following work practices in an attempt to take its safety program beyond compliance with mandated safety laws and procedures.

Chemical Mixing

The Rule of One. In order to avoid the wrong working concentration of a particular cleaning material each packet of concentrate is intended for dilution with a single container of water. Each container has a clearly marked "fill line" or "feel line." The container should be filled to the "fill line" or "feel line" with water and a single packet or squirt from a "Stock Solution" bottle of the appropriate concentrate added to the water.



MSDS



Color Coding. In order to reduce the risk of mixing and using mislabeled material we have adopted a color coding system that matches chemicals, labels and MSDS'. The diluted chemical is the same color as the label on the container which is in turn the same color as the MSDS for that chemical. For example all purpose cleaner is labeled green, the concentrate is dark green and the mixed material is a similar green color as the label. This gives a clear visual signal that the material is labeled and mixed properly. Alternatively if a material is mixed or labeled improperly the color coding will alert workers to that fact. Thus it is a policy that a material whose color does not match the label should not be used. Any such incident should be reported to a supervisor.

Numbering System Each packet of concentrate is numbered. The last two digits of the number indicate the size of the primary container to which the concentrate should be added. An 04 as the last two digits of the numbering system indicates that the material should be added to water in a 4 gallon bucket. Similarly a 01 indicated the use of a one gallon bucket. Sixty-four ounce bottles will have a 64 and the material for a thirty two ounce bottle will be coded 32.

The main exception for this in the numbering system is where a single product has two different acceptable dilution uses, as in the case of ScrubPac 102. 102 may be used in a two gallon mopping bucket but it is also used as a spray cleaning solution in a 32 ounce spray bottle that clearly identifies this secondary use on the screened label.

Distribution Packets of concentrated cleaning materials are given the custodians in a distribution tray. After a packet is used it should be rinsed in clean water and placed in the distribution tray under a clean paper towel. Empty packs are returned to the supervisor.

This will enable the supervisor to track inventories and usage of cleaning chemicals.



MSDS



Inventory

Two Container Inventory Mt. San Antonio College uses a just in time inventory system to reduce the potential waste, spills and storage requirements. The particular system adopted is known as a two-container system. For each level of use and storage we maintain the quantity necessary to fulfill the necessary function and one extra equivalent quantity. At the distribution tray level that means that there will be one packet to use and one in reserve. At the job control level we will maintain one box for use and one extra box. In the central warehouse there will be one case in use and one extra case.

Environmental Impact

Source Reduction It is the policy of Mt. San Antonio College to reduce potential waste in the environment. Our cleaning products are supplied as concentrated materials in biodegradable packaging. This substantially reduces the volume of waste that we generate and produces a waste stream that is uniquely compatible with current and future waste disposal systems.

We also refill plastic bottles rather than dispose of them after each use. This not only reduces the costs to Mt. San Antonio College associated with waste disposal but also makes a contribution to the environment.

If you have any questions concerning the *MSDS Beyond Compliance* in Mt. San Antonio College please contact any of the following:

Facilities Planning and Management Department Office	909-594-5611, Ext 4850
Joseph E. Garcia, Custodial Services Supervisor	909-594-5611, Ext 6430
Kenneth McAlpin, Manager of Custodial Services	909-594-5611, Ext. 4280
Director Safety, Health Benefits and Risk Management	909-594-5611, Ext 5508

© ManageMen • All rights reserved

Next upgrade date November 15, 2010

