

**PACKAGE ID** - 000730SEQSM00 CMSPNL

**KWIC TITLE** - Chemical Management System Lab-Wide Electronic  
Chemical Inventory Tracking

**AUTHORS** - Nye, J.P.  
Pacific Northwest Lab., Richland, WA (United States)

Cathey, J.B.  
Pacific Northwest Lab., Richland, WA (United States)

Sawyer, J.G.  
Pacific Northwest Lab., Richland, WA (United States)

Hare, A.C.  
Pacific Northwest Lab., Richland, WA (United States)

**LIMITATION CODE** - UNL                    **AUDIENCE CODE** - UNL

**COMPLETION DATE** - 12/01/1993    **PUBLICATION DATE** - 12/01/1993

**DESCRIPTION** - CMSPNL provides an inventory of all chemicals on order or being held in the laboratory, to provide a specific location for all chemical containers, to ensure that health and safety regulatory codes are being upheld, and to provide Pacific Northwest Lab. (PNL) staff with hazardous chemical information to better manage their inventories. CMSPNL is comprised of five major modules: 1) chemical purchasing, 2) chemical inventory, 3) chemical names, properties, and hazard groups, 4) reporting, and 5) system administration.

**PACKAGE CONTENTS** - Media Directory; Software Abstract; Media Includes Source Code, Executable Module, Control Information, Programmer Documentation, User's Guide;

**SOURCE CODE INCLUDED?** - No

**MEDIA QUANTITY** - 1 CD Rom

**METHOD OF SOLUTION** - CMSPNL is a relational database system. All run-time options are specified via screen input that are parsed by UNIX shell scripts and the applications programs. PNL's standard systems development life-cycle was used from requirements definition through implementation. The software is constructed in a modular manner.

**COMPUTER** - SEQUENT SYMMETR

**OPERATING SYSTEMS** - DYNIS/ptx(R) V2.0.4; a POSIX-compliant version of UNIX

**PROGRAMMING LANGUAGES** - Oracle RDBMS, SQL Forms (60%), SQL + (20%), SQL Menu (5%), Bourne and C shell scripts (10%), C (5%)

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**SOFTWARE LIMITATIONS** - Oracle and UNIX dependent.

**SOURCE CODE AVAILABLE (Y/N)** - N

**UNIQUE FEATURES** - On-order inventory records are created at the time of purchase. Each distinct chemical can have any number of names. The ORACLE 'soundex' capability is used to facilitate approximate spelling of chemical names which aids in maintaining integrity of the data. Relational tables are used to define hazard groups which provide great flexibility in reporting.

**RELATED SOFTWARE** - CMSPNL relies heavily on the ORACLE relational database management system (RDBMS) and its proprietary development tools, and on the UNIX shell scripts. System utilities for terminal security, database grants, and printing are provided with the system. Source code, executable, and data files available for this system are in compressed TAR format files.

**OTHER PROG/OPER SYS INFO** - Directory structures are maintained in the TAR files and are required for successful implementation of the system.

**HARDWARE REQS** - UNIX based micro, mini, or midrange computer; 50-150 Mbytes of free disk space depending on the number of chemical containers in inventory. 70,000 containers, representing 20,000 distinct chemicals, and 60,000 unique names, takes about 120 Mbytes.

**TIME REQUIREMENTS** - Run time requirements are highly dependent on computer capacity and load. Rule of thumb is 3 seconds per inventory query on a moderately loaded Sequent Symmetry S81. Moderate load is 100 processes running.

**REFERENCES** - User's Guide on Media.

**ABSTRACT STATUS** - Submitted July 27, 1994. Released AS-IS September 27, 1994.

**SUBJECT CLASS CODE** - UM

**KEYWORDS** -

COMPUTER PROGRAM DOCUMENTATION  
C CODES  
INVENTORIES  
CHEMISTRY  
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ACCOUNTING

**EDB SUBJECT CATEGORIES** -

990200 990301 400200

**SPONSOR** - DOE/RO

**PACKAGE TYPE** - AS - IS