



Rapid Response

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Rapid Response Survey of Organizational Practices in Acquisition of Products Containing Hazardous Chemicals Requested by Shirli Axelrod, Seattle Public Utilities

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Request

Practices on the acquisition and purchase of products with hazardous chemical ingredients vary widely. Can PPRC survey some large organizations in the region to determine what types of practices are used to safely acquire these products?

Key Findings

- There is a general trend away from individual authority for chemical purchases via distributed purchase cards and towards centralized chemical product purchasing authority.
- Most organizations have a standard set of authorized chemical products for common tasks. While exceptions and changes are possible, there is usually a process in place to authorize new chemical products using cross-functional teams with appropriate expertise.
- Most organizations audit compliance with the chemical products purchasing guidelines.
- While many organizations maintain lists of chemicals to avoid (“red” lists), these are most often based on regulatory restrictions and for tracking hazardous waste handling or disposal costs.

Background

PPRC developed a questionnaire for use during telephone interviews of purchasing staff or staff familiar with hazardous product acquisitions. The following companies were surveyed: the Boeing Company, City of Portland (and the Portland Water Bureau), Joint Base Lewis – McChord, Port of Seattle – Aviation, and the University of Washington. Individual source names and contact information are available on request. Comments from each organization appear below in alphabetical order.

Boeing Company

General Comments

Boeing has a high degree of standardization for most internal product uses. Staff members are “qualified” for given tasks and tasks have highly standardized procedures, including required chemicals. For non-fly products/tasks (those that aren’t used during airplane flight), procedures and chemicals may vary by site.

Chemicals Policy

Each site maintains a list to guide chemical/material purchasing. These may include “chemicals of concern” (e.g., TSCA list chemicals), but also attributes that are undesirable at a specific site due to local concerns, geographical considerations, etc.

Purchasing Procedure

Who can buy products?

Due to “maverick” purchasing, availability of individual procurement cards has been widely curtailed in recent years. The great majority of purchasing is through approved purchasing agents.

What products can they buy?

All products follow an approval process via a “New Materials Evaluation Request.” The form is tailored to each area and includes how the chemical will be used, category of use (e.g., solvent, lubricant), relevant Boeing specification, anticipated storage/replacement, type of container, local site concerns, etc.

The request first travels to a specialist in the area of work or a department’s safety point-of-contact, who identifies whether existing approved products are suitable. If existing products are not suitable, the Environmental Health & Safety point-person sets up a committee to review the product, which may include an industrial hygienist, environmental manager, toxicologist, etc., as needed. For example, a product for outdoor use may require storm water expertise.

Auditing/Metrics

Boeing requires internal divisions to have a procedure for chemicals acquisition. Divisions must have lists of approved products, procedures for approving new products and procedures to audit for compliance.

Learnings/Directions

There are challenges to establishing enterprise standards when attempting to merge existing practices with long-established practices at acquired companies.

City of Portland

General Comments

As part of a wider toxics reduction plan, the city completed an inventory of all chemicals and maintains an electronic MSDS collection of active products. Staff and resource reductions have curtailed efforts to further integrate the Toxics Reduction Plan into departments.

Chemicals Policy

Portland has a sustainable procurement policy (based on the precautionary principle) and a toxics reduction strategy. Contracts for janitorial services include a requirement for green cleaning products. For the city as a whole, individual departments make their own decisions on purchase of chemical products.

Purchasing Procedure – Portland Water Bureau Example

Who can buy products?

The bulk of the purchasing is through a central storeroom, however, city credit cards are available to staff.

What products can they buy?

The Water Bureau store room purchases from an established list of current chemical products. If a product is requested with no MSDS on the current list, the requester must fill out a “New Substance” form. The form requires an MSDS, and information about anticipated use and storage. There must be a “good reason” to add a new product. The existing list will be reviewed for suitable substitutes before vetting a new product. Minor specification changes to current products are easily approved.

There is no formal red list, but a “risk specialist” reviews the request for obvious hazards, e.g., flammability, reactivity, presence of carcinogens. Jeff mentioned concerns with “lots of 3’s and 4’s” on the NFPA or HMIS labels. Requests may be circulated to supervisors and to other resources for help. Final approvals are passed on to stores. Approximately 15-20 requests are made each year.

Otherwise, stores staff are aware of city policies and make efforts to incorporate environmental values and safety in purchasing decisions for all products.

There are no restrictions to purchases made by individuals, e.g., a carpenter, on city credit cards.

Auditing/Metrics

The organization surveys for compliance, but these are rare. The city has acquired enterprise data management software and will be able to develop and track more metrics in the future.

Learnings/Directions

N/A

Joint Base Lewis - McChord

General Comments

The base recently won a Secretary of the Army Environmental Award in the sustainability category and the Environmental Protection Agency Region 10 Champions of Environmental Leadership and Green Movement Award for their efforts in reducing waste and helping the environment.

Chemicals Policy

Chemicals policy is guided by the Joint Base sustainability policy, and Department of Defense and Federal EPP requirements.

Purchasing Procedure

Who can buy products?

Products with hazardous chemicals should in almost all cases be purchased through the Hazardous Materials Control Center (HMCC). Government purchase cards are available for individuals.

What products can they buy?

Each organization on the installation has an environmental operating permit that describes authorized hazardous chemicals (Authorized Use List / Qualified Products List). For established tasks, technical manuals specify approved chemical products.

New chemical requests are checked against a restricted use list, which includes a variety of chemicals of concern (Montreal protocol, some PBTs, etc.) The new chemical approval process includes a product review by industrial hygienists, safety, environmental services, etc. as needed. Final decisions are made by the P2 coordinator. The impact on hazardous waste generation and disposal are an important factor.

With individual government purchase cards, purchase of hazardous materials is specifically prohibited.

Auditing/Metrics

Audits may be conducted on purchase card transactions with serious consequences for non-compliance. Audit teams also check for non-HMCC products in facilities.

Learnings/Directions

As always, there is resistance to change in facilities with a long history. Old practices die hard. Facilities can request studies on safer alternatives through a defense logistics research program.

Port of Seattle - Aviation

General Comments

The Port began a chemical reduction program in 1995. Practices are designed to be uniform port-wide, but different organizations within the port are at varying stages of development against sustainability policies.

Chemicals Policy

There is a port-wide environmental purchasing policy. Safer alternative products must be viable, cost-neutral and reliable.

Purchasing Procedure

Who can buy products?

The bulk of the purchasing is through a central purchasing/distribution center. It was unclear whether Port purchase cards or city credit cards are widely available.

What products can they buy?

There is an approved list for all chemical products. Staff are expected to use products specified for a given task and to acquire these products through the distribution center. Purchasing agents verify that a chemical is on the approved list.

New chemicals can be approved through a process that has been in place for approximately 15 years. The process includes environmental and health and safety reviews. The environmental review is subjective and considers the amount of product, how it will be used and regulatory (e.g., hazardous waste) compliance. Efforts have been made to educate on purchasing appropriate volumes to avoid costly disposal of expired products. Where available, safer alternatives are offered, but deference is given to the requestor in cases where a hazardous chemical is considered essential to the job. Care is taken to specify personal protective equipment and appropriate use/disposal practices.

While there is no list of banned products, chemicals are checked against lists of regulated chemicals. Any chemical that would generate hazardous waste or is targeted by, e.g., OSHA/WISHA, receives closer scrutiny. Additional ad hoc rules include no chlorinated solvents for part cleaning. Health and safety reviewers have a small list of banned chemicals, e.g., isocyanates.

Efforts are made to offer information to staff to identify new, safer products; efforts are made to work with vendors to provide samples for evaluation.

Auditing/Metrics

There are chemical audits to check compliance with the approved product list. The port sustainability plan includes metrics for hazardous waste and goals for reduction. There are discussions about future metrics for hazardous material use on site.

Learnings/Directions

N/A

University of Washington

General Comments

Practices vary in the different divisions of the UW structure, e.g., Healthcare (i.e., hospital), Facilities, Medical Center (i.e., research), etc. The current process is undergoing change as UW seeks to incorporate a wider range of environmental stewardship values into its operating practices.

Chemicals Policy

UW maintains a list of “chemicals of concern,” which serves to identify a variety of issues regarding use of chemicals in the workplace, including regulatory requirements, permit requirements, etc. The list is based on concerns particular to the UW’s overall stewardship goals (e.g., minimizing ethylene oxide use for sterilization), reporting requirements (e.g., Homeland Security reporting, radionuclide controls), but also familiar EPA priority chemicals/materials, e.g., mercury, asbestos, etc.

No chemicals are specifically banned, but prospective purchases follow procedures for approval which vary by division.

Purchasing Procedure – Facilities Example

Who can buy products?

Purchasing is handled through a central stockroom.

What products can they buy?

Products currently available have been approved. Employees can only use chemicals available through the stockroom, but may request new products. If a product contains one of the listed “chemicals of concern,” it must be approved. A “Job Activities Review” is performed for the affected trade group by a staff safety “point of contact” (typically an industrial hygienist). Trade group safety committees can surface concerns about chemicals. A full product review can be requested (performed in the Environmental Health & Safety department) to consider P2 opportunities, waste handling, etc.

Purchasing Procedure – Healthcare Division Example

Who can buy products?

All purchasing is centralized. A Materials Management group, using the “chemicals of concern” list, serves as a clearinghouse to identify issues with possible purchases.

What products can they buy?

If a product contains a “chemical of concern,” the Materials Management group looks for safer alternatives. If no suitable alternative is available, a “Product Review Committee” evaluates the request. The committee makeup may be customized to address the nature of the risk and the anticipated use. Restrictions on use and appropriate notifications are made to ensure safety and regulatory compliance. Approval waivers are subject to periodic review to look again for safer alternatives.

Auditing/Metrics

General safety surveys may identify unapproved chemicals. Also, indoor air quality complaints may link back to use of unapproved products. Instances of “maverick” purchases are seen as an opportunity for training staff.

Learnings/Directions

UW is trying to leverage electronic procurement to incorporate other needs, including flagging chemicals of concern at time of request. There is also an opportunity for purchasing information to feed directly into electronic inventory management. The process currently requires separate entry for each process. Summary

Resources

1. The U.S. EPA prepared a case study on environmental purchasing practices at the City of Santa Monica. It can be found at: http://www.smgov.net/Departments/OSE/Categories/Buying_Green/Case_Study.aspx
2. The City of San Francisco has a well-developed program on environmentally preferable purchasing. The main program website is: <http://www.sfapproved.org/>
3. An excellent study of green purchasing as practiced in King County, Washington can be found at: http://www.kingcounty.gov/operations/procurement/Services/Environmental_Purchasing/~/_media/operation_s/procurement/documents/EP_Bulletin_99_Best_Practices_Report.ashx