

**SCHOOL TOXICS ADVISORY COMMITTEE
FINAL REPORT TO THE
COLORADO STATE BOARD OF HEALTH
APRIL 4TH, 2001**

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I. Executive Summary

The School Toxics Advisory Committee was formed to evaluate the scope and nature of safety issues associated with chemical storage, use and disposal in schools. Based on this evaluation, the Committee was then to advise the Board of Health regarding actions that could be taken to resolve the problems identified.

The Committee had three main objectives. The first was to gather existing information related to the current regulatory scheme and the inspection programs conducted by the Colorado Department of Public Health & Environment (CDPHE). The second objective was to determine recommendations for responding to immediate risks posed by chemical use and storage in schools. The third objective was to develop recommendations and/or options for an on-going program that prevents a similar situation from occurring.

In order to meet these objectives, the Committee gathered information and sought opinions from a variety of public health, emergency response and school representatives. Based on this input, the Committee believes that the problems can be broadly characterized into two groups. First, there are inventories of old and hazardous chemicals in schools. Second, poor inventory control, curriculum design and limited regulation do not prevent hazardous chemicals from entering the schools.

For a variety of reasons most schools have inventories of chemical materials that are hazardous. In many cases these materials present an imminent hazard to health and safety because of degradation and/or poor storage practices. Current inventory and purchase practices promote accumulation of unnecessary inventories well beyond what is appropriate to the ongoing curriculum needs. Rarely is curriculum design based on the use of minimum quantities of chemical materials or the use of the least hazardous materials appropriate to the demonstration or experiment being conducted.

Because of the extraordinary risks to students, staff and the public, the Committee believes that existing, unnecessary inventories of hazardous chemicals must be removed from schools and properly disposed. Unfortunately the cost of such a program is beyond the reach of routine school district budgets, which has resulted in the practice of accumulating inventories. While some very limited grant funds and other assistance may be available, the Committee could not identify funding for a statewide program to remove these inventories.

In order to address the future accumulation of chemicals within schools, the Committee recommends that the Board of Health adopt, as part of the existing regulations, a list of chemicals generally prohibited from schools and use by students. In addition, a list of restricted use chemicals is being recommended for inclusion in the regulation to assist with identifying and implementing inventory control practices that reduce health and safety risk. These lists are intended to reduce the likelihood of continuing the poor inventory practices that resulted in dangerous chemical inventories.

The Committee further recommends that the Board of Health organize a meeting with interested stake holders such as teacher's unions, school district administrators, State agencies, etc. to see if a consensus can be developed regarding the appropriate role, if any, that the State should take. One of the items for discussion at this meeting will be to determine whether a request should be made to the General Assembly to convene an Interim Study Committee. An Interim Study Committee could be used to evaluate the State's role and to resolve statutory issues associated with cleanup efforts.

II. Nature of the Issues and Problems Discovered

The School Toxics Advisory Committee met with a variety of experts with experience in inspecting schools and removing hazardous chemicals found during these inspections. Opinions, advice and information were also sought from regulators, educators and emergency response agencies. Based upon this investigation, the Committee identified the following problem areas:

1. Under existing regulatory programs and typical school district management approaches, no specific person within a school is directly responsible for taking inventories of chemicals, preparing safety and spill response plans, controlling the purchase of chemicals and minimizing chemical usage through curriculum design. In addition, school personnel are not familiar with the regulatory requirements associated with disposal of waste chemicals.
2. In the current scheme of school chemical management practices and regulations, old chemicals are not being discarded. Financial constraints further complicate this issue. Typically old chemicals are not in active use within the curriculum and frequently were acquired by teachers that are no longer teaching at the school. In addition, as new teachers come into schools they adopt new curriculum practices consistent with their level of training and experience. These changes result in different materials being purchased and older materials being ignored and placed to the back of storage shelves.
3. The hazards presented by old chemicals are not well understood by most teachers, school management, emergency responders and agencies responsible for performing inspections. The main reasons for this lack of understanding are that the characteristics of chemicals change with time and this is not a typical component of chemical management training programs. Many chemicals that initially present a limited hazard, present extreme hazards when degraded with age. For example, some chemicals form peroxide compounds or can otherwise become shock sensitive. In addition, as storage time progresses, oxidation and other reactions can transform otherwise acceptably safe materials into ones that are truly dangerous. An examination of the results of school inspections and responses carried out by CDPHE demonstrates that this situation occurs repeatedly. **See Attachment A, Responses to Date.**
4. The accreditation process does not necessarily require science teachers to be trained in chemistry and chemical safety. With the teaching shortage, many teachers are not teaching subjects that they are accredited in, especially in rural Colorado where the shortage has had a greater impact. For this reason, they may not be prepared to deal with accidents during experiments and demonstrations. Additionally, they may not be familiar with the current regulatory programs either for school safety or the disposal of hazardous wastes or with the unique and unsuspected hazards presented by degraded chemicals.

5. Because of the expense associated with disposal of old chemicals almost no school district makes a concerted effort to inspect and remove these old chemicals. At this point we have no highly reliable estimate of the cost of inspection and cleanup in K-12 schools. From information developed in other States, an average cost of \$5,000

per school is not unreasonable. It should be noted that the Committee does not have any way to verify that this cost is reflective of what would be required in Colorado. In any case, the cost is beyond the means of all but the largest school districts in Colorado.

6. The size of the school district is not a good indicator as to whether or not hazardous chemical inventory issues exist. For example, Denver Public Schools have engaged in a systematic approach to dealing with the problem, including the retention of a contractor to perform the project. As a result, obsolete chemical inventories and future procurement practices have been addressed. Other schools that are an equivalent size have not made this progress.
7. The ability to enforce existing regulations is not fully understood. There are several agencies that have jurisdiction and enforcement has not been the focus of any agency. For example, CDPHE is not ultimately responsible for inspections and enforcement across the State. Instead, much of this function is the responsibility of local health agencies. In addition, local fire jurisdictions may or may not have the authority or expertise to perform inspections. This has led to inconsistencies in how issues are identified and resolved. Although the Committee is not advocating enforcement as the solution to these issues, it is an important component and should be evaluated further.

III. Description of Existing Regulations

A. Fire Codes and Inspections

- §32-1-1002 (3), C.R.S. Fire Departments, including special districts, are required to enforce the laws of the state and applicable fire codes, and to conduct inspections as necessary.
- § 8-1-107, C.R.S. The Division of Labor is required to adopt a fire code and building codes, which the fire departments are to enforce in schools by inspections.
- § 22-32-134 (3), C.R.S. Fire departments may annually inspect schools unless the Board of Education for the district has contracted for such inspections by a qualified person.
- West Adams County Fire District v. Adams County School District 12, 926 P.2d 172 (Colorado App. 1996). The Colorado Court of Appeals was faced with these conflicting provisions and ruled that the local fire department may enforce either fire codes adopted locally or by the Division of Labor by inspection unless the school district has contracted for inspections.

B. Colorado Department of Public Health & Environment

- § 25-1-107 (1)(m), (s) and (t), C.R.S. The department acting through the Board of Health may adopt regulations that deal with sanitary conditions, exposures to toxic materials and exposures to environmental conditions. These regulations may apply to schools and most all public facilities.
- 8-105 An annual inventory is to be maintained.
- 8-106 Material Safety Data Sheets shall be provided.
- 8-107 Provides fire codes are "guidance" for storage, handling and use.
- 8-108 If refrigerators are used for flammable compound storage, they must be explosion proof.
- 8-109 A written plan for spills and clean ups must be maintained.
- 8-110 A written plan that explains the proper storage, handling and disposal procedures, must be maintained.
- Other regulations involving air emissions, wastewater management and hazardous waste management also applies to schools.

IV. Description of the Current School Inspection Program

A. Inspection Program Description

The school regulations were promulgated by the Board of Health under the authority in §25-1-107 (1)(m), C.R.S. Section 1-103 of the *Rules and Regulations Governing Schools in the State of Colorado* recommends schools with laboratories, and/or engaging in industrial arts or hazardous vocational activities be inspected a minimum of once per year. All other schools should be inspected once per three years.

The Consumer Protection Division (CPD) and counties under contract with the CPD inspect schools at the frequency recommended above. Currently, thirty-six (36) counties are covered, twenty-two (22) by contracts with sixteen separate agencies and fourteen (14) by the CPD.

The other counties in the state are under the jurisdiction of organized county or regional health departments. Currently, there are fourteen (14) organized agencies. Organized departments are not required to conduct inspections of schools. Program activities are resource dependent and at the discretion of the local health agency.

B. Inspector Credentials

Currently, all Consumer Protection Division (CPD) professional staff have at least a bachelors degree from an accredited university in an applied science, i.e., biology, microbiology, environmental health/science, chemistry, etc. County contracts are required to have a four-year degree in an applied science or a year for year experience substitution.

C. Training

Past training efforts included, a course in 1994 offered by the Consumer Protection Division (CPD) to local health agencies on the requirements of the regulation. Local health departments and county contract staffs are trained internally by their experienced staff members or provided training by CPD local assistance personnel if requested.

On June 15, 1999, Hazardous Materials and Waste Management Division (HMWMD) personnel, responding to a request for assistance from a high school chemistry teacher, became involved in an emergency response action due to the presence of potentially unstable hazardous laboratory chemicals stored at three area schools and the district administration building in Rifle, Colorado.

After the Rifle incident a directed and cooperative effort to provide training to health department personnel, school teachers and administrators was initiated. State and local environmental health specialists, who conduct inspections of schools, were offered training to increase their skill levels in evaluating chemical hazards. Three eight-hour workshops were held in October 1999 and included technical information on the chemistries of hazardous substances, safe waste disposal practices, regulatory requirements, and the CHEMIS program for chemical management.

In February and November 2000, the CDPHE Environmental Customer Assistance Center organized a similar chemical management workshop for school personnel.

Prior to these efforts, several state and local agencies had been working independently to increase awareness and identification of potential chemical hazards in Colorado schools.

- During routine inspections for compliance with the *Rules and Regulations Governing Schools in the State of Colorado*, CPD and local health departments work with individual schools to identify and correct chemical storage problems.
- The Mesa County Health Department Western Slope Pollution Prevention Program organized a chemistry teachers workshop that focused on waste minimization, including implementation of micro-scale chemistry. The workshop was funded by a grant from CDPHE's Pollution Prevention program.
- The Colorado Emergency Planning Commission supports the efforts of Jack Rowe, a retired chemist residing on the western slope. Mr. Rowe, a member of the Ouray County Emergency Planning Committee, was assisting individual schools with updating their chemical inventories and disposing of unwanted/unused chemicals.
- Prior to 1999, the Department of Public Safety Division of Fire Safety had provided training to local health departments in the CHEMIS program, a free software program designed for managing chemicals in school laboratories.
- A science/hazardous materials specialist, working at the Department of Education, had been assisting individual science teachers with chemical management.

D. Inspection Criteria

The inspection of schools, as previously described, is not a required program for local health departments. **Attachment B.** is a spreadsheet detailing, by county, what schools have been inspected and the violations (by the applicable section of the regulation) that were noted.

V. Solutions and Recommendations

Based on the results of the evaluation process, the School Toxics Advisory Committee identified possible solutions and recommendations. Due to the complexity of this issue, the Committee was unable to identify one comprehensive solution. Addressing these problems will require a combination of efforts that may in some instances require a statewide approach, while other efforts need to focus on individual school districts.

The following summary presents a set of recommendations that are intended to achieve some broad-based goals. These recommendations are classified as recommendations that have already been accomplished, recommendations that require Board of Health action or recommendations that require action from other entities.

A. **Recommendations That Have Already Been Accomplished**

1. In early discussions related to the problems and issues that chemical characterization and disposal present for schools, the School Toxics Advisory Committee became aware of the need to identify a guideline to assist schools in determining vendor qualifications. This guideline is intended to assist school personnel in determining if an outside vendor has the necessary qualifications to perform chemical characterization and/or disposal. The guideline was developed and finalized in early February and is posted on the CDPHE Consumer Protection Homepage, located at www.cdphe.state.co.us/cp/, under Guidance on Chemical Management In Schools. A copy of the guideline is included as **Attachment C**.
2. The Committee had lengthy discussions regarding training. The issues surrounding training were associated with content, frequency and who should receive training. The main goal of the Committee was to develop an outline that provided consistent information on the content of training sessions. In addition, it was determined that training should be provided to several groups, including school administrators/management, teachers, facility managers and inspectors that evaluate chemical storage in schools.

Since the training audience requires training on different levels, the Committee developed training content outlines for each of the four groups mentioned previously. This information will be posted on the CDPHE Consumer Protection Homepage and on the Department of Education's Homepage. The Committee is recommending that the training be conducted frequently enough that those responsible for managing chemicals or performing inspections maintain their competencies. The recommended training content outlines are included in **Attachment D**.

B. **Recommendations That Require Board of Health Action**

1. Early in the process, the Committee agreed that it was necessary to develop a list of chemicals that should be prohibited from use in schools. In addition, there were other chemicals that needed to be restricted in some way including, quantity restrictions, storage restrictions, chemical form, etc. By developing these lists, the Committee felt that it may be easier for inspectors

to determine compliance with the applicable regulations and that the schools would be able to identify what could be procured and in what quantity.

Mr. Fred Dowsett, with the CDPHE Hazardous Materials and Waste Management Division, developed the criteria that were utilized to place a chemical on this list. The criteria included use of the National Fire Protection Association's ranking system, which ranks the health, flammability, reactivity and special hazards associated with a chemical. In addition, Mr. Dowsett drew on the experience of his staff that has been involved in performing chemical characterizations and disposal at various schools across the state.

Committee members that have knowledge and experience in conducting classroom experiments in schools also closely scrutinized this list. Their input was invaluable in determining what chemicals had to be used, etc. to continue to perform experiments that are in the curriculum.

The Prohibited and Restricted Chemical Lists were developed and finalized in March of 2001. The Committee believes that the Board of Health currently has the regulatory authority to adopt these lists as part of the existing regulations under § 25-1-107(1)(m), C.R.S. The Committee is strongly recommending that the Board take action on this item as soon as possible. Adoption of these lists and the regulatory verbiage describing them is critical in preventing a recurrence of chemical inventory problems. **A copy of the Prohibited and Restricted Chemical Lists along with the classification criteria used and proposed regulatory language to adopt these lists is included in Attachment E.**

2. During the discussion surrounding the development of the Prohibited and Restricted Chemical Lists, there was concern among the Committee members that these lists would be very cumbersome for school personnel to use. For this reason, the Committee is recommending that the Board of Health assign the CDPHE Consumer Protection Division with the task of developing a guidance document for distribution to schools along with the Prohibited and Restricted Chemical Lists. This guidance should include development of "short lists" that are more practical for schools to use, as well as suggested chemical alternatives that will work in place of banned or restricted chemicals. It is important that the CDPHE Hazardous Materials and Waste Management Division and the Colorado Chemistry Teachers Association be included in development of this document.
3. The Committee discussed the existing statutory authority that the Board of Health and CDPHE has for enforcing regulations related to chemical management in schools. It is unclear what the scope of the regulatory authority is and what enforcement options are available under the current statutory scheme. In addition, an opinion needs to be rendered as to the degree to which training may be addressed under existing statutes. For this reason, the Committee is recommending that the Board of Health request a formal opinion from the Attorney General's office. This will be beneficial in future pursuits to solve the chemical inventory problem.

4. One of the major components of discussions surrounding chemical characterization and disposal of outdated inventories was the cost associated with this process and the funding options that should be considered. The Committee members all agree that if immediate risks posed by outdated inventories are not addressed and corrected, changes to the existing program would be difficult to implement and ineffective. The initial clean up of old inventories is essential for providing a clean start and allowing for the implementation of new management strategies. For this reason, the Committee is recommending that every funding option that can be identified, be evaluated. It is important to consider that the success of other state programs (e.g., Ohio and Vermont) were based largely on the ability to provide funding for the initial characterization and disposal of old inventories. It should also be noted that other options might include new fees or revenue streams created on a temporary basis or use of general revenues on a temporary basis.
5. The Committee is recommending that the Board of Health assign CDPHE with the task of providing an assessment on the availability and use of existing revenue streams from solid waste disposal and other State fees. It should be stressed that the use of these fees would constitute a one time funding source to cover characterization and disposal of old inventories. This would not be an ongoing expenditure and, although either option would require legislative action, the Committee believes that these options should be evaluated. The Committee is recommending that before a school district could expect to receive cleanup assistance, a commitment to improved inventory control practices and agreement to participate in training activities would be required.

C. Recommendations That Require Action From Other Entities

1. The Committee recognizes that the existing chemical inventory cleanup effort is likely beyond the financial means of many, if not most, school districts. Although the Committee encourages the use of volunteer efforts and grant funds to accomplish some of this cleanup, grants will not provide sufficient funding to complete this task in a timely manner. According to the Jefferson County Local Emergency Planning Committee, demonstration projects are anticipated for this spring and summer; however, this effort is contingent on the award of grant funds to various groups.

It should be noted that these demonstration projects will be limited in geographic scope and will not fully address the problems associated with old chemical inventories. It is for this reason that an effort must be made to communicate with other interested groups such as teacher and school district associations to see if a consensus can be reached regarding the State's role in this process and whether the Colorado General Assembly should convene an Interim Study Committee. A much broader universe of people and organizations have a stake in the solution to these problems and should be involved in any effort to approach the General Assembly.

The range of options for the State are numerous. On one hand, there is a traditional view that management of the schools is a matter of local concern and that the State should not be telling school districts how to spend their money. On the other hand, the State is facing problems that present potentially catastrophic impacts to a school, individuals within that school and the communities involved. Solutions to the chemical inventory issues are probably beyond the internal technical expertise,

management systems and financial resources of most districts. It seems clear that the General Assembly should consider whether these risks are an appropriate topic of State action and, if so, the nature of the action that is most appropriate.

2. The Committee fully recognizes that training and the exchange of technical information are key components to a successful statewide chemical management program. Training and information sharing create a greater awareness of the pertinent chemical management issues and assist in identifying and implementing management techniques. For this reason, the Committee is recommending that CDPHE establish a forum for working with other entities (e.g., first responders, local health departments, etc.) with the purpose of sharing technical expertise to better utilize limited resources. For example, focus should be placed on developing guidance information and training sessions that address working with hazardous chemicals and identifying and implementing sound management techniques. Each of the entities involved in this forum would bring a unique perspective that may be useful to others.

VI. Conclusion

The problems identified by the Committee are bigger than the solutions any one institution or agency can provide. As the risks presented by hazardous chemicals are large and potentially catastrophic, it is incumbent on all interested parties to do their part. The burden cannot be imposed only on the schools or the regulatory agencies.

The Committee has identified two broad approaches to addressing these problems. Training to improve awareness and management techniques is critical to maintaining a safe environment once inventories of hazardous chemicals have been removed. It is in this removal effort that the greatest opportunity for a state role exists. The problems identified by the Committee likely cannot be solved absent a broader, state-level commitment of resources.

Appendix A

Responses to Date

Responses to Date

- 1) Rifle School District, June 1999
 - a) Rifle High School [shock sensitives , detonation for explosive materials, radioactive materials & chemical deactivation operation (chlorine gas cylinder & hydrofluoric acid)]
 - b) Rifle Middle School (shock sensitives)
 - c) New Castle Middle School (shock sensitives)
 - d) Rifle Administration Building (shock sensitives)
- 2) University of Colorado, August 1999 [detonation for explosive materials (grignard/ether reagents)]
- 3) University of Northern Colorado, August 1999 [shock sensitives, detonation for explosive materials (ethers, monomers) and chlorine gas cylinder sent off-site w/o treatment]
- 4) Karval School, K-12 (both high school and middle school in same building), October 1999 [shock sensitives, chemical deactivation operation (various acids) & detonation for explosive materials]
- 5) City of Fort Morgan, February 2000
 - a) Ft. Morgan High School [shock sensitives, detonation for explosive materials, radioactive materials & chemical deactivation operation (hydrofluoric acid)]
 - b) Ft. Morgan Middle School (shock sensitives)
 - c) Columbine Elementary School (shock sensitives)
 - d) Ft. Morgan Police Department [chemical removal (chloroform)]
 - e) Ft. Morgan Fire Department (armed fire ax)
 - f) Colorado Plains Medical Center [detonation (suspected nitroglycerin)]
- 6) Clear Creek County School District Maintenance Facility, April 2000 (detonation for shock sensitive materials including ethers)
- 7) Westcliffe K-12, Custer County School District, June 12 & 13, 2000 (chemical deactivation operation)
- 8) S.E. Board of Cooperative Education Services, weeks of June 26 and July 17, 2000 (only Kim, Colorado, did not have any problem)
 - a) Baca County
 - i) Springfield (shock sensitives)
 - ii) Campo [shock sensitives & chemical deactivation operation (white phosphorous)]
 - iii) Vilas (shock sensitives)
 - iv) Walsh (shock sensitives)
 - v) Pritchett (shock sensitives)

Prowers County

- vi) Holly (shock sensitives)
 - vii) Granada (shock sensitives)
 - viii) Wiley [shock sensitives & chemical deactivation operation (hydrofluoric and nitric acids)]
 - ix) Lamar High School (shock sensitives & chemical deactivation operation)
 - x) Lamar Middle School (shock sensitives)
 - b) Kiowa County
 - i) Plainview (shock sensitives, radioactive materials, detonation for explosive materials & chemical deactivation operation)
 - ii) Eads High School [shock sensitives & chemical deactivation operation (chlorine gas cylinder)]
 - iii) Eads Middle School (shock sensitives)
 - c) Bent
 - i) McClave (shock sensitives & radioactive materials)
 - ii) Las Animas (shock sensitives)
 - d) Las Animas County
 - i) Kim (did not have any problem)
- 9) Lamar Junior College, weeks of June 26 and July 17, 2000 (shock sensitives, radioactive materials, detonation for explosive materials & chemical deactivation operation)
- 10) Debeque, Colorado, July 2000 (shock sensitives, detonation & chemical deactivation operation)
- 11) N.E. Colorado, August 2000, following schools were inspected (only Wray, Haxtun and the Christian School did not have problems):
- a) Julesberg (shock sensitives)
 - b) Ovid [shock sensitives & chemical deactivation operation (hydrofluoric acid)]
 - c) Caliche [shock sensitives & chemical deactivation operation (hydrofluoric acid)]
 - d) Peetz (shock sensitives, radioactive materials & chemical deactivation operation)
 - e) Sterling (shock sensitives & chemical deactivation)
 - f) Holyoke (shock sensitives, detonation for explosive materials)
 - g) Idalia (shock sensitives)
 - h) Liberty (Joes, CO) (shock sensitives & chemical deactivation operation)
 - i) Fleming (shock sensitives & hazcated suspected nitro glycerin)
 - j) Arikeree (Anton, CO) (shock sensitives, & chemical deactivation operation & detonation for explosive materials)
 - k) Yuma (shock sensitives, detonation for explosive materials)
 - l) Otis (shock sensitives)
 - m) Lonestar [shock sensitives & chemical deactivation operation (hydrofluoric acid)]
 - n) Wiggins (shock sensitives)
 - o) Weldona (shock sensitives)
 - p) Merino (shock sensitives)
 - q) Woodlin (shock sensitives)
 - r) Brush (shock sensitives & detonation for explosive materials)
 - s) Akron (shock sensitives)

- t) Haxtun (no problem)
 - u) Wray (no problem except for leaking ethidium bromide solution)
 - v) New Life Christian School (Eckley, CO)(no problem, hazcated unknown)
- 12) N.E. Colorado, August 2000, Morgan Community College (shock sensitives & detonation for explosive materials)
 - 13) Adams City Christian School and Church, September 2000 (shock sensitives, peroxide formers and radioactive materials)
 - 14) Adams City High School, October 2000 (shock sensitives, peroxide formers)
 - 15) Arvada Schools, October 2000
 - a) Arvada High School, (peroxide formers)
 - b) Arvada West High School, (shock sensitives, peroxide formers and radioactive materials)
 - c) Pomona High School, (shock sensitives, peroxide formers)
 - d) North Arvada Middle School, (shock sensitives)
 - e) Maranantha Christian School, (shock sensitives, peroxide formers)
 - 16) Golden High School, October 2000 (shock sensitives, peroxide formers)
 - 17) Denver Area Schools, October 2000
 - a) JFK High
 - b) North High School
 - c) Mullen High School
 - 18) Lamar Area Schools, October 2000
 - a) Otero Junior College, (shock sensitives, detonation, peroxide formers and radioactive materials)
 - b) La Junta High School, (shock sensitives, peroxide formers and radioactive materials)
 - c) La Junta Junior High School, (shock sensitives)
 - d) Rocky Ford High School, (shock sensitives, peroxide formers)
 - e) Fowler High School, (shock sensitives)
 - f) Manzanola High School, (shock sensitives)
 - g) Cheraw High School, (shock sensitives)
 - h) Swink High School, (shock sensitives)
 - i) Crowley County High School, (peroxide formers)
 - 19) Pikes Peak Community Colleges, October 2000 (Colorado Springs)
 - a) Centennial Campus, (shock sensitives, detonation, peroxide formers and radioactive materials)
 - b) Rampart Range Campus, (shock sensitives)
 - 20) Walsenburg High School, November 2000 (peroxide formers)

Huerfano County Schools, November 2000

- a) La Veta High School (chemical deactivation)
- b) La Veta Middle School (no problems)
- c) La Veta Elementary School (no problems)
- d) Huerfano Middle School (no problems)
- e) Huerfano Elementary School (no problems)

21) Parachute Colorado Schools, November 2000

- a) Parachute High School (shock sensitives, detonation, chemical deactivation)
- b) Parachute Middle School (no problems)
- c) Parachute Elementary School (no problems)

22) Buena Vista High School, February 2000, (shock sensitives, chemical deactivation)

23) Salida High School, February 2000, (shock sensitives, detonation, chemical deactivation)

24) Denver Street School, February 2000 (chemical deactivation)

25) Fort Morgan Museum, February 2000, (chemical deactivation)

78 schools, 2 administrative/maintenance buildings

Appendix B

School Inspection Summary

	#7913																		
	Sanford H.S. #7912	annual - lab	10/5/00				x										x	x	
Costillia																			
	Centennial Elem. School # 7916	3 years - no lab	3/29/00		x														x
	Centennial Jr. H.S. #7917	annual - lab	10/17/00																
	Centennial H. S. # 7918	annual - lab	10/6/00		x		x											x	x
	Sierra Grande Elem. #8047	annual - lab	5/10/00					x										x	x
	Sierra Grande K- 12 #670	annual - lab	10/24/00															x	
Elbert																			
	Big Sandy K-12 # 1467	annual - lab	10/12/00		x													x	
	Agate Schools K- 12 # 1465	annual - lab	10/24/00															x	
	Elbert School K- 12 # 1469	annual - lab	10/25/00		x													x	
	Elizabeth H.S. # 1471	annual - lab	8/17/00															x	x
	Elizabeth M.S. #1510	annual - lab	10/27/00		x		x											x	x
	Kiowa Elem # 1477	3 years - no lab	3/16/99																
	Kiowa Middle and H.S. # 7938	annual - lab	10/27/00		x		x											x	x
	Running Creek Elem #1511	3 years - no lab	1/6/00																
	New Thomas Learning Center	3 years - no lab	10/27/00																

	Singing Hills Elem #1529	3 years - no lab	12/9/99															
Garfield																		
	Bea Underwood Elem #1938	3 years - no lab																
	Carbondale Middle School #2006	annual - lab	10/6/00						x									
	Carbondale Elem School	3 years - no lab																
	Crystal River Elem. #2081	3 years - no lab																
	Colorado Rocky Mountain School #1740	?	2/23/00															
	Esma Lewis Elem. #1747	3 years - no lab	3/1/00															
	Glenwood Springs Elem. #1757	?																
	Glenwood Springs Middle #2001	annual - lab	10/25/00		x					x								
	Glenwood HS	annual - lab	10/9/00															x
	Grand Valley School #1758	annual - lab	10/26/00		x					x							x	x
	Kathryn Senior Elem #2095	3 years - no lab	3/2/00		x													
	Mt. Sopris Elem #2085	3 years - no lab																
	Rifle H.S. #1792	annual - lab	10/24/00														x	x
	Rifle M.S.	3 years - no lab	10/24/00		x					x							x	x

	Riverside M.S.	3 years - no lab	10/25/00				x	x					x	x	
	Roaring Fork H.S. #1796	annual - lab	10/6/00				x								
	Roy Moore Elem. #2118	3 years - no lab	2/29/00				x								
	St. John M.S.	3 years - no lab	10/26/00			x	x						x	x	x
	Waldorf at the Roaring Fork preschool	3 years - no lab	10/6/00												
	Walmsley Elem #1937	3 years - no lab	2/29/00				x								
Gilpin															
	Gilpin County Mountain School	annual - lab	10/24/00				x								
Grand															
	East Grand M.S. #2404	annual - lab	10/18/00		x		x						x		
	Fraser Valley E.S. #2405	3 years - no lab	4/20/00												
	Granby E.S. #2403	3 years - no lab	3/26/98		x										
	Grand Lake E.S. #2403	annual - lab	11/18/99			x									
	Grand Valley H.S.	annual - lab	10/26/00		x		x						x	x	
	Middle Park H. S. #2426	annual - lab	10/18/00		x		x						x		x
	North Park Jr/Sr H. S.	annual - lab	10/19/00				x						x		x
	West Grand E.S. #2418	3 years - no lab	1/12/99												
	West Grand M.S.	3 years - no lab	4/20/00												
	West Grand H.S. #2427	annual - lab	10/20/00		x		x								
Gunnison															
	Gunnison Community School	3 years - no lab	5/3/00		x		x	x							

	#2784																			
	Gunnison H.S. #8007	annual - lab	4/8/99		x	x	x												x	
	Crested Butte Academy 9-12 #2712	annual - lab	8/30/00				x												x	
	Crested Butte Community School K-12	annual - lab	3/7/00			x	x													
	Marble Charter School #8045	3 years - no lab	last inspected 8/26/96, to jeff															x		
Jackson																				
	North Park Jr/Sr H.S. #7980	annual - lab	11/17/99																x	
	Walden E.S. #2868	3 years - no lab	12/2/99			x														
Mineral																				
	Creede E.S. #7919	3 years - no lab	4/18/99																	
	Creede Jr./Sr. #7970	annual - lab	10/19/00			x												x	x	
Moffat																				
	Craig M.S. #3267	annual - lab	10/3/00		x		x	x										x	x	x
	Craig M.S. East Campus #3268	3 years - no lab	12/12/97		x		x													
	Dinosaur E.S. #3237	3 years - no lab	1/14/98, 2/24/98		x															
	East E.S. #3265	3 years - no lab	5/28/98																	
	Maybell E.S. #3265	3 years - no lab	12/11/97																	
	Moffat County H.S. #3263	annual - lab	10/2/00															x	x	x
	Ridgeview E.S. #3262	3 years - no lab	5/28/98																	
	Sunset E.S. #3264	3 years - no lab	5/1/98		x															
Rio Blanco																				
	Barone Jr. H.S. #4344	3 years - no lab	3/3/00					x											x	

	Meeker E.S. #4358	3 years - no lab	4/16/98															
	Meeker H.S. #4389	annual - lab	10/5/00															
	Parkview E.S. #4364	3 years - no lab	1/15/98		x			x										
	Rangely H.S. #4383	annual - lab	10/4/00															x
	Rangely M.S. #4367	annual - lab	10/4/00		x													
Rio Grande																		
	Del Norte E.S. #4542	3 years - no lab	2/25/99															
	Del Norte H.S. #4468	annual - lab	10/16/00															
	Del Norte M.S #4540	3 years - no lab	2/3/99															
	Marsh E.S. #4494	3 years - no lab	2/18/99															
	Monte Vista M.S. #4543	annual - lab	10/12/99		x													x
	Sargents School #4445	annual - lab	4/21/99															
	Monte Vista H.S. #4493	annual - lab	10/30/00							x								x x x
	St. Peters Lutheran School #4445	3 years - no lab	2/4/99															
	Sargents H.S. #8048	annual - lab	10/18/00															x x
Saguache																		
	Center H.S. #4852	annual - lab	10/7/99		x													x x x
	Crestone Charter #7929	annual - lab	2/15/00															x x x
	Haskin E.S. #7931	3 years - no lab	10/7/98															
	Moffatt Con. Schools K-12 # 4850	annual - lab	10/25/00															x x
	Mountain Valley K-12 #4862	annual - lab	10/26/00		x													x x
	Skogland M.S.#7930		file to jeff, last inspected 4/2/96															

COUNTY CONTRACTS	NAME OF SCHOOL	County	TIME FRAME (1/yr. Or 1/3yr.)	DATE of INSPECTION	PRIMARY VIOLATIONS								SECONDARY VIOLATIONS						
					8-101	8-102	8-103	8-105	8-106	8-107	8-108	8-104	8-109	8-110	8-203				
City of Aspen																			
See Pitkin County																			
Bent County	Las Animas Middle School	Bent	annual - lab	9/22/00															
	Las Animas High School	Bent	annual - lab	9/22/00															
Baca County																			
	Vilas School	Bent	annual - lab	9/27/00															
Chaffee/Lake County H.D.																			
	Avery Parsons Elem. #257	Chaffee	3 year - no lab	no inspection															
	Buena Vista High School #255	Chaffee	annual - lab	2/15/01				x	x						x	x		x	
	Longfellow Elem. #247	Chaffee	3 year - no lab	no inspection															
	Salida High School #251	Chaffee	annual - lab	1/25/01		x	x	x	x	x				x	x	x		x	
	Salida Middle School #5680	Chaffee	?	no inspection															
	Lake County Intermediate #3031	Lake	?	no inspection															
	Lake County Senior High #3024	Lake	annual - lab	no inspection															
	West Park Elem #3029	Lake	3 year - no lab	no inspection															
Clear Creek County H.D																			

	Carlson Elem. #523	Clear Creek	annual - lab	10/16/98															
	Clear Creek Secondary #521	Clear Creek	3 year - no lab	5/28/97															
	Georgetown Elem. #522	Clear Creek	3 year - no lab	5/12/97															
	King Murphy Elem	Clear Creek	3 year - no lab	5/5/97															
Eagle County H.D.																			
	Avon Elem. #1384	Eagle	3 year - no lab	9/28/00															
	Basalt Elem. #1001	Eagle	annual - lab	3/29/96		x													
	Battle Mountain High School #1086	Eagle	annual - lab	5/2/00		x	x												
	Berry Creek Middle School #1372	Eagle	annual - lab	3/17/00															
	Eagle County Charter Academy	Eagle	annual - lab	8/14/00															
	Eagle Valley Elem. #985	Eagle	3 year - no lab	8/26/97															
	Eagle Valley Middle School #1077	Eagle	annual - lab	3/17/00 & 5/19/00		x	x	x											
	Eagle Valley Senior High #987	Eagle	annual - lab	5/4/00															
	Edwards Elem. #1222	Eagle	3 year - no lab	3/26/99															
	Gypsum Elem. #1319	Eagle	3 year - no lab	3/26/99															
	Minturn Middle School #1000	Eagle	annual - lab	3/29/00		x													
Fremont County H.D.																			

	Canon City High School #1586	Fremont	annual - lab	4/4/00	x														
	Canon City Middle School #1582	Fremont	annual - lab	5/6/99															
	Cotopaxi Consolidated K-12 #1592	Fremont	annual - lab	3/17/99	x														
	Florence High School #1594	Fremont	annual - lab	5/12/99	x														
	Fremont Elem./Middle #7942	Fremont	annual - lab	5/12/99	x														
	Harrison Elem. #1587	Fremont	3 year - no lab	3/16/99															
	Lincoln Elem. #1588	Fremont	3 year - no lab	2/17/98															
	Madison Exploratory School	Fremont	3 year - no lab	11/3/97															
	McKinley Elem. #1589	Fremont	3 year - no lab	3/10/99															
	Mountain View Core Knowledge School	Fremont	3 year - no lab	11/4/97															
	Penrose School K-8 #1593	Fremont	annual - lab	3/25/99															
	Skyline Elem. #1597	Fremont	3 year - no lab	2/3/98															
	Washington Elem. #1591	Fremont	3 year - no lab	4/20/99															
	Hinsdale County H.D.																		
	Kiowa County																		
	Eads Jr. High School	Kiowa	annual - lab	4/27/00															
	Kit Carson County H.D																		

	Bethune School	Kit Carson	annual - lab	4/26/00															
	Burlington Elem	Kit Carson	3 year - no lab	5/4/99															
	Burlington Middle School	Kit Carson	annual - lab	5/12/00															x
	Burlington High School	Kit Carson	annual - lab	5/12/00															
	Flagler High School #2190	Kit Carson	3 year - no lab	5/9/00															
	Hi Plains Elem.	Kit Carson	3 year - no lab	2/16/99															
	Hi Plains High School	Kit Carson	annual - lab	5/4/00															
	Stratton Elem.	Kit Carson	?	4/26/00															
	Stratton Jr/Sr High	Kit Carson	annual - lab	5/11/00															
	Cheyenne Wells School K-12 #450	Cheyenne	annual - lab	4/27/00		x		x											
	Kit Carson School K-12 #454	Cheyenne	annual - lab	4/27/00															
	Genoa - Hugo School K-12 #3102	Lincoln	annual - lab	5/2/00															
	Karval Public School K-12 #3091	Lincoln	annual - lab	1/6/00															x
	Limon Public School K-12	Lincoln	annual - lab	11/4/99					x										x
Montezuma County H.D.																			
	Battle Rock Elem #7999	Montezuma	3 year - no lab	3/10/99															
	Beech Street Elem #8000	Montezuma	3 year - no lab	3/9/99															
	Cortez Adventist Christian School #8003	Montezuma	3 year - no lab	3/17/99															
	Cortez Middle School	Montezuma	annual - lab	3/13/00		x													

	#3363																		
	Dolores Elem #3378	Montezuma	3 year - no lab	3/18/00															
	Dolores Middle School #7995	Montezuma	annual - lab	3/18/99															
	Dolores High School	Montezuma	annual - lab	3/18/99															
	Downey Elem #8001	Montezuma	3 year - no lab	12/4/96															
	Jump Start Preschool	Montezuma	3 year - no lab	3/9/99															
	Kemper Elem #3364	Montezuma	3 year - no lab	3/9/99															
	Lakeview Elem #8002	Montezuma	3 year - no lab	3/9/99															
	Lewis-Arriola Elem #3374	Montezuma	3 year - no lab	3/9/99															
	Manaugh School #3375	Montezuma	3 year - no lab	3/9/99															
	Mancos Elem #3384	Montezuma	3 year - no lab	3/15/99															
	Mancos High School #7997	Montezuma	annual - lab	3/15/99															
	Mancos Middle School #7998	Montezuma	annual - lab	3/15/99															
	Mesa Elem #3370	Montezuma	3 year - no lab	3/10/99															
	Montezuma Cortez High School #3376	Montezuma	annual - lab	3/13/00															
	Pleasantview Elem #3372	Montezuma	3 year - no lab	3/9/99															
	Dolores County High School	Dolores	3 year - no lab	12/12/96															
Montrose County H.D.																			
	Early Childhood School	Montrose	?	no inspection															
	Centennial Jr High School	Montrose	annual - lab	11/9/99			x	x											x

	Guffey Elem #3865	Park	3 year - no lab	1/3/99															
	Lake George Elem #3866	Park	3 year - no lab	3/3/99															
	Platte Canyon High School #3872	Park	annual - lab	9/9/99															
	South Park Jr/Sr #3867	Park	annual - lab	9/16/99	x	x		x											
Pitkin County H.D.																			
	Compass K-8 (Aspen Community School) #6371	Pitkin	annual - lab	12/14/99															
	Aspen Elementary School #4126	Pitkin	3 years - no lab	11/4/99															
	Aspen Middle School #3937	Pitkin	annual - lab	11/29/99		x													
	Aspen High School #3934	Pitkin	annual - lab	11/29/99		x													
	Basalt Middle School #4036	Pitkin	?	2/27/97															
	Basalt High School #4181	Pitkin	annual - lab	4/25/00															
Routt County H.D.																			
	Christian Heritage School	Routt	annual - lab	2/1/00				x											x
	Hayden Jr/Sr #4653	Routt	annual - lab	12/17/99		x													
	Hayden Valley Elem #7053	Routt	annual - lab	11/16/99															
	Lower Whitman	Routt	?	11/18/99															
	School district RE	Routt	?	no inspection															
	Soda Creek Elem #	Routt	annual - lab	11/4/99															
	Soroco	Routt	3 year - no	1/12/96															

	Elem		lab																
	Soroco Jr/Sr #4639	Routt	annual - lab	11/23/99															
	South Routt Elem #4654	Routt	annual - lab	11/24/98															
	Steamboat Springs High School #4631	Routt	annual - lab	12/8/99			x												x
	Steamboat Springs Middle School #7064	Routt	annual - lab	11/3/98															
	Whitman School Elem	Routt	annual - lab	12/2/98															
San Miguel County H.D.																			
	Egnar Public School	San Miguel	3 year - no lab	4/25/95															
	Norwood high School #	San Miguel	3 year - no lab	5/28/97															x
	Telluride Elem #4986	San Miguel	3 year - no lab	5/21/98															
	Telluride Middle & High #4930	San Miguel	annual - lab	6/10/00		x			x										
Southeast Land and Env.																			
	Pritchett School #158	Baca	annual - lab	9/9/99		x		x											x
	Springfield Elem #163	Baca	3 year - no lab	11/9/99															
	Springfield Middle/High School #7903	Baca	annual - lab	9/9/99		x	x												
	Vilas School #162	Baca	annual - lab	12/3/99		x													
	Walsh High School #168	Baca	annual - lab	11/9/99		x			x										
	Walsh Elem #7904	Baca	3 year - no lab	11/8/99															
	Columbian Elem #199	Bent	3 year - no lab	12/1/99															
	Las Animas High School	Bent	annual - lab	12/1/99															

	#206																				
	Las Animas Middle #7811	Bent	annual - lab	12/1/99																	
	McClave Elem #7804	Bent	3 year - no lab	12/1/99																	
	McClave High School	Bent	annual - lab	12/1/99									x								
	Eads Jr/Sr	Kiowa	annual - lab	4/27/00									x						x		
	Planview High School	Kiowa	annual - lab	11/4/99									x								
	Planview Elem #7829	Kiowa	3 year - no lab	11/4/99																	
	Alta Vista Elem #4260	Prowers	3 year - no lab	12/18/96																	
	Granada School #4214	Prowers	annual - lab	11/10/99										x							
	Holly Elem/Jr/Sr	Prowers	annual - lab	11/16/99										x							
	Lamar High School #4226	Prowers	annual - lab	11/23/99										x							
	Lamar Middle School	Prowers	annual - lab	11/30/99									x	x							
	Lincoln Elem #4228	Prowers	3 year - no lab	11/1/99																	
	Parkview Elem #4258	Prowers	3 year - no lab	11/8/99																	
	Washington Elem #4259	Prowers	3 year - no lab	11/2/99																	
	Wiley School	Prowers	annual - lab	10/25/99									x		x	x					
Summit County H.D.																					
	Breckenridge Elem #5068	Summit	3 year - no lab	5/14/98															x	x	
	Dillion Valley Elem #5156	Summit	3 year - no lab	5/21/99																	
	Frisco Elem	Summit	3 year - no lab	5/7/98										x		x				x	x
	Keystone Science School	Summit	?	no inspection																	
	Silverthorne Elem #5125	Summit	3 year - no lab	5/17/99										x	x	x	x			x	x
	Summit	Summit	annual -	5/5/00										x	x	x					

	Middle School		lab																
	Summit County Christian School	Summit	annual - lab	5/18/00															
	Summit County High School	Summit	annual - lab	5/26/00	x		x							x	x				x
	Summit Cove Elem	Summit	3 year - no lab	4/25/00			x	x	x					x	x				
Teller County H.D,																			
	Columbiine Elem #5538	Teller	3 years - no lab	2/7/99															
	Cresson Elem #5646	Teller	3 years - no lab	11/8/99															
	Cripple Creek-Victor High School #5503	Teller	annual - lab	11/8/99															
	Gateway Elem #5536	Teller	3 years - no lab	6/29/99															
	Summit Elem #5595	Teller	3 years - no lab	11/12/99		x													
	Woodland Park High School #5487	Teller	annual - lab	6/29/99		x													x
	Woodland Park Middle #5654	Teller	annual - lab	6/29/99															
Town of Vail																			
	Vail Mountain School	Eagle	annual - lab	5/23/00				x											

Appendix C
Guidance on Chemical Management in Schools
Vendor Qualification

Questions to ask and/or Information to Obtain From Potential Hazardous Waste Vendors

In order to properly select a hazardous waste vendor, vendors must be able to document compliance history, credentials, etc. by providing information on the following items or areas:

- 1) Are financially sound e.g., Dun &Bradstreet report, Bank letter of credit;
- 2) Are properly permitted for the transportation, storage, treatment and disposal of waste identified at the facility;
- 3) Are able to demonstrate a good sound history of regulatory compliance;
- 4) Meet minimum insurance requirements and have coverage for accidents;
- 5) Have adequate personnel that are properly trained;
- 6) Are able to provide a statement of qualifications (SOQ's);
- 7) Have procedures for dealing with unknown chemicals;
- 8) Are able to provide a list of capabilities/services, e.g., transportation, disposal, treatment, identification of unknowns, etc.
- 9) If using subcontractors are able to identify who is utilized and for what activities;

Appendix D

Training Content Outlines

Liability Training for School Management

1. Identification and definition of applicable regulations and regulators
2. Prohibited/Restricted Chemical List (in very general terms)
3. Regulatory impact on their school/school district (e.g., what is required)
4. Liabilities for non-compliance, including enforcement (examples of what's been found and what could have occurred)
5. Specific responsibilities (management, teachers, etc.)
6. Contacts/Reference materials

Training for Teachers

1. Objectives and reasons for conducting this training
2. Identification and definition of applicable regulations (very general; 5 - 10 minutes)
3. Prohibited/Restricted Chemical List, the criteria used in developing list and the benefits of bench scale (micro scale) science
4. Hazard Communication Standard training:
 - Labeling requirements;
 - Material Safety Data Sheets (MSDSs);
 - Hazard identification (for materials in the school);
 - Documentation of training.
5. Personal Protective Equipment (including ventilation hoods):
 - What is required;
 - Where it is located;
 - How it is properly used;
 - How to properly inspect, maintain and care for equipment;
 - How it is obtained;
 - Appropriate documentation for records (such as check lists or some other method to document inspections are being performed);
6. Safe Practices
 - Class room demonstrations;
 - Class room chemical use (student experiments);
 - Microchemistry;
 - Preparation for experiments.
7. The School's/School District's Hazardous Materials Management Plan:
 - Basic rules and procedures;
 - Responsibilities;
 - Chemical procurement, distribution and storage;
 - Housekeeping, maintenance and inspections (including chemical inventory);
 - Spills and accident procedures;

- Waste disposal;
- Documentation of inspections, waste disposal, etc.

8. Contacts/Reference Materials

Training for Facility Managers, including janitorial, maintenance and grounds personnel

1. Objectives and reasons for conducting this training
2. Identification and definition of applicable regulations (very general; 5 - 10 minutes)
3. Prohibited/Restricted Chemical List, the criteria used in developing list and the benefit of minimizing chemical purchases;
4. Hazard Communication Standard training:
 - Labeling requirements;
 - Material Safety Data Sheets (MSDSs);
 - Hazard identification (for materials in the school);
 - Documentation of training.
5. Personal Protective Equipment (including ventilation hoods):
 - What is required;
 - Where it is located;
 - How it is properly used;
 - How to properly inspect, maintain and care for equipment;
 - How it is obtained;
 - Appropriate documentation for records (such as check lists or some other method to document inspections are being performed).
6. The School's/School District's Hazardous Materials Management Plan:
 - Basic rules and procedures;
 - Responsibilities;
 - Chemical procurement, distribution and storage;
 - Housekeeping, maintenance and inspections (including chemical inventory);
 - Spills and accident procedures;
 - Waste disposal;
 - Documentation of inspections, waste disposal, etc.
7. Contacts/Reference Materials

Training for Inspectors, including Consumer Protection Division, Local Health Departments, etc.

1. Identification and definition of applicable regulations
 - a. Authority
 - b. General Overview
 - c. Relationship/Commonalties with other Consumer Protection Division (CPD) regulations
 - d. Chapter 8 of the CPD regulations
 - Chemical Hygiene Plan
 - Storage parameters
 - NFPA
 - Ventilation
 - Safety equipment
 - e. Enforcement procedures
2. Effective inspections
 - a. Inspection criteria/checklist;
 - b. How to review chemical storage arrays;
 - c. What to look for;
 - d. Use of resource documents;
 - e. Questions to ask.
3. Prohibited/Restricted Chemical List (and the criteria used in developing the list):
 - What action to take is prohibited chemicals are observed during an inspection;
 - What restrictions apply
4. Hazard Communication Standard training:
 - Labeling requirements;
 - Material Safety Data Sheets (MSDSs);
 - Hazard identification (for materials in the school).
5. Personal Protective Equipment (including ventilation hoods):
 - What is required;
 - Where it is located;
 - How it is properly used;
 - How to properly inspect, maintain and care for equipment;

- How it is obtained.
6. The School's/School District's Hazardous Materials Management Plan:
 - Basic rules and procedures;
 - Responsibilities;
 - Chemical procurement, distribution and storage;
 - Housekeeping, maintenance and inspections (including chemical inventory);
 - Spills and accident procedures;
 - Waste disposal.
 7. What action to take if an imminently hazardous condition is observed during an inspection.
 8. Contacts/Reference Materials
 - a. Compliance assistance documents
 - b. Resource information
 - For the Inspector
 - For the Schools
 - c. Sample Hazardous Materials Management Plans
 9. For Local Health Agencies:
 - a. Field Exercise
 - Visit school and conduct an inspection with CPD and local assistance personnel. (Maximum of 5 local agency staff)
 - b. Post Field Exercise Review
 - Discussion of observations during the field exercise
 - Question and Answer

Appendix E
Prohibited and Restricted Chemical Lists
Criteria for Listing Chemicals on Lists
Suggested Regulatory Language for Adopting Lists

Criteria for Listing Chemicals as Prohibited or Restricted From Use in K-12 Schools

Prohibited Chemicals

Chemicals prohibited from purchase and use at a school.

- 1. NFPA Health Hazard Code of 4**
- 2. NFPA Flammable Hazard Code of 4**
- 3. NFPA Reactive Hazard Code of 2, 3 or 4**
- 4. Peroxide, peroxide forming**
- 5. Explosion hazard**
- 6. Contains arsenic, mercury, cadmium, cyanide, hydride, uranium**

Restricted Chemicals

Chemicals that may have use or quantity restrictions imposed. Limited quantities may be established for certain chemicals based on a showing of specific instructional need. Some chemicals may be restricted for class demonstrations with strict controls. All the chemicals listed as restricted will be subject to specific use, storage, or management procedures.

- 1. NFPA Health Hazard Code of 3 or 2**
- 2. NFPA Flammable Hazard Code of 3 or 2**
- 3. NFPA Reactive Hazard Code of 1**
- 4. Water reactive**
- 5. Oxidizers**
- 6. Chromium compounds**

Source of Information Regarding Chemicals Listed as Prohibited or Restricted

Chemicals were chosen from an Access database that is a compilation of information from a number of sources. The basic database was constructed with the CHEMIS database as the foundation. The CHEMIS database contains information on 757 chemicals. The list of chemicals in the CHEMIS database was increased by the addition of 285 chemicals listed as explosive, shock-sensitive, or water-reactive in a guidance document compiled by Ken Niswonger, senior chemist with the Colorado Department of Public Health and Environment. The lists of explosive, shock-sensitive, and water-reactive chemicals were compiled from a variety of information sources including standard chemical references and university chemical safety databases. The information on NFPA Hazard Codes from the CHEMIS database were augmented with information on individual chemicals from Material Safety Data Sheets (MSDS) from the Safety Information Resources, Inc. (SIRI) MSDS archive. The SIRI archive is affiliated with the University of Vermont and provides links to MSDSs from chemical manufacturers. Additional information on NFPA codes was compiled from the Michigan State University health and safety site.

NFPA HAZARD INDEX RATING CODES

Hazard Rating Index: Flammability

4	<p>Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or which are readily dispersed in air, and which will burn readily. This degree should include:</p> <ul style="list-style-type: none"> • Gases; • Cryogenic materials; • Any liquid or gaseous material which is a liquid while under pressure and have a flash point below 73°F (22.8°C) and having a boiling point below 100°F(37.8°C). (Class IA flammable liquids.) • Materials which on account of their physical form or environmental conditions can form explosive mixtures with air and which are readily dispersed in air, such as dusts of combustible solids and mists of flammable or combustible liquid droplets.
3	<p>Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. This degree should include:</p> <ul style="list-style-type: none"> • Liquids having a flash point below 73°F (22.8°C) and having a boiling point at or above 100°F (37.8°C) and those liquids having a flash point at or above 73°F (22.8°C) and below 100°F (37.8°C). (Class IB and Class IC flammable liquids); • Solid materials in the form of coarse dusts which may burn rapidly but which are generally do not form explosive atmospheres with air; • Solid materials in a fibrous or shredded form which may burn rapidly and create flash fire hazards, such as cotton, sisal and hemp; • Materials which burn with extreme rapidity, usually by reason of self-contained oxygen (e.g., dry nitrocellulose and <i>many organic peroxides</i>); • Materials that ignite spontaneously when exposed to air.
2	<p>Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres with air. This degree should include:</p> <ul style="list-style-type: none"> • Liquids having a flash point above 100°F (37.8°C), but not exceeding 200°F (93.4°F); • Solids and semisolids that readily give off flammable vapors.
1	<p>Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature condition, before ignition and combustion can occur. This degree should include:</p> <ul style="list-style-type: none"> • Materials which will burn in air when exposed to a temperature of 1500°F (815.5°C) for a period of 5 minutes or less; • Liquids, solids, and semisolids having a flash point above 200°F (93.4°C); • This degree includes most ordinary combustible materials.
0	<p>Materials that will not burn. This degree should include any material that will not burn in air when exposed to a</p>

temperature of 1500°F (815.5°C) for a period of 5 minutes.

Hazard Rating Index: Health

4	<p>Materials which upon very limited exposure could cause death or major residual injury even though prompt medical treatment is given, including those which are too dangerous to be approached without specialized protective equipment. This degree should include:</p> <ul style="list-style-type: none"> • Materials which can penetrate ordinary rubber protective clothing; • Materials that under normal conditions or under fire conditions give off gases that are extremely hazardous (i.e., toxic or corrosive) through inhalation or through contact with or absorption through the skin.
3	<p>Materials which upon short-term exposure could cause serious temporary or residual injury even though prompt medical treatment is given, including those requiring protection from all bodily contact. This degree should include:</p> <ul style="list-style-type: none"> • Materials giving off highly toxic combustion products; • Materials corrosive to living tissue or toxic by skin absorption.
2	<p>Materials which on intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical treatment is given, including those requiring use of respiratory protective equipment with independent air supply. This degree should include:</p> <ul style="list-style-type: none"> • Materials giving off toxic combustion products; • Materials giving off highly irritating combustion products; • Materials that either under normal conditions or under fire conditions give off toxic vapors lacking warning properties.
1	<p>Materials which on exposure would cause irritation but only minor residual injury even if no treatment is given, including those which require use of an approved canister type gas mask. This degree should include:</p> <ul style="list-style-type: none"> • Materials which under fire conditions would give off irritating combustion products • Materials that on the skin could cause irritation without destruction of tissue.
0	<p>Materials that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible material.</p>

Hazard Rating Index: Reactivity

4	Materials that are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperatures and pressures. This degree should include materials that are sensitive to mechanical or localized thermal shock at normal temperatures and pressures.
3	Materials that are capable of detonation or of explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation. This degree should include materials which are sensitive to thermal or mechanical shock at elevated temperatures and pressures or which react explosively with water without requiring heat or confinement.
2	Materials that are normally unstable and readily undergo violent chemical change but do not detonate. This degree should include materials which can undergo chemical change with rapid release of energy at normal temperatures and pressures or which can undergo violent chemical change at elevated temperatures and pressures. It should also include those materials which may react violently with water or which may form potentially explosive mixtures with water.
1	Materials which are normally stable, but which can become unstable at elevated temperatures and pressures or which may react with water with some release of energy but not violently.
0	Materials that are normally stable, even under fire exposure conditions, and which are not reactive with water.

Hazard Rating Index: Special Notice

OX	Denotes materials that are oxidizing agents. These compounds give up oxygen easily, remove hydrogen from other compounds, or attract negative electrons.
W	Denotes materials that are water-reactive. These compounds undergo rapid energy releases on contact with water.

PROHIBITED CHEMICAL LIST

Name	Formula	CAS Number	NFPA Hazard Index Code			
			Flammability	Health	Reactivity	Special
2-Butanol (sec-butyl alcohol)	C ₂ H ₅ CH(OH)CH ₃	78-92-2B	3	1	0	
Acetal			3	2	0	
Acetaldehyde	CH ₃ CHO	75-07-0	4	3	2	
Acetyl chloride	CH ₃ COCl	75-36-5	3	3	2	W
Acetyl nitrate						
Acrolein	CH ₂ CHCHO	107-02-8	3	4	3	
Acrylic acid	H ₂ C=CHCO ₂ H	79-10-7	2	2	2	
Acrylonitrile	CH ₂ CHCN	107-13-1	3	4	2	
Alcohols (allylic, benzylic)						
Alkyl-substituted cycloaliphatics						
Aluminum chloride, anhydrous	AlCl ₃	7446-70-0	0	3	2	W
Aluminum hydrophosphide						
Aluminum phosphide	AlP	20859-73-8	4	4	2	W
Amatol						
Ammonal						
Ammonium bromate						
Ammonium chlorate						
Ammonium dichromate	(NH ₄) ₂ Cr ₂ O ₇	7789-09-5A	1	4	3	OX
Ammonium hexanitrocobaltate						
Ammonium nitrate	NH ₄ NO ₃	6484-52-2	0	0	3	OX
Ammonium nitrite						
Ammonium perchlorate	NH ₄ ClO ₄	7790-98-9	0	1	4	OX
Ammonium periodate						
Ammonium permanganate			0	0	3	OX
Ammonium persulfate	(NH ₄) ₂ S ₂ O ₈	7727-54-0	0	2	3	OX
Ammonium tetraperoxychromate						
Antimony and antimony compounds						
Arsenic and arsenic compounds						
Azides						
Azidocarbonyl guanidine						
Barium	Ba		1	2	2	W
Barium chlorate	Ba(ClO ₃) ₂ ·H ₂ O	13477-00-4	0	2	1	OX
Barium oxide, anhydrous,	BaO	1304-28-5	0	3	2	
Barium peroxide	BaO ₂	1304-29-6	0	1	0	OX
Benzene	C ₆ H ₆	71-43-2	3	2	0	
Benzene diazonium chloride						
Benzotriazole	C ₆ H ₅ N ₃	95-14-7	1	2	0	

Benzoyl peroxide	(C6H5CO)2O2	94-36-0	4	1	4	OX
Benzyl alcohol	C6H5CH2OH	100-51-6	1	2	0	
Bismuth nitrate	Bi(NO3)3*5H2O	10035-06-0	0	1	3	OX
Borane, boranes, diboranes						
Boron tribromide			0	3	2	W
Boron trifluoride			0	4	1	
Bromine	Br2	7726-95-6A	0	4	0	OX
Bromine pentafluoride	BrF5	7789-30-2	0	4	3	W,OX
Bromine trifluoride			0	4	3	W,OX
Butadiene	C4H6	106-99-0	4	2	0	
Butanol (n-butyl alcohol)	CH3(CH2)3OH	71-36-3A	3	1	0	
Butenetroil trinitrate						
Cadmium and cadmium compounds						
Calcium carbide	CaC2	75-20-7	3	1	2	W
Calcium nitrate, anhydrous	Ca(NO3)2	10124-37-5	0	1	3	OX
Calcium permanganate	Ca(MnO4)2					
Carbon tetrachloride	CCl4	56-23-5	0	3	0	
Chloral hydrate	CCl3CH(OH)2	302-17-0				
Chlorine	Cl2	7782-50-5	0	4	0	OX
Chlorine dioxide	ClO2	10049-04-4				OX
Chlorine trifluoride			0	4	3	W,OX
Chlorine trioxide						
Chloroacetylene						
Chloroform	CHCl3	67-66-3	0	2	0	
Chloropicrin	CCl3NO2	76-06-2	0	4	3	
Chloroprene						
Chlorotrifluoroethylene						
Chromium (ic) chloride	CrCl3*6H2O	10060-12-5	0	1	2	
Chromium (powder)	Cr	7440-47-3	1	2	1	
Chromium oxide	Cr2O3	1308-38-9	0	4	3	OX
Chromyl chloride	CrO2Cl2	14977-61-8	0	3	2	W
Cobalt (powder)	Co	7440-48-4				
Colchicine	C22H25NO6	64-86-8	1	4	0	
Collodion	C25H33O13(NO3)7	9004-70-0	4	1	0	
Copper acetylide						
Cumene	C6H5CH(CH3)2	98-82-8	3	2	1	
Cycloheptanone	C7H12O	502-42-1	3	2		
Cyclohexanol	C6H11OH	108-93-0	2	2	1	
Cyclohexanone			2	1	0	
Cyclohexene	C6H10	110-83-8	3	1	0	
Cyclopentanone			3	2	0	
Cyclopentene			3	1	1	
Diacetylene						
Diazoethane						
Diazodinitrophenol						

Diazomethane	CH ₂ N ₂	334-88-3				
Dicyclopentadiene	C ₁₀ H ₁₂	77-73-6	3	1	1	
Diethyl ether	(C ₂ H ₅) ₂ O	60-29-7B	4	2	1	
Diethylene glycol dimethyl ether (diglyme)	(CH ₃ OCH ₂ CH ₂) ₂ O	111-96-6	2	1	1	
Diisopropyl ether	C ₆ H ₁₄ O	108-20-3	3	2	1	
Dinitrophenol	C ₆ H ₃ OH(NO ₂) ₂	51-28-5				
Dinitrophenylhydrazine	C ₆ H ₆ N ₄ O ₄	119-26-6	2	1	2	
Dioxane	C ₄ H ₈ O ₂	123-91-1	3	2	1	
Dipentaerythritol hexanitrate						
Disulfur dinitride						
Divinyl acetylene			3		3	
Divinyl ether			4	2	2	
Ethyl ether	(C ₂ H ₅) ₂ O	60-29-7A	4	1	1	
Ethyl nitrite			4	3	4	
Ethylene glycol dimethyl ether (glyme)			2	1	0	
Ethylene glycol dinitrate	C ₂ H ₄ N ₂ O ₆	628-96-6				
Ethylene oxide	C ₂ H ₄ O	75-21-8	4	3	3	
Formaldehyde	CH ₂ O	50-00-0A	2	3	0	
Furan			4	1	1	
Glycol dinitrate	C ₂ H ₄ N ₂ O ₆	628-96-6				
Glycol monolactate trinitrate						
Grignard reagents (ether solvents)						
Guanyl nitrosaminoguanyl hydrazine						
Hexyl alcohol	CH ₃ (CH ₂) ₄ CH ₂ OH	111-27-3	2	1	0	
HMX				3	4	
Hydrazoic acid						
Hydrides, borohydrides						
Hydrofluoric acid	HF	7664-39-3	0	4	0	
Hydrogen	H ₂	1333-74-0	4	0	0	
Hydrogen peroxide (>30%)	H ₂ O ₂	7722-84-1	0	3	1	OX
Hydrogen sulfide	H ₂ S	7783-06-4	4	4	0	
Isopropyl ether			3	1	1	
Lead arsenate	Pb ₃ (AsO ₄) ₂	7784-40-9	0	2	0	
Lead dinitride (azide)	Pb ₃ (N ₃) ₂	13424-46-9				
Lead dinitrorescorcinat (styphnat)			4	3	4	
Lead dioxide, brown	PbO ₂	1309-60-0A	0	3	3	OX
Lead mononitrorescorcinat						
Lithium	Li	7439-93-2	1	1	2	W
Lithium nitrate	LiNO ₃	7790-69-4	0	2	3	OX
Lithium nitride						
Lithium peroxide						

Magnesium (except Mg ribbon)	Mg	7439-95-4	1	0	2	W
Magnesium peroxide						
Mannitol hexanitrate						
Mercury and mercury compounds (except in sealed devices)						
Methyl acetylene	C ₃ H ₄	74-99-7	4	2	2	
Methyl cyclopentane	C ₆ H ₁₂	96-37-7	3	2	0	
Methyl isobutyl ketone (MIBK)	CH ₃ COCH ₂ CH(CH ₃) ₂	108-10-1	3	2	1	
Methyl isocyanate	CH ₃ NCO	624-83-9	3	4	2	W
Methyl methacrylate, monomer	C ₅ H ₈ O ₂	80-62-6	3	2	2	
M-trinitrocresol						
Nessler's reagent (mercury compound)	Hg+KI+NaOH	NA26				
Nicotine	C ₁₀ H ₁₄ N ₂	54-11-5	1	4	0	
Nitroglycerin			2	2	4	
Nitrosoguanidine						
Osmic acid	OsO ₄	20816-12-0B	0	4	0	
Osmium tetroxide	OsO ₄	20816-12-0A	0	4	0	
O-toluidine	C ₇ H ₉ N	95-53-4	3	2	0	
Pentaerythritol tetranitrate (PETN)		78-11-5				
Pentane	C ₅ H ₁₂	109-66-0	4	1	0	
Perchloric acid	HClO ₄	7601-90-3	0	3	3	OX
Phenol	C ₆ H ₆ O	108-95-2	2	4	0	
Phenyl thiourea	C ₇ H ₈ N ₂ S	103-85-5A	0	4	0	
Phosphorus and phosphorus compounds (excepting phosphates)						
Phthalic anhydride	C ₈ H ₄ O ₃	85-44-9	1	3	2	
Picrates, picramide, picryl compounds.						
Picric acid	C ₆ H ₃ N ₃ O ₇	88-89-1	4	3	4	
P-nitrophenol	NO ₂ C ₆ H ₄ OH	100-02-7	1	3	2	
Polyvinyl nitrate						
Potassium	K	7440-09-7	1	3	2	W
Potassium amide						
Potassium chlorate	KClO ₃	3811-04-9	0	2	0	OX
Potassium cyanide	KCN	151-50-8	0	3	0	
Potassium dinitrobenzofuroxan						
Potassium nitrite	KNO ₂	7758-09-0	0	2	3	OX
Potassium perchlorate	KClO ₄	7778-74-7	0	1	2	
Potassium periodate	KIO ₄	7790-21-8	0	2	3	OX

Potassium peroxide	KO2	12030-88-5	0	3	3	
Potassium superoxide	KO2	12030-88-5	0	3	3	
RDX		121-82-4				
Sec-butyl alcohol(2-butanol)	C4H10O	78-92-2A	3	1	0	
Silanes, chlorosilanes						
Silicon tetrachloride			0	3	2	W
Silver acetylde						
Silver cyanide	AgCN	506-64-9	0	3	1	
Silver dinitrorescorcinat (styphnate)						
Silver fulminate (cyanate)	AgOCN	3315-16-0	0	1	0	
Silver nitride						
Silver oxalate						
Silver oxide	Ag2O	20667-12-3	1	1	2	OX
Silver tetrazene						
Sodamide	H2NNa	7782-92-5	3	2	2	W
Sodium amide	H2NNa	7782-92-5	3	2	2	W
Sodium arsenate	Na3AsO4*12H2O	7778-43-0	0	3	0	
Sodium arsenite	NaAsO2	7784-46-5	0	3	0	
Sodium chlorate	NaClO3	7775-09-9	0	1	2	OX
Sodium chlorite			0	1	1	OX
Sodium cyanide	NaCN	143-33-9	0	3	1	
Sodium dithionite	Na2S2O4	7775-14-6A	1	3	2	W
Sodium hydrosulfite	Na2S2O4*2H2O	7775-14-6B	1	2	2	
Sodium methylate	CH3ONa	124-41-4	3	3	2	W
Sodium perborate	UNDEFINED	7632-04-4	0	3	0	
Sodium perchlorate			0	2	2	W,OX
Sodium permanganate	NaMnO4	10101-50-5	1	2	2	OX
Sodium peroxide	Na2O2	1313-60-6	0	3	2	W,OX
Strontium perchlorate		13450-97-0				
Styrene monomer	C8H8	100-42-5	3	2	2	
Sulfur trioxide	SO3	7446-11-9	0	3	2	W
Sulfuryl chloride (sulfonyl)	Cl2O2S	7791-25-5	0	3	2	W
Sulfuryl chloride fluoride	ClFO2S	13637-84-8	1	3	2	W
T-butyl hypochlorite						
Tetrafluoroethylene			4	2	3	
Tetrahydrofuran	C4H8O	109-99-9	3	2	1	
Tetrahydronaphthalene	C10H12	119-64-2	2	1	0	
Tetranitromethane		509-14-8				
Tetraselenium tetranitride						
Tetrazene						
Tetryl		479-45-8	2	2	4	
Thallium nitride						
Thermit	Fe2O3 + Al	69012-31-3	0	0	0	
Thermite igniting mixture	Al	Unknown	1	0	1	
Thiocarbonyl tetrachloride	CCl4S	594-42-3	0	3	2	

Thionyl chloride	SOCl ₂	7719-09-7	0	4	2	W
Titanium (powder)	Ti	7440-32-6	1	1	2	
Titanium tetrachloride			0	3	2	
Triethyl aluminum		97-93-8				
Triethyl arsine						
Triisobutyl aluminum		100-99-2				
Trimethyl aluminum		75-24-1				
Trinitroanisole						
Trinitrobenzene			4	2	4	
Trinitrobenzoic acid						
Trinitronaphthalene						
Trinitroresorcinol						
Trinitrotoluene	C ₇ H ₅ N ₃ O ₆	118-96-7	4	2	4	
Trisilyl arsine						
Uranium compounds						
Uranyl acetate	UO ₂ (C ₂ H ₃ O ₂) ₂	541-09-3	0	0	0	
Uranyl nitrate	UO ₂ (NO ₃) ₂ ·6H ₂ O	10102-06-4	0	1	0	
Urea nitrate						
Vinyl acetate	C ₄ H ₆ O ₂	108-05-4	3	2	2	
Vinyl acetylene			4	2	3	
Vinyl chloride	C ₂ H ₃ Cl	75-01-4	4	2	2	
Vinyl ethers			4	2	2	
Vinylidene chloride (1,1-DCE)	C ₂ H ₂ Cl ₂	75-35-4	4	2	2	
Wright's stain (Hg containing)	UNDEFINED	68988-92-1	3	0	0	
Zinc peroxide						

RESTRICTED CHEMICAL LIST

Name	Formula	CAS Number	NFPA Hazard Index Code			
			Flammability	Health	Reactivity	Special
Acetamide	CH3CONH2	60-35-5	1	3	1	
Acetanilide	CH3CONHC6H5	103-84-4	1	3	0	
Acetic acid	CH3COOH	64-19-7A	2	2	1	
Acetic anhydride	(CH3CO)2O	108-24-7	2	3	1	W
Acetone	CH3COCH3	67-64-1	3	1	0	
Acetyl halides						
Acetylcholine bromide	CH3CO2C2H4N(CH3)3Br	66-23-9	0	2	0	
Acridine orange	UNDEFINED	10127-02-3	0	2	0	
Adipoyl chloride	ClOC(CH2)4COCl	111-50-2	2	2	0	
Alizarin red	UNDEFINED	130-22-3	1	2	0	
Alkyl aluminum chloride						
Aluminum	Al	7429-90-5	1	0	1	
Aluminum acetate	Al(C2H3O2)2OH	142-03-0	0	1	1	
Aluminum bromide	AlBr3	7727-15-3	1	3	1	
Aluminum chloride, hydrate	ALCL3*6H2O	7784-13-6	0	3	0	
Aluminum fluoride	AlF3	7784-18-1	0	2	0	
Aluminum hydroxide	Al(OH)3*3H2O	21645-51-2	0	1	1	
Aluminum nitrate	Al(NO3)3*9H2O	7784-27-2	0	1	0	OX
Aluminum tetrahydroborate						
Ammonia, anhydrous	NH3	7664-41-7	1	3	0	
Ammonia, liquid	NH3	1336-21-6A	1	3	0	
Ammonium acetate	NH4C2H3O2	631-61-8	1	1	1	
Ammonium bicarbonate	NH4HCO3	1066-33-7A	0	1	1	
Ammonium bichromate	(NH4)2Cr2O7	7789-09-5B	1	1	1	OX
Ammonium bromide	NH4Br	12124-97-9	0	2	0	
Ammonium carbonate	NH4CO3	10361-29-2	0	2	2	
Ammonium chloride	NH4Cl	12125-02-9	0	2	0	
Ammonium chromate	(NH4)2CrO4	7788-98-9	1	1	1	OX
Ammonium fluoride	NH4F	12125-01-8	0	3	0	
Ammonium hydroxide	NH4OH	1336-21-6B	1	3	0	
Ammonium iodide	NH4I	12027-06-4	0	2	1	
Ammonium molybdate	(NH4)6Mo7O24*4H2O	12054-85-2	0	2	1	
Ammonium oxalate	(NH4)2C2O4*H2O	6009-70-7	0	3	1	
Ammonium phosphate, dibasic	(NH4)2H2PO4	7783-28-0	0	2	1	
Ammonium phosphate, monobasic	NH4H2PO4	7722-76-1	0	2	0	
Ammonium sulfate	(NH4)2SO4	7783-20-2	0	3	0	
Ammonium sulfide	(NH4)2S*H2O	12135-76-1	3	3	0	
Ammonium tartrate	(NH4)2C4H4O6	3164-29-2	0	2	0	
Ammonium thiocyanate	NH4SCN	1762-95-4	1	2	1	
Amyl acetate	CH3COOC5H11	628-63-7	3	1	0	
Amyl alcohol(n)	CH3(CH2)3CH2OH	71-41-0A	3	1	0	
Aniline	C6H5NH2	62-53-3	2	3	0	
Aniline hydrochloride	C6H5NH2*HCL	142-04-1	1	3		
Anisoyl chloride	C8H7ClO2	100-07-2	2	3	0	
Barium acetate	Ba(C2H3O2)H2O	543-80-6	0	2	0	
Barium carbide						

Barium chloride, hydrate	BaCl ₂ *2H ₂ O	10326-27-9	0	3	0	
Barium nitrate	Ba(NO ₃) ₂	10022-31-8	0	1	0	OX
Benzaldehyde	C ₆ H ₅ CHO	100-52-7	2	2	0	
Benzene phosphorus dichloride						
Benzoic acid	C ₆ H ₅ COOH	65-85-0	1	2		
Benzyl chloride	C ₆ H ₅ CH ₂ Cl	100-44-7	2	3	1	
Benzyl sodium						
Benzylamine	C ₆ H ₅ CH ₂ NH ₂	100-46-9	2	3	0	
Beryllium tetrahydroborate						
Biphenyl (diphenyl)	C ₆ H ₅ C ₆ H ₅	92-52-4	1	2	0	
Bismuth pentafluoride	BiF ₅	7787-62-4	0	1	0	
Boric acid	H ₃ BO ₃	10043-35-3	0	2	0	
Boron bromodiodide						
Boron dibromiodide						
Boron phosphide						
Boron trichloride						
Bromine monofluoride						
Bromine water	Br ₂ + H ₂ O	7726-95-6B				OX
Bromobenzene	C ₆ H ₅ Br	108-86-1	2	2	0	
Bromodiethylaluminum						
Bromoform	CHBr ₃	75-25-2	0	3	0	
Butyric acid	CH ₃ CH ₂ CH ₂ COH	107-92-6	2	3	0	
Calcium (100 g limit)	Ca	7440-70-2	1	3	2	W
Calcium bromide	CaBr ₂	7789-41-5	0	1	1	
Calcium hypochlorite	Ca(OCl) ₂	7778-54-3	0	3	1	OX
Calcium nitrate tetrahydrate	Ca(NO ₃) ₂ *4H ₂ O	13477-34-4	0	2	1	OX
Calcium phosphide						
Camphor	C ₁₀ H ₁₆ O	21368-68-3	2	0	0	
Carbon disulfide (bi)	CS ₂	75-15-0	3	2	0	
Ceric (iv) sulfate	Ce(SO ₄) ₂ *4H ₂ O	13590-82-4	0	3	0	OX
Cesium amide						
Cesium phosphide						
Chlorine monofluoride						
Chlorine pentafluoride						
Chloroacetic acid	C ₂ H ₃ ClO ₂	79-11-8B	1	3	0	
Chloroacetyl chloride	C ₂ H ₂ Cl ₂ O/ClCH ₂ COCl	79-04-9	0	3	1	
Chlorobenzene	C ₆ H ₅ Cl	108-90-7	3	2	0	
Chlorodiisobutyl aluminum						
Chlorophenyl isocyanate	C ₇ H ₄ CINO	3320-83-0				
Chromic acid	CrO ₃	1333-82-0A	0	3	1	OX
Chromium (ic) nitrate	Cr(NO ₃) ₃ *9H ₂ O	7789-02-8	0	3	1	OX
Chromium sulfate	Cr ₂ (SO ₄) ₃ *nH ₂ O	10101-53-8	0	2	0	
Chromium trioxide	CrO ₃	1333-82-0B	0	3	1	
Cobalt (ous) nitrate	Co(NO ₃) ₂ *6H ₂ O	10026-22-9	0	2	0	OX
Cupric bromide, anhydrous	CuBr ₂	7789-45-9A	0	2	0	
Cyclohexane	CH ₂ (CH ₂) ₄ CH ₂	110-82-7	3	1	0	
Dichlorobenzene	C ₆ H ₄ Cl ₂	106-46-7B	2	2	0	
Dichloroethane	C ₂ H ₄ Cl ₂	107-06-2B	3	2	0	
Dichloromethane	CH ₂ Cl ₂	75-09-2A	1	2	0	
Diethyl aluminum chloride	C ₄ H ₁₀ AlCl	96-10-6				

Diethyl zinc	C4H10Zn	557-20-0				
Diisopropyl beryllium						
Dimethyl magnesium						
Diphenyl diisocyanate						
Diphenylamine	(C6H5)2NH	122-39-4	1	3	0	
Ethanol	C2H5OH	64-17-5B	3	0	0	
Ethyl acetate	CH3COOC2H5	141-78-6	3	1	0	
Ethyl alcohol	C2H5OH	64-17-5A	3	0	0	
Ethyl methacrylate	CH2CCH3COOC2H5	97-63-2	3	2	0	
Ethylene dichloride	C2H4Cl2	107-06-2A	3	2	0	
Ethylenediamine	NH2CH2CH2NH2	107-15-3	2	3	0	
Faa solution	UNDEFINED	NA14	3	2	0	
Fehlings solution a	UNDEFINED	7758-99-8C	0	3	1	
Fehlings solution b	UNDEFINED	NA15	0	3	1	
Ferric chloride, anhydrous	FeCl3	7705-08-0	0	3	1	
Ferric nitrate	Fe(NO3)3*9H2O	7782-61-8	0	1	1	OX
Fluorine monoxide						
Fluorosulfonic acid						
Formalin	CH2O	50-00-0B	2	2	0	
Formic acid	HCOOH	64-18-6	2	3	0	
Gasoline	UNDEFINED	8006-61-9	3	1	0	
Glutaraldehyde	OCH(CH3)3CHO	111-30-8	0	3	1	
Gold acetylde						
Hematoxylin	C16H14O6*3H2O	517-28-2	0	1	1	
Heptane, n-	CH3(CH2)5CH3	142-82-5	3	1	0	
Hexamethylene diisocyanate	C8H12N2O2	822-06-0	2	1	0	W
Hexamethylenediamine	H2N(CH2)6NH2	124-09-4	2	3	0	
Hexane, n-	CH3(CH2)4CH3	110-54-3	3	1	0	
Hydriodic acid	HI	10034-85-2	0	3	0	
Hydrobromic acid	HBr	10035-10-6	0	3	0	
Hydrochloric acid	HCl	7647-01-0	0	3	0	
Hydrogen peroxide (10%)	H2O2		0	3	1	OX
Hydroquinone	C6H4(OH)2	123-31-9	1	2	0	
Hydroxylamine hydrochloride	NH2OH*HCl	5470-11-1	1	3	1	
Iodine	I2	7553-56-2B	0	3	1	OX
Iodine monochloride	ICl	7790-99-0	0	3	1	
Iron	Fe	7439-89-6	1	3	1	
Isoamyl alcohol	(CH3)2CHCH2CH2OH	123-51-3A	2	1	0	
Isobutyl alcohol	(CH3)2CHCH2OH	78-83-1	3	1	0	
Isopentyl alcohol	(CH3)2CHCH2CH2OH	123-51-36	3	1	0	
Isopropyl alcohol	(CH3)2CHOH	67-63-0	3	1	0	
Kerosene	UNDEFINED	8008-20-6	2	0	0	
Lead nitrate	Pb(NO3)2	10099-74-8	0	1	0	OX
Lead oxide, red	Pb3O4	1314-41-6	1	3	1	OX
Lead peroxide (di)	PbO2	1309-60-0B	0	3	1	OX
Lithium amide						
Lithium bromide	LiBr	7550-35-8	0	2	0	
Lithium ferrosilicon						
Lithium silicon						
Lithium sulfete	Li2SO4*H2O	10102-25-7	0	2	0	

Lye	NaOH	1310-73-2B	0	3	1	
Magnesium (ribbon)	Mg	7439-95-4	1	0	2	W
Magnesium nitrate	Mg(NO3)2*6H2O	13446-18-9	0	1	0	OX
Manganese carbonate	MnCO3	598-62-9	0	0	1	
Manganese dioxide	MnO2	1313-13-9A	0	2	1	OX
Manganese nitrate (ous)	Mn(NO3)2*6H2O	10377-66-9	0	3	0	OX
Manganese oxide	MnO2	1313-13-9B	0	1	0	
Methyl alcohol	CH3OH	67-56-1	3	1	0	
Methyl aluminum sesquibromide	C3H9Al2Br3					
Methyl aluminum sesquichloride	C3H9Al2Cl3	12542-85-7				
Methyl ethyl ketone	CH3COC2H5	78-93-3B	3	1	0	
Methyl magnesium bromide	CH3BrMg	75-16-1				
Methyl magnesium chloride	CH3ClMg	676-58-4				
Methyl magnesium iodide						
Methylene chloride	CH2CL2	75-09-2B	1	2	0	
Naphthalene	C10H8	91-20-3	2	2	0	
Napthol-1 (a)	C10H7OH	90-15-3	1	3	1	
N-butyl alcohol	C6H10O	71-36-3B	3	1	0	
N-butyl lithium						
Nickel antimonide						
Nickel(ii) nitrate	Ni(NO3)2*6H2O	13478-00-7	0	2	1	
Nickel(ii) sulfate	NiSO4*6H2O	10101-97-0	0	2	0	
Nitric acid	HNO3	7697-37-2	0	3	0	OX
Nitrobenzene	C6H5NO2	98-95-3	2	3	1	
Nitrogen	N2	7727-37-9	0	3	0	
Octyl alcohol	CH3(CH2)6CH2OH	111-87-5	2	1	0	
O-dichlorobenzene	C6H4Cl2	95-50-1	2	2	0	
Oxalic acid, hydrate	H2C2O4*2H2O	6153-56-6	1	2	0	
Oxygen	O2	7782-44-7	0	3	0	OX
P-dichlorobenzene	C6H4Cl2	106-46-7	2	2	0	
Pentyl alcohol (amyl)	CH3(CH2)4OH	71-41-0B	3	1	0	
Petroleum ether (500 ml limit)	UNDEFINED	8032-32-4	4	1	0	
Phosphoric acid	H3PO4	7664-38-2	0	3	0	
Phthalic acid	C6H4(COOH)2	88-99-3	1	0	1	
Polyphenyl polymethyl isouanta						
Polyvinyl alcohol	CH2CH(OH)	9002-89-5	2	0	0	
Potassium bromate	KBrO3	7758-01-2	0	2	0	OX
Potassium chromate	K2CrO4	7789-00-6B	0	3	1	OX
Potassium dichromate	K2Cr2O7	7778-50-9	1	3	1	OX
Potassium ferricyanide	K3Fe(CN)6	13746-66-2	0	1	1	
Potassium ferrocyanide	K4Fe(CN)6*3H2O	14459-95-1	0	1	1	
Potassium hydroxide	KOH	1310-58-3	0	3	1	
Potassium iodate	KIO3	7758-05-6	0	1	1	OX
Potassium nitrate	KNO3	7757-79-1	0	1	0	OX
Potassium permanganate	KMnO4	7722-64-7	0	1	0	OX
Potassium persulfate	K2S2O8	7727-21-1	0	1	0	OX
Potassium sulfide	K2S	1312-73-8	1	3	0	
Propane	CH3CH2CH3	74-98-6	4	1	0	

Propionic acid	C3H6O2	79-09-4	2	2	0	
Propyl alcohol	C3H8O	71-23-8	3	1	0	
Pyridine	C5H5N	110-86-1	3	3	0	
Pyrosulfuryl chloride						
Silver nitrate	AgNO3	7761-88-8	0	1	0	OX
Silver sulfate	Ag2SO4	10294-26-5	0	2	0	
Sodium (100 g limit)	Na	7440-23-5	3	3	2	W
Sodium bisulfite	NaHSO3	7631-90-5	0	1	1	
Sodium chromate	Na2CrO4	7775-11-3	0	3	1	OX
Sodium cobaltinitrite	Na3Co(NO2)6	13600-98-1	0	2	0	OX
Sodium dichromate, hydrate	Na2Cr2O7*2H2O	7789-12-0	0	1	1	
Sodium fluoride	NaF	7681-49-4	0	3	0	
Sodium hydroxide	NaOH	1310-73-2A	0	3	1	
Sodium hypochlorite	NaClO	7681-52-9	0	2	1	
Sodium iodate	NaIO3	7681-55-2	0	1	1	OX
Sodium iodide	NaI	7681-82-5	0	2	1	
Sodium meta-bisulfite	Na2S2O5	7681-57-4B	0	3	1	
Sodium nitrate	NaNO3	7631-99-4	0	1	1	OX
Sodium nitrite	NaNO2	7632-00-0	0	2	1	OX
Sodium phosphate, tribasic	Na3PO4*12H2O	7601-54-9A	0	2	1	
Sodium sulfide	Na2S*9H2O	1313-84-4	1	3	1	
Sodium thiocyanate	NaSCN	540-72-7	0	3	1	
Sodium thiosulfate	Na2S2O3*5H2O	10102-17-7	0	0	1	
Stannic chloride	SnCl4	7646-78-8	0	3	1	
Strontium nitrate	Sr(NO3)2	10042-76-9	0	1	0	OX
Sulfur chloride	Cl2S2	10025-67-9	1	2	1	
Sulfur pentafluoride						
Sulfuric acid (≤10%)	H2SO4	7664-93-9	0	3	0	
Sulfuric acid (>10%) (2.5 l limit)	H2SO4	7664-93-9	0	3	2	W
t-Butanol	(CH3)3COH	75-65-0	3	1	0	
Terpineol	C10H17OH	98-55-5	2	0	0	
Thiophosphoryl chloride	Cl3SP	3982-91-0	0	3	0	
Tin	Sn	7440-31-5	1	1	1	
Toluene	C7H8	108-88-3	3	2	0	
Toluene diisocyanate	C9H6N2O2	584-84-9	1	3	1	
Toluidine blue	CH3C6H4NH2	95-53-4	2	3	0	
Trichloroethane-1,1,1	C2H3Cl3	71-55-6	1	3	1	
Trichloroethylene	C2HCl3	79-01-6	1	2	0	
Triethanolamine	C6H15NO3	102-71-6	1	2	1	
Triethyl stibine						
Trimethylpentane 2,2,4	C8H18	540-84-1	3	0	0	
Tri-n-butyl aluminum						
Trioctyl aluminum						
Triphenyl tetrazolium chloride	C19H15N4Cl	298-96-4	1	2	1	
Tripnonyl stibine						
Trisilyl arsine						
Trisodium phosphate	Na3H3PO4	7601-54-9B	0	2	1	
Trivinyl stibine						
Tungsten	W	7440-33-7	2	1	1	

Turpentine	C10H16	8006-64-2	3	1	0	
Vanadium trichloride	VC13	7718-98-1				
Xylene	C8H10	1330-20-7	3	2	0	
Zinc (powder)	Zn	7440-66-6	1	1	1	W
Zinc acetylde						
Zinc nitrate (500 g limit)	Zn(NO3)2*6H2O	10196-18-6	1	1	2	OX
Zinc phosphide	Zn3P2	1314-84-7	3	3	1	

PROPOSED REGULATIONS

CHAPTER EIGHT - LABORATORY, INDUSTRIAL, ART,

AND VOCATIONAL HAZARDS

GENERAL

ADD A NEW SUBPART AS FOLLOWS:

PROHIBITED CHEMICALS

8-150 DEFINITIONS:

- 1: PROHIBITED CHEMICALS ARE THOSE HAZARDOUS CHEMICALS LISTED IN APPENDIX A TO THIS REGULATION.
 1. RESTRICTED CHEMICALS ARE THOSE CHEMICALS LISTED IN APPENDIX B TO THIS REGULATION.
 2. REGULATED MIXTURES ARE THOSE MIXTURES OF CHEMICAL MATERIALS CONTAINING A PROHIBITED CHEMICAL IN AN AMOUNT GREATER THAN 5 PERCENT BY WEIGHT.
 3. MOTOR FUEL AND MAINTENANCE FLUIDS ARE THOSE ITEMS SUCH AS GASOLINE AND MOTOR OIL UTILIZED AWAY FROM STUDENT INSTRUCTIONAL AREAS FOR THE MAINTENANCE OF THE SCHOOL FACILITIES OR GROUNDS.
 4. HEATING FUELS ARE THOSE ITEMS SUCH AS FUEL OIL AND PROPANE USED FOR GENERAL HEATING OF THE SCHOOL AND RELATED FACILITIES.

8-151 ALL PROHIBITED CHEMICALS AND REGULATED MIXTURES ARE BARRED FROM ANY AREA OF A SCHOOL USED FOR STUDENT INSTRUCTION INCLUDING STORE ROOMS AND OTHER AREAS ADJACENT TO AREAS USED FOR STUDENT INSTRUCTION EXCEPT AS PROVIDED BELOW.

8-152 RESTRICTED CHEMICALS ARE NOT ALLOWED IN ANY AREA OF A SCHOOL USED FOR STUDENT INSTRUCTION, INCLUDING STORE ROOMS AND OTHER AREAS ADJACENT TO AREAS USED FOR STUDENT INSTRUCTION, UNLESS SPECIFICALLY REQUIRED FOR A COURSE OF STUDY OR DEMONSTRATION DESCRIBED IN THE CURRICULUM FOR THE COURSE. UNLESS A SPECIFIC QUANTITY LIMIT IS PROVIDED IN APPENDIX B, RESTRICTED CHEMICALS MAY ONLY BE PRESENT IN A STORAGE LOCATION IN AN AMOUNT NOT EXCEEDING THE MINIMUM NECESSARY FOR THE COURSE OF STUDY OR DEMONSTRATION BEING CONDUCTED ON THAT DAY. THE APPROPRIATE HEALTH AND SAFETY PLAN SHALL ITEMIZE THE RESTRICTED CHEMICALS PRESENT, LIST THE QUANTITIES PRESENT AND DESCRIBE THE CONDITIONS OF SAFE STORAGE, USE AND DISPOSAL.

8-153 MOTOR FUELS AND MAINTENANCE FLUIDS MAY BE PRESENT IN STUDENT INSTRUCTION AREAS IF DIRECTLY USED IN A COURSE OF STUDY BEING CONDUCTED IN THAT AREA ON THAT DAY. LONG-TERM STORAGE OR STORAGE IN QUANTITIES IN EXCESS OF THAT AMOUNT NEEDED FOR THAT DAY'S ACTIVITIES IS NOT ALLOWED.

8-154 HEATING FUELS, SUCH AS PROPANE, MAY BE PRESENT IN STUDENT INSTRUCTION AREAS IF DIRECTLY USED IN A COURSE OF STUDY BEING CONDUCTED IN THAT AREA ON THAT DAY. LONG-TERM STORAGE OR STORAGE IN QUANTITIES IN EXCESS OF THAT AMOUNT NEEDED FOR THAT DAY'S ACTIVITIES IS NOT ALLOWED.

APPENDIX A - TABLE OF PROHIBITED CHEMICALS

Name	Formula	CAS Number	NFPA Hazard Index Code			
			Flammability	Health	Reactivity	Special
2-Butanol (sec-butyl alcohol)	C ₂ H ₅ CH(OH)CH ₃	78-92-2B	3	1	0	
Acetal			3	2	0	
Acetaldehyde	CH ₃ CHO	75-07-0	4	3	2	
Acetyl chloride	CH ₃ COCl	75-36-5	3	3	2	W
Acetyl nitrate						
Acrolein	CH ₂ CHCHO	107-02-8	3	4	3	
Acrylic acid	H ₂ CCHCO ₂ H	79-10-7	2	2	2	
Acrylonitrile	CH ₂ CHCN	107-13-1	3	4	2	
Alcohols (allylic, benzylic)						
Alkyl-substituted cycloaliphatics						
Aluminum chloride, anhydrous	AlCl ₃	7446-70-0	0	3	2	W
Aluminum hydrophosphide						
Aluminum phosphide	AlP	20859-73-8	4	4	2	W
Amatol						
Ammonal						
Ammonium bromate						
Ammonium chlorate						
Ammonium dichromate	(NH ₄) ₂ Cr ₂ O ₇	7789-09-5A	1	4	3	OX
Ammonium hexanitrocobaltate						
Ammonium nitrate	NH ₄ NO ₃	6484-52-2	0	0	3	OX
Ammonium nitrite						
Ammonium perchlorate	NH ₄ ClO ₄	7790-98-9	0	1	4	OX
Ammonium periodate						
Ammonium permanganate			0	0	3	OX
Ammonium persulfate	(NH ₄) ₂ S ₂ O ₈	7727-54-0	0	2	3	OX
Ammonium tetraperoxychromate						
Antimony and antimony compounds						
Arsenic and arsenic compounds						
Azides						
Azidocarbonyl guanidine						
Barium	Ba		1	2	2	W
Barium chlorate	Ba(ClO ₃) ₂ ·H ₂ O	13477-00-4	0	2	1	OX
Barium oxide, anhydrous,	BaO	1304-28-5	0	3	2	
Barium peroxide	BaO ₂	1304-29-6	0	1	0	OX
Benzene	C ₆ H ₆	71-43-2	3	2	0	
Benzene diazonium chloride						
Benzotriazole	C ₆ H ₅ N ₃	95-14-7	1	2	0	

Benzoyl peroxide	(C ₆ H ₅ CO) ₂ O ₂	94-36-0	4	1	4	OX
Benzyl alcohol	C ₆ H ₅ CH ₂ OH	100-51-6	1	2	0	
Bismuth nitrate	Bi(NO ₃) ₃ *5H ₂ O	10035-06-0	0	1	3	OX
Borane, boranes, diboranes						
Boron tribromide			0	3	2	W
Boron trifluoride			0	4	1	
Bromine	Br ₂	7726-95-6A	0	4	0	OX
Bromine pentafluoride	BrF ₅	7789-30-2	0	4	3	W,OX
Bromine trifluoride			0	4	3	W,OX
Butadiene	C ₄ H ₆	106-99-0	4	2	0	
Butanol (n-butyl alcohol)	CH ₃ (CH ₂) ₃ OH	71-36-3A	3	1	0	
Butenetroil trinitrate						
Cadmium and cadmium compounds						
Calcium carbide	CaC ₂	75-20-7	3	1	2	W
Calcium nitrate, anhydrous	Ca(NO ₃) ₂	10124-37-5	0	1	3	OX
Calcium permanganate	Ca(MnO ₄) ₂					
Carbon tetrachloride	CCl ₄	56-23-5	0	3	0	
Chloral hydrate	CCl ₃ CH(OH) ₂	302-17-0				
Chlorine	Cl ₂	7782-50-5	0	4	0	OX
Chlorine dioxide	ClO ₂	10049-04-4				OX
Chlorine trifluoride			0	4	3	W,OX
Chlorine trioxide						
Chloroacetylene						
Chloroform	CHCl ₃	67-66-3	0	2	0	
Chloropicrin	CCl ₃ NO ₂	76-06-2	0	4	3	
Chloroprene						
Chlorotrifluoroethylene						
Chromium (ic) chloride	CrCl ₃ *6H ₂ O	10060-12-5	0	1	2	
Chromium (powder)	Cr	7440-47-3	1	2	1	
Chromium oxide	Cr ₂ O ₃	1308-38-9	0	4	3	OX
Chromyl chloride	CrO ₂ Cl ₂	14977-61-8	0	3	2	W
Cobalt (powder)	Co	7440-48-4				
Colchicine	C ₂₂ H ₂₅ NO ₆	64-86-8	1	4	0	
Collodion	C ₂₅ H ₃₃ O ₁₃ (NO ₃) ₇	9004-70-0	4	1	0	
Copper acetylide						
Cumene	C ₆ H ₅ CH(CH ₃) ₂	98-82-8	3	2	1	
Cycloheptanone	C ₇ H ₁₂ O	502-42-1	3	2		
Cyclohexanol	C ₆ H ₁₁ OH	108-93-0	2	2	1	
Cyclohexanone			2	1	0	
Cyclohexene	C ₆ H ₁₀	110-83-8	3	1	0	
Cyclopentanone			3	2	0	
Cyclopentene			3	1	1	
Diacetylene						
Diazoethane						

Diazodinitrophenol						
Diazomethane	CH ₂ N ₂	334-88-3				
Dicyclopentadiene	C ₁₀ H ₁₂	77-73-6	3	1	1	
Diethyl ether	(C ₂ H ₅) ₂ O	60-29-7B	4	2	1	
Diethylene glycol dimethyl ether (diglyme)	(CH ₃ OCH ₂ CH ₂) ₂ O	111-96-6	2	1	1	
Diisopropyl ether	C ₆ H ₁₄ O	108-20-3	3	2	1	
Dinitrophenol	C ₆ H ₃ OH(NO ₂) ₂	51-28-5				
Dinitrophenylhydrazine	C ₆ H ₆ N ₄ O ₄	119-26-6	2	1	2	
Dioxane	C ₄ H ₈ O ₂	123-91-1	3	2	1	
Dipentaerythritol hexanitrate						
Disulfur dinitride						
Divinyl acetylene			3		3	
Divinyl ether			4	2	2	
Ethyl ether	(C ₂ H ₅) ₂ O	60-29-7A	4	1	1	
Ethyl nitrite			4	3	4	
Ethylene glycol dimethyl ether (glyme)			2	1	0	
Ethylene glycol dinitrate	C ₂ H ₄ N ₂ O ₆	628-96-6				
Ethylene oxide	C ₂ H ₄ O	75-21-8	4	3	3	
Formaldehyde	CH ₂ O	50-00-0A	2	3	0	
Furan			4	1	1	
Glycol dinitrate	C ₂ H ₄ N ₂ O ₆	628-96-6				
Glycol monolactate trinitrate						
Grignard reagents (ether solvents)						
Guanyl nitrosaminoguanyl hydrazine						
Hexyl alcohol	CH ₃ (CH ₂) ₄ CH ₂ OH	111-27-3	2	1	0	
HMX				3	4	
Hydrazoic acid						
Hydrides, borohydrides						
Hydrofluoric acid	HF	7664-39-3	0	4	0	
Hydrogen	H ₂	1333-74-0	4	0	0	
Hydrogen peroxide (>30%)	H ₂ O ₂	7722-84-1	0	3	1	OX
Hydrogen sulfide	H ₂ S	7783-06-4	4	4	0	
Isopropyl ether			3	1	1	
Lead arsenate	Pb ₃ (AsO ₄) ₂	7784-40-9	0	2	0	
Lead dinitride (azide)	Pb ₃ (N ₃) ₂	13424-46-9				
Lead dinitrorescorcinat (styphnate)			4	3	4	
Lead dioxide, brown	PbO ₂	1309-60-0A	0	3	3	OX
Lead mononitrorescorcinat						
Lithium	Li	7439-93-2	1	1	2	W
Lithium nitrate	LiNO ₃	7790-69-4	0	2	3	OX

Lithium nitride						
Lithium peroxide						
Magnesium (except Mg ribbon)	Mg	7439-95-4	1	0	2	W
Magnesium peroxide						
Mannitol hexanitrate						
Mercury and mercury compounds (except in sealed devices)						
Methyl acetylene	C3H4	74-99-7	4	2	2	
Methyl cyclopentane	C6H12	96-37-7	3	2	0	
Methyl isobutyl ketone (MIBK)	CH3COCH2CH(CH3)2	108-10-1	3	2	1	
Methyl isocyanate	CH3NCO	624-83-9	3	4	2	W
Methyl methacrylate, monomer	C5H8O2	80-62-6	3	2	2	
M-trinitrocresol						
Nessler's reagent (mercury compound)	Hg+KI+NaOH	NA26				
Nicotine	C10H14N2	54-11-5	1	4	0	
Nitroglycerin			2	2	4	
Nitrosoguanidine						
Osmic acid	OsO4	20816-12-0B	0	4	0	
Osmium tetroxide	OsO4	20816-12-0A	0	4	0	
O-toluidine	C7H9N	95-53-4	3	2	0	
Pentaerythritol tetranitrate (PETN)		78-11-5				
Pentane	C5H12	109-66-0	4	1	0	
Perchloric acid	HClO4	7601-90-3	0	3	3	OX
Phenol	C6H6O	108-95-2	2	4	0	
Phenyl thiourea	C7H8N2S	103-85-5A	0	4	0	
Phosphorus and phosphorus compounds (excepting phosphates)						
Phthalic anhydride	C8H4O3	85-44-9	1	3	2	
Picrates, picramide, picryl compounds.						
Picric acid	C6H3N3O7	88-89-1	4	3	4	
P-nitrophenol	NO2C6H4OH	100-02-7	1	3	2	
Polyvinyl nitrate						
Potassium	K	7440-09-7	1	3	2	W
Potassium amide						
Potassium chlorate	KClO3	3811-04-9	0	2	0	OX
Potassium cyanide	KCN	151-50-8	0	3	0	
Potassium dinitrobenzofuroxan						

Potassium nitrite	KNO2	7758-09-0	0	2	3	OX
Potassium perchlorate	KClO4	7778-74-7	0	1	2	
Potassium periodate	KIO4	7790-21-8	0	2	3	OX
Potassium peroxide	KO2	12030-88-5	0	3	3	
Potassium superoxide	KO2	12030-88-5	0	3	3	
RDX		121-82-4				
Sec-butyl alcohol(2-butanol)	C4H10O	78-92-2A	3	1	0	
Silanes, chlorosilanes						
Silicon tetrachloride			0	3	2	W
Silver acetylide						
Silver cyanide	AgCN	506-64-9	0	3	1	
Silver dinitrorescorcinat (styphnate)						
Silver fulminate (cyanate)	AgOCN	3315-16-0	0	1	0	
Silver nitride						
Silver oxalate						
Silver oxide	Ag2O	20667-12-3	1	1	2	OX
Silver tetrazene						
Sodamide	H2NNa	7782-92-5	3	2	2	W
Sodium amide	H2NNa	7782-92-5	3	2	2	W
Sodium arsenate	Na3AsO4*12H2O	7778-43-0	0	3	0	
Sodium arsenite	NaAsO2	7784-46-5	0	3	0	
Sodium chlorate	NaClO3	7775-09-9	0	1	2	OX
Sodium chlorite			0	1	1	OX
Sodium cyanide	NaCN	143-33-9	0	3	1	
Sodium dithionite	Na2S2O4	7775-14-6A	1	3	2	W
Sodium hydrosulfite	Na2S2O4*2H2O	7775-14-6B	1	2	2	
Sodium methylate	CH3ONa	124-41-4	3	3	2	W
Sodium perborate	UNDEFINED	7632-04-4	0	3	0	
Sodium perchlorate			0	2	2	W,OX
Sodium permanganate	NaMnO4	10101-50-5	1	2	2	OX
Sodium peroxide	Na2O2	1313-60-6	0	3	2	W,OX
Strontium perchlorate		13450-97-0				
Styrene monomer	C8H8	100-42-5	3	2	2	
Sulfur trioxide	SO3	7446-11-9	0	3	2	W
Sulfuryl chloride (sulfonyl)	Cl2O2S	7791-25-5	0	3	2	W
Sulfuryl chloride fluoride	ClFO2S	13637-84-8	1	3	2	W
T-butyl hypochlorite						
Tetrafluoroethylene			4	2	3	
Tetrahydrofuran	C4H8O	109-99-9	3	2	1	
Tetrahydronaphthalene	C10H12	119-64-2	2	1	0	
Tetranitromethane		509-14-8				
Tetraselenium tetranitride						
Tetrazene						
Tetryl		479-45-8	2	2	4	

Thallium nitride						
Thermit	Fe2O3 + Al	69012-31-3	0	0	0	
Thermite igniting mixture	Al	Unknown	1	0	1	
Thiocarbonyl tetrachloride	CCl4S	594-42-3	0	3	2	
Thionyl chloride	SOCl2	7719-09-7	0	4	2	W
Titanium (powder)	Ti	7440-32-6	1	1	2	
Titanium tetrachloride			0	3	2	
Triethyl aluminum		97-93-8				
Triethyl arsine						
Triisobutyl aluminum		100-99-2				
Trimethyl aluminum		75-24-1				
Trinitroanisole						
Trinitrobenzene			4	2	4	
Trinitrobenzoic acid						
Trinitronaphthalene						
Trinitroresorcinol						
Trinitrotoluene	C7H5N3O6	118-96-7	4	2	4	
Trisilyl arsine						
Uranium compounds						
Uranyl acetate	UO2(C2H3O2)2	541-09-3	0	0	0	
Uranyl nitrate	UO2(NO3)2.6H2O	10102-06-4	0	1	0	
Urea nitrate						
Vinyl acetate	C4H6O2	108-05-4	3	2	2	
Vinyl acetylene			4	2	3	
Vinyl chloride	C2H3Cl	75-01-4	4	2	2	
Vinyl ethers			4	2	2	
Vinylidene chloride (1,1-DCE)	C2H2Cl2	75-35-4	4	2	2	
Wright's stain (Hg containing)	UNDEFINED	68988-92-1	3	0	0	
Zinc peroxide						

APPENDIX B - TABLE OF RESTRICTED CHEMICALS

Name	Formula	CAS Number	NFPA Hazard Index Code			
			Flammability	Health	Reactivity	Special
Acetamide	CH3CONH2	60-35-5	1	3	1	
Acetanilide	CH3CONHC6H5	103-84-4	1	3	0	
Acetic acid	CH3COOH	64-19-7A	2	2	1	
Acetic anhydride	(CH3CO)2O	108-24-7	2	3	1	W
Acetone	CH3COCH3	67-64-1	3	1	0	
Acetyl halides						
Acetylcholine bromide	CH3CO2C2H4N(CH3)3Br	66-23-9	0	2	0	
Acridine orange	UNDEFINED	10127-02-3	0	2	0	
Adipoyl chloride	ClOC(CH2)4COCl	111-50-2	2	2	0	
Alizarin red	UNDEFINED	130-22-3	1	2	0	
Alkyl aluminum chloride						
Aluminum	Al	7429-90-5	1	0	1	
Aluminum acetate	Al(C2H3O2)2OH	142-03-0	0	1	1	
Aluminum bromide	AlBr3	7727-15-3	1	3	1	
Aluminum chloride, hydrate	ALCL3*6H2O	7784-13-6	0	3	0	
Aluminum fluoride	AlF3	7784-18-1	0	2	0	
Aluminum hydroxide	Al(OH)3*3H2O	21645-51-2	0	1	1	
Aluminum nitrate	Al(NO3)3*9H2O	7784-27-2	0	1	0	OX
Aluminum tetrahydroborate						
Ammonia, anhydrous	NH3	7664-41-7	1	3	0	
Ammonia, liquid	NH3	1336-21-6A	1	3	0	
Ammonium acetate	NH4C2H3O2	631-61-8	1	1	1	
Ammonium bicarbonate	NH4HCO3	1066-33-7A	0	1	1	
Ammonium bichromate	(NH4)2Cr2O7	7789-09-5B	1	1	1	OX
Ammonium bromide	NH4Br	12124-97-9	0	2	0	
Ammonium carbonate	NH4CO3	10361-29-2	0	2	2	
Ammonium chloride	NH4Cl	12125-02-9	0	2	0	
Ammonium chromate	(NH4)2CrO4	7788-98-9	1	1	1	OX
Ammonium fluoride	NH4F	12125-01-8	0	3	0	
Ammonium hydroxide	NH4OH	1336-21-6B	1	3	0	
Ammonium iodide	NH4I	12027-06-4	0	2	1	
Ammonium molybdate	(NH4)6Mo7O24*4H2O	12054-85-2	0	2	1	
Ammonium oxalate	(NH4)2C2O4*H2O	6009-70-7	0	3	1	
Ammonium phosphate, dibasic	(NH4)2H2PO4	7783-28-0	0	2	1	
Ammonium phosphate, monobasic	NH4H2PO4	7722-76-1	0	2	0	
Ammonium sulfate	(NH4)2SO4	7783-20-2	0	3	0	
Ammonium sulfide	(NH4)2S*H2O	12135-76-1	3	3	0	
Ammonium tartrate	(NH4)2C4H4O6	3164-29-2	0	2	0	
Ammonium thiocyanate	NH4SCN	1762-95-4	1	2	1	
Amyl acetate	CH3COOC5H11	628-63-7	3	1	0	
Amyl alcohol(n)	CH3(CH2)3CH2OH	71-41-0A	3	1	0	
Aniline	C6H5NH2	62-53-3	2	3	0	
Aniline hydrochloride	C6H5NH2*HCL	142-04-1	1	3		
Anisoyl chloride	C8H7ClO2	100-07-2	2	3	0	
Barium acetate	Ba(C2H3O2)H2O	543-80-6	0	2	0	
Barium carbide						

Barium chloride, hydrate	BaCl ₂ *2H ₂ O	10326-27-9	0	3	0	
Barium nitrate	Ba(NO ₃) ₂	10022-31-8	0	1	0	OX
Benzaldehyde	C ₆ H ₅ CHO	100-52-7	2	2	0	
Benzene phosphorus dichloride						
Benzoic acid	C ₆ H ₅ COOH	65-85-0	1	2		
Benzyl chloride	C ₆ H ₅ CH ₂ Cl	100-44-7	2	3	1	
Benzyl sodium						
Benzylamine	C ₆ H ₅ CH ₂ NH ₂	100-46-9	2	3	0	
Beryllium tetrahydroborate						
Biphenyl (diphenyl)	C ₆ H ₅ C ₆ H ₅	92-52-4	1	2	0	
Bismuth pentafluoride	BiF ₅	7787-62-4	0	1	0	
Boric acid	H ₃ BO ₃	10043-35-3	0	2	0	
Boron bromodiiiodide						
Boron dibromoiiodide						
Boron phosphide						
Boron trichloride						
Bromine monofluoride						
Bromine water	Br ₂ + H ₂ O	7726-95-6B				OX
Bromobenzene	C ₆ H ₅ Br	108-86-1	2	2	0	
Bromodiethylaluminum						
Bromoform	CHBr ₃	75-25-2	0	3	0	
Butyric acid	CH ₃ CH ₂ CH ₂ COH	107-92-6	2	3	0	
Calcium (100 g limit)	Ca	7440-70-2	1	3	2	W
Calcium bromide	CaBr ₂	7789-41-5	0	1	1	
Calcium hypochlorite	Ca(OCl) ₂	7778-54-3	0	3	1	OX
Calcium nitrate tetrahydrate	Ca(NO ₃) ₂ *4H ₂ O	13477-34-4	0	2	1	OX
Calcium phosphide						
Camphor	C ₁₀ H ₁₆ O	21368-68-3	2	0	0	
Carbon disulfide (bi)	CS ₂	75-15-0	3	2	0	
Ceric (iv) sulfate	Ce(SO ₄) ₂ *4H ₂ O	13590-82-4	0	3	0	OX
Cesium amide						
Cesium phosphide						
Chlorine monofluoride						
Chlorine pentafluoride						
Chloroacetic acid	C ₂ H ₃ ClO ₂	79-11-8B	1	3	0	
Chloroacetyl chloride	C ₂ H ₂ Cl ₂ O/ClCH ₂ COCl	79-04-9	0	3	1	
Chlorobenzene	C ₆ H ₅ Cl	108-90-7	3	2	0	
Chlorodiisobutyl aluminum						
Chlorophenyl isocyanate	C ₇ H ₄ ClNO	3320-83-0				
Chromic acid	CrO ₃	1333-82-0A	0	3	1	OX
Chromium (ic) nitrate	Cr(NO ₃) ₃ *9H ₂ O	7789-02-8	0	3	1	OX
Chromium sulfate	Cr ₂ (SO ₄) ₃ *nH ₂ O	10101-53-8	0	2	0	
Chromium trioxide	CrO ₃	1333-82-0B	0	3	1	
Cobalt (ous) nitrate	Co(NO ₃) ₂ *6H ₂ O	10026-22-9	0	2	0	OX
Cupric bromide, anhydrous	CuBr ₂	7789-45-9A	0	2	0	
Cyclohexane	CH ₂ (CH ₂) ₄ CH ₂	110-82-7	3	1	0	
Dichlorobenzene	C ₆ H ₄ Cl ₂	106-46-7B	2	2	0	
Dichloroethane	C ₂ H ₄ Cl ₂	107-06-2B	3	2	0	
Dichloromethane	CH ₂ Cl ₂	75-09-2A	1	2	0	

Diethyl aluminum chloride	C4H10AlCl	96-10-6				
Diethyl zinc	C4H10Zn	557-20-0				
Diisopropyl beryllium						
Dimethyl magnesium						
Diphenyl diisocyanate						
Diphenylamine	(C6H5)2NH	122-39-4	1	3	0	
Ethanol	C2H5OH	64-17-5B	3	0	0	
Ethyl acetate	CH3COOC2H5	141-78-6	3	1	0	
Ethyl alcohol	C2H5OH	64-17-5A	3	0	0	
Ethyl methacrylate	CH2CCH3COOC2H5	97-63-2	3	2	0	
Ethylene dichloride	C2H4Cl2	107-06-2A	3	2	0	
Ethylenediamine	NH2CH2CH2NH2	107-15-3	2	3	0	
Faa solution	UNDEFINED	NA14	3	2	0	
Fehlings solution a	UNDEFINED	7758-99-8C	0	3	1	
Fehlings solution b	UNDEFINED	NA15	0	3	1	
Ferric chloride, anhydrous	FeCl3	7705-08-0	0	3	1	
Ferric nitrate	Fe(NO3)3*9H2O	7782-61-8	0	1	1	OX
Fluorine monoxide						
Fluorosulfonic acid						
Formalin	CH2O	50-00-0B	2	2	0	
Formic acid	HCOOH	64-18-6	2	3	0	
Gasoline	UNDEFINED	8006-61-9	3	1	0	
Glutaraldehyde	OCH(CH3)3CHO	111-30-8	0	3	1	
Gold acetylde						
Hematoxylin	C16H14O6*3H2O	517-28-2	0	1	1	
Heptane, n-	CH3(CH2)5CH3	142-82-5	3	1	0	
Hexamethylene diisocyanate	C8H12N2O2	822-06-0	2	1	0	W
Hexamethylenediamine	H2N(CH2)6NH2	124-09-4	2	3	0	
Hexane, n-	CH3(CH2)4CH3	110-54-3	3	1	0	
Hydriodic acid	HI	10034-85-2	0	3	0	
Hydrobromic acid	HBr	10035-10-6	0	3	0	
Hydrochloric acid	HCl	7647-01-0	0	3	0	
Hydrogen peroxide (10%)	H2O2		0	3	1	OX
Hydroquinone	C6H4(OH)2	123-31-9	1	2	0	
Hydroxylamine hydrochloride	NH2OH*HCl	5470-11-1	1	3	1	
Iodine	I2	7553-56-2B	0	3	1	OX
Iodine monochloride	ICl	7790-99-0	0	3	1	
Iron	Fe	7439-89-6	1	3	1	
Isoamyl alcohol	(CH3)2CHCH2CH2OH	123-51-3A	2	1	0	
Isobutyl alcohol	(CH3)2CHCH2OH	78-83-1	3	1	0	
Isopentyl alcohol	(CH3)2CHCH2CH2OH	123-51-36	3	1	0	
Isopropyl alcohol	(CH3)2CHOH	67-63-0	3	1	0	
Kerosene	UNDEFINED	8008-20-6	2	0	0	
Lead nitrate	Pb(NO3)2	10099-74-8	0	1	0	OX
Lead oxide, red	Pb3O4	1314-41-6	1	3	1	OX
Lead peroxide (di)	PbO2	1309-60-0B	0	3	1	OX
Lithium amide						
Lithium bromide	LiBr	7550-35-8	0	2	0	
Lithium ferrosilicon						

Lithium silicon						
Lithium sulfate	Li2SO4*H2O	10102-25-7	0	2	0	
Lye	NaOH	1310-73-2B	0	3	1	
Magnesium (ribbon)	Mg	7439-95-4	1	0	2	W
Magnesium nitrate	Mg(NO3)2*6H2O	13446-18-9	0	1	0	OX
Manganese carbonate	MnCO3	598-62-9	0	0	1	
Manganese dioxide	MnO2	1313-13-9A	0	2	1	OX
Manganese nitrate (ous)	Mn(NO3)2*6H2O	10377-66-9	0	3	0	OX
Manganese oxide	MnO2	1313-13-9B	0	1	0	
Methyl alcohol	CH3OH	67-56-1	3	1	0	
Methyl aluminum sesquibromide	C3H9Al2Br3					
Methyl aluminum sesquichloride	C3H9Al2Cl3	12542-85-7				
Methyl ethyl ketone	CH3COC2H5	78-93-3B	3	1	0	
Methyl magnesium bromide	CH3BrMg	75-16-1				
Methyl magnesium chloride	CH3ClMg	676-58-4				
Methyl magnesium iodide						
Methylene chloride	CH2CL2	75-09-2B	1	2	0	
Naphthalene	C10H8	91-20-3	2	2	0	
Napthol-1 (a)	C10H7OH	90-15-3	1	3	1	
N-butyl alcohol	C6H10O	71-36-3B	3	1	0	
N-butyl lithium						
Nickel antimonide						
Nickel(ii) nitrate	Ni(NO3)2*6H2O	13478-00-7	0	2	1	
Nickel(ii) sulfate	NiSO4*6H2O	10101-97-0	0	2	0	
Nitric acid	HNO3	7697-37-2	0	3	0	OX
Nitrobenzene	C6H5NO2	98-95-3	2	3	1	
Nitrogen	N2	7727-37-9	0	3	0	
Octyl alcohol	CH3(CH2)6CH2OH	111-87-5	2	1	0	
O-dichlorobenzene	C6H4Cl2	95-50-1	2	2	0	
Oxalic acid, hydrate	H2C2O4*2H2O	6153-56-6	1	2	0	
Oxygen	O2	7782-44-7	0	3	0	OX
P-dichlorobenzene	C6H4Cl2	106-46-7	2	2	0	
Pentyl alcohol (amyl)	CH3(CH2)4OH	71-41-0B	3	1	0	
Petroleum ether (500 ml limit)	UNDEFINED	8032-32-4	4	1	0	
Phosphoric acid	H3PO4	7664-38-2	0	3	0	
Phthalic acid	C6H4(COOH)2	88-99-3	1	0	1	
Polyphenyl polymethyl isouanta						
Polyvinyl alcohol	CH2CH(OH)	9002-89-5	2	0	0	
Potassium bromate	KBrO3	7758-01-2	0	2	0	OX
Potassium chromate	K2CrO4	7789-00-6B	0	3	1	OX
Potassium dichromate	K2Cr2O7	7778-50-9	1	3	1	OX
Potassium ferricyanide	K3Fe(CN)6	13746-66-2	0	1	1	
Potassium ferrocyanide	K4Fe(CN)6*3H2O	14459-95-1	0	1	1	
Potassium hydroxide	KOH	1310-58-3	0	3	1	
Potassium iodate	KIO3	7758-05-6	0	1	1	OX
Potassium nitrate	KNO3	7757-79-1	0	1	0	OX
Potassium permanganate	KMnO4	7722-64-7	0	1	0	OX

Potassium persulfate	K2S2O8	7727-21-1	0	1	0	OX
Potassium sulfide	K2S	1312-73-8	1	3	0	
Propane	CH3CH2CH3	74-98-6	4	1	0	
Propionic acid	C3H6O2	79-09-4	2	2	0	
Propyl alcohol	C3H8O	71-23-8	3	1	0	
Pyridine	C5H5N	110-86-1	3	3	0	
Pyrosulfuryl chloride						
Silver nitrate	AgNO3	7761-88-8	0	1	0	OX
Silver sulfate	Ag2SO4	10294-26-5	0	2	0	
Sodium (100 g limit)	Na	7440-23-5	3	3	2	W
Sodium bisulfite	NaHSO3	7631-90-5	0	1	1	
Sodium chromate	Na2CrO4	7775-11-3	0	3	1	OX
Sodium cobaltinitrite	Na3Co(NO2)6	13600-98-1	0	2	0	OX
Sodium dichromate, hydrate	Na2Cr2O7*2H2O	7789-12-0	0	1	1	
Sodium fluoride	NaF	7681-49-4	0	3	0	
Sodium hydroxide	NaOH	1310-73-2A	0	3	1	
Sodium hypochlorite	NaClO	7681-52-9	0	2	1	
Sodium iodate	NaIO3	7681-55-2	0	1	1	OX
Sodium iodide	NaI	7681-82-5	0	2	1	
Sodium meta-bisulfite	Na2S2O5	7681-57-4B	0	3	1	
Sodium nitrate	NaNO3	7631-99-4	0	1	1	OX
Sodium nitrite	NaNO2	7632-00-0	0	2	1	OX
Sodium phosphate, tribasic	Na3PO4*12H2O	7601-54-9A	0	2	1	
Sodium sulfide	Na2S*9H2O	1313-84-4	1	3	1	
Sodium thiocyanate	NaSCN	540-72-7	0	3	1	
Sodium thiosulfate	Na2S2O3*5H2O	10102-17-7	0	0	1	
Stannic chloride	SnCl4	7646-78-8	0	3	1	
Strontium nitrate	Sr(NO3)2	10042-76-9	0	1	0	OX
Sulfur chloride	Cl2S2	10025-67-9	1	2	1	
Sulfur pentafluoride						
Sulfuric acid (≤10%)	H2SO4	7664-93-9	0	3	0	
Sulfuric acid (>10%) (2.5 l limit)	H2SO4	7664-93-9	0	3	2	W
t-Butanol	(CH3)3COH	75-65-0	3	1	0	
Terpineol	C10H17OH	98-55-5	2	0	0	
Thiophosphoryl chloride	Cl3SP	3982-91-0	0	3	0	
Tin	Sn	7440-31-5	1	1	1	
Toluene	C7H8	108-88-3	3	2	0	
Toluene diisocyanate	C9H6N2O2	584-84-9	1	3	1	
Toluidine blue	CH3C6H4NH2	95-53-4	2	3	0	
Trichloroethane-1,1,1	C2H3Cl3	71-55-6	1	3	1	
Trichloroethylene	C2HCl3	79-01-6	1	2	0	
Triethanolamine	C6H15NO3	102-71-6	1	2	1	
Triethyl stibine						
Trimethylpentane 2,2,4	C8H18	540-84-1	3	0	0	
Tri-n-butyl aluminum						
Trioctyl aluminum						
Triphenyl tetrazolium chloride	C19H15N4Cl	298-96-4	1	2	1	
Tripropyl stibine						

Trisilyl arsine						
Trisodium phosphate	Na ₃ H ₃ PO ₄	7601-54-9B	0	2	1	
Trivinyl stibine						
Tungsten	W	7440-33-7	2	1	1	
Turpentine	C ₁₀ H ₁₆	8006-64-2	3	1	0	
Vanadium trichloride	VC _{l3}	7718-98-1				
Xylene	C ₈ H ₁₀	1330-20-7	3	2	0	
Zinc (powder)	Zn	7440-66-6	1	1	1	W
Zinc acetylide						
Zinc nitrate (500 g limit)	Zn(NO ₃) ₂ *6H ₂ O	10196-18-6	1	1	2	OX
Zinc phosphide	Zn ₃ P ₂	1314-84-7	3	3	1	