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METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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EXECUTIVE SECRETARY

May 25, 1994

To: Board of Directors (Committee on Legislation-Action)
(Special Committee on Water Quality
and Environmental Compliance--Information)

From: General Manager

Subject: Policy Principles Regarding Accidental Release of Hazardous
Materials

Report

SUMMARY

California has several existing programs to minimize the risk of handling hazardous materials. A newly proposed federal rule will require California to revise its program to conform to federal requirements. A number of State bills have been introduced to accomplish this goal and to address single, but related issues. Several important themes have emerged in these legislative proposals and policy principles have been developed to address these issues. Several of the proposed policy principles are conceptually consistent with previously adopted permit streamlining principles; however, new principles are proposed to directly address the issue of accidental releases of hazardous materials.

BACKGROUND

Existing California law requires facilities handling specified chemicals above threshold quantities to register with a local administering agency (typically the fire or health department). The administering agency must, in turn, determine whether the facility poses a risk to the public. If so, the existing facility is required to prepare and implement a comprehensive risk management and prevention program (or "RMPP"). All new qualifying facilities are required to prepare RMPPs. Currently, only one Metropolitan facility has been requested to prepare and has implemented a RMPP; the Joseph Jensen Filtration Plant.

In addition, the California Occupational Health and Safety Administration (Cal/OSHA) requires a similar program be implemented for facilities handling hazardous chemicals: the Process Safety Management Standard for Acutely Hazardous Chemicals (PSM). Because the focus of the PSM standard is on worker safety as opposed to offsite impacts, the chemicals, thresholds, and detailed requirements vary somewhat from the RMPP program. There are several Metropolitan facilities handling listed chemicals in quantities requiring PSM compliance and a program is underway to meet the requirements of the standard.

To complicate matters, the Federal Environmental Protection Agency (EPA) is required by the Clean Air Act Amendments of 1990 to issue regulations covering risk management programs (RMP) for the prevention of accidental chemical releases. This rule was proposed in October of 1993 and is expected to be published in final form prior to 1995.

The California Legislature is now in the process of revising state law to implement the federal RMP rule. Numerous bills have been introduced and are moving forward in the State Legislature which are related to this issue: AB 3264 (Campbell) creates a penalty structure for accidental releases; AB 3276 (Baca) addresses agency jurisdiction for implementation; and AB 3480 (Bates) requires secondary containment for specified facilities. In addition two bills establish comprehensive requirements to implement the federal EPA RMP program and integrate it with the existing California RMPP: AB 3263 (Campbell) and SB 1851 (Calderon). Issues of concern include: the definition of "worst case" for the purpose of evaluating and communicating to the public the potential offsite consequences; management of change; coordination of new requirements with existing RMPP and PSM; allowing generic RMPs and model programs; consistency of local requirements; and requirement for secondary containment. Policy principles are proposed below to address each of these issues.

Attached are matrices illustrating the elements of the comprehensive legislative proposals (AB 3263 and SB 1851) and the existing and proposed regulatory programs governing accidental releases. Brief summaries of the other related bills are also attached for reference.

PROPOSED POLICY PRINCIPLES**"Worst Case Scenario" / Evaluation and Communication of Offsite Consequences****Issue:**

The proposed federal rule requires analysis of a range of release scenarios including the "worst case" as a part of the hazard assessment. This scenario is utilized for evaluation and communication to the public of potential offsite consequences including identification of all populations affected and the expected environmental damage. EPA proposed to define the worst case release as the instantaneous loss of all of the hazardous material in a process with failure of all mitigation systems (active and passive) and worst possible meteorological conditions. Metropolitan staff (and numerous other entities including the American Water Works Association, local emergency planners, and other public agencies) opposed this definition on the basis of technical arguments. For example, for many listed chemicals (including chlorine), instantaneous evaporation resulting in a large volume release is physically impossible except under the most extreme (and implausible) conditions. Furthermore, the development of unlikely scenarios does not minimize the potential risk of release of hazardous materials, adds to the already significant cost of implementing the RMP, and needlessly alarms a public that would not be affected by an actual release. The counter argument (as posed by the Environmental Protection Agency, or EPA) is that the definition will define for the public the extreme worst case and allow for comparison of results.

Policy Options:

1. Support language that defers to definition of "worst case" in final EPA RMP rule rather than potentially making the California definition more (or less) stringent and different from federal requirements.
2. Support technically justified alternatives to the "worst case" definition, such as the EPA recommendation in "Technical Guidance for Hazard Analysis" (or Green Book), to provide the potentially affected public with useful information by which to assess the relative hazards associated with facilities in their communities.

3. Oppose development and communication to the public of low probability worst case scenarios. Rather, support efforts to focus attention on the more likely release scenarios which are also required to be developed by the federal rule.
- 3a. Support provisions aligned with existing RMPP law. Namely, for only the most likely hazards, an offsite consequence analysis is prepared assuming pessimistic weather conditions and including a clearly prepared map indicating zones of vulnerability for communicating potential risks to the public.
4. Remain neutral on this issue.

Recommendation:

Support policy option 2.

Generic RMPs / Model Programs

Issue:

The proposed federal rule provides for development of model programs to simplify compliance for targeted industries. EPA specifically identified water treatment as a likely candidate since facilities are, for the most part, using the same chemicals in the same way, with similar types of equipment and processes. The similarity would allow for development of guidance on required elements and substantially simplify and reduce the cost of compliance for these facilities. In addition, existing California law governing RMPPs allows preparation of generic documents for facilities under one owner where they are substantially identical and the handling of the acutely hazardous material is substantially similar.

Policy Options:

1. Support inclusion of language to authorize generic documents and to require development of model programs for appropriate industries, including water treatment and delivery.

2. Support generic documents for multiple facilities and model programs for targeted industries in concept and promote this position through industry groups such as ACWA or California Council for Environmental and Economic Balance (CCEEB).
3. Remain neutral on this issue.

Recommendation:

Support policy options 1 and 2 (which is generally consistent with previously adopted policy principles regarding permit streamlining).

Coordination with Cal/OSHA PSM and Other Regulatory Requirements

Issue:

Though the overall focus of the EPA RMP rule and PSM is different (PSM focuses on worker safety while the RMP looks at offsite consequences), both requirements entail comprehensive programs to identify and minimize risks associated with handling hazardous materials. Many of the detailed requirements of each program are substantially similar such as the requirements for standard operating procedures, technical evaluation of process hazards, training, and management of change. In addition, there are other regulatory requirements that parallel specific elements of the federal RMP such as emergency response planning mandated by Occupational Safety and Health Administration's Hazardous Waste Operations and Emergency Response standard.

Policy Options:

1. Support language to minimize duplication, clarify overlapping requirements, and to delineate agency roles.
2. Support the concept of minimizing duplication, clarifying overlapping requirements, and delineating agency roles and promote this position through industry groups such as ACWA or CCEEB.
3. Remain neutral on the issue.

Recommendation:

Support policy options 1 and 2 (which is generally consistent with previously adopted policy principles regarding permit streamlining).

Consistency of State/Local Requirements and Implementation**Issue:**

Existing RMPP requirements are codified in state law but direct implementation is on the local level, primarily through fire and health departments. Though this system works well in terms of responding to unique local issues, implementation may be inconsistent due to differences in interpretation or application of requirements. For any regional or statewide agency with facilities in multiple jurisdictions, clear and consistent implementation of requirements would facilitate compliance and thereby minimize costs.

Policy Options:

1. Support language that follows existing precedent in terms of local implementation while mandating that statewide guidance be issued to eliminate the possibility of conflicting implementation by local agencies.
2. Remain neutral on the issue.

Recommendation:

Support policy option 1 (which is generally consistent with previously adopted policy principles regarding permit streamlining).

Secondary Containment**Issue:**

Public concern and awareness of issues surrounding management of hazardous materials has increased in recent years due mostly to accidents such as the General Chemical Corporation release of oleum in the San Francisco Bay Area.

Though the issue of mandating secondary containment is not directly raised by comprehensive bills to implement the federal RMP, one piece of legislation by Assemblyman Bates would require containment if specified findings are made by the administering agency. The findings address issues such as the risk posed by the facility and the severity and likelihood of offsite consequences. Existing bill language does not set levels of risk, criteria for evaluation of risk, and/or consideration technological alternatives.

The proposed RMP is a comprehensive, detailed technical analysis which takes into consideration a myriad of parameters. Mandating containment, even under specified conditions, frontloads the results of the analysis and as such runs counter to the intent and purpose of the federal RMP program. In proposing the rule EPA states:

...the owner or operator [must] investigate and document a plan for (or rationale for not) installing systems to detect, contain, or mitigate accidental releases if such systems are not already in place. Because accidental releases can be mitigated by the use of detection, secondary containment, and mitigation systems, facilities should consider whether the hazards they have identified can be addressed through such systems. The decision on whether such systems are the best way to address the hazards must, however, rest, in the first instance with the facility's management.

In other words, EPA believes the decision to implement containment (or any other mitigation technique) rests ultimately with the facility.

Furthermore, the existing California RMPP law requires that "design, monitoring, or automatic control systems" be implemented as a part of the program and that "alarm, detection, monitoring, and automatic control devices" be considered to reduce the risk of an accident. The law does not specify that containment is required.

Policy Options:

1. Oppose legislation to address the issue of containment separate from the comprehensive measures to implement the federal RMP program (oppose Assemblyman Bates' bill AB 3480). Support the concept of addressing containment through a comprehensive risk assessment and management program such as that mandated by the EPA RMP requirement.

2. Direct staff to continue to monitor development of legislation addressing containment and to report back as warranted.
3. Support a policy that would allow agencies to require risk reduction while allowing the facility owner to determine the most technically justified approach.
4. Remain neutral on the issue.

Recommendation:

Support policy option 1.

Management of Change

Existing RMPP requirements state that a facility will review the RMPP, notify the administering agency, and make necessary changes to the program within 60 days of implementing changes that materially affect the handling of an acutely hazardous substance. This provision has been the subject of scrutiny following the General Chemical oleum release since administering agencies maintain that had they had the chance to review the operation prior to implementation, the release would never have occurred. Nevertheless, some proposals have gone to a completely different extreme in terms of notifying the administering agency well in advance of modified operations, requiring actual changes in the risk management program, and allowing the agency to delay implementation of changes.

The proposed federal rule, as well as existing PSM requirements in California, require that detailed management of change and pre-start up review elements be implemented prior to modification of facilities. Based on the technical analysis of potential hazards and the possibility of accidental release of chemicals, changes would be made to the RMP (or PSM) program to minimize the likelihood of an accidental release.

Legislative proposals currently under consideration vary widely and range anywhere from notifying the administering agency and actually amending the RMP 60 days prior to making any modification to formally requiring implementation of management of change / pre-start up review and notifying the agency within a specified time period (ranging in proposals from 60 days to 48 hours prior to the modification). One proposal also allows the administering agency to take additional time, beyond the planned start-up date, to further evaluate the planned changes to the facility. Since a great amount of time, cost, and effort is involved in formally revising a risk management program, it is important that allowances be made for testing of equipment or alterations in

processes that minimize the potential release of material but do not impose unnecessary administrative burdens and costs on the facility.

An additional issue is the ability of facilities, particularly essential public services, to respond to such events as earthquakes or other disasters and protect public health without being restricted or hampered by the requirement to provide advance notice or to revise the risk management program prior to acting.

Policy Options:

1. Support proposals that: rely on risk management programs such as "management of change" and "pre-start up review" to ensure that new operations are consistent with safe practices; allow for reasonable advance notice to the administering agency; give the administering agency the authority to extend their review or delay project implementation only when a finding of imminent and substantial threat of accidental release is made; and allow for final RMP revisions after the changes are implemented.
2. Support measures that recognize there are emergency circumstances under which actions must be implemented immediately and make allowances for such occurrences.
3. Remain neutral on the issue.

Recommendation:

Support policy options 1 and 2.

Board Committee Assignments

This letter is referred for action to:

The Committee on Legislation because of its responsibility for District positions on legislation.

This letter is referred for information to:

The Special Committee on Water Quality and Environmental Compliance because of its authority regarding Federal and State environmental regulations pursuant to Administrative Code Section 2551 (a) and (b).

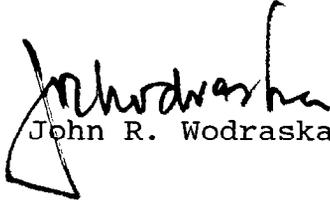
Recommendation

COMMITTEE ON LEGISLATION FOR ACTION

It is recommended that your Board adopt legislative policy principles for accidental release programs as recommended by staff.

SPECIAL COMMITTEE ON WATER QUALITY AND ENVIRONMENTAL COMPLIANCE.

For information only.


John R. Wodraska

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Proposed Legislation to Address California Implementation of EPA Accidental Release Program

	SB 1851 (Calderon) - 5/5/94	AB 3263 (Campbell) - 5/19/94
Applicability	All facilities handling acutely hazardous materials above thresholds used for existing RMPP must register. Facilities handling greater than Federal thresholds must automatically prepare RMP. Administering agency makes determination based on registration form that other registered facilities pose a risk and must prepare RMP. Determination is made available for public review and comment - comments must be responded to in writing.	Same as SB 1851 except determination is not subject to public review and comment.
Definition of "worst case"	<p>Loss of all material from largest tank or contiguous piping within a ten minute period (or within shortest time a release could physically take place) and failure of all active mitigation systems. Defers to federal definition if final rule is more stringent.</p> <p>Requires examination of more likely significant release scenarios.</p> <p>Requires preparation of maps indicating zones of vulnerability and levels of expected exposure for the most likely release scenarios.</p>	<p>No requirement to analyze a worst case scenario.</p> <p>Requires determination of the worst credible release scenario. Must determine the more likely release scenarios and analyze the offsite consequences of the scenario that would cause the most significant offsite consequences. Requires consideration of parameters that are no longer included in the bill (the amendment does not adequately merge the new language). Must also include a discussion of the likelihood that a worst credible release scenario may occur.</p> <p>Requires preparation of maps indicating zones of vulnerability and levels of exposure. Exact requirements not clear since reference to section in previous version of the bill is retained, but section has been deleted.</p>
Public review of RMP report	RMP report (including maps of likely release scenarios) available for 45 day public review and comment. Notice published as display advertisement in local newspaper and mailed to interested parties. Comments must be responded to in writing. Affected members of public may request public hearing.	Provisions for public review and request for hearing are identical to those in SB 1851
Coordination with existing requirements	Expressly allows use of elements prepared for Process Safety Management compliance where appropriate.	No mention of Process Safety Standard.

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	SB 1851 (Calderon) - 5/5/94	AB 3263 (Campbell) - 5/19/94
Provision for generic plans/model programs	Allows use of generic plans for substantially identical facilities. No provision for model plans.	No provision for generic plans or model programs.
Management of change/modified facilities	<p>Requires 60 day notice and revision of RMP for changes to facility that result in either a significant increase in the amount of material handled or significant increase in risk posed. Revisions to RMP may be preliminary prior to implantation but must be made final within 60 days of implementation.</p> <p>For modifications triggering management of change or pre-start up review elements of RMP program, 48 hours notice must be given to administering agency. Agency may request 48 hour further delay if determined necessary to protect public health/safety or the environment.</p> <p>Allows modifications made under emergency conditions without proper notice as long as notice is made as soon as possible after the discovery of the need to act quickly.</p>	<p>Requires that notice be given and, if appropriate, an amended RMP report be filed with the administering agency 30 days prior to: handling new or additional amounts of chemicals that exceed thresholds or altering equipment, procedure or processes in ways not addressed by RMP if after implementing management of change a finding is made that there is a potential for release that is not analyzed in the RMP.</p> <p>Whenever possible, prior to making modifications involving alterations in equipment, processes, or procedures, an amended RMP should be filed with the administering agency and in all cases the amended RMP must be filed within 60 days following the alteration.</p>
Fees	<p>Administering agencies may assess fees to cover costs of implementing program when authorized by majority vote of the appropriate governing body fees to consider the volume of chemicals, degree of hazard potential, and the size and complexity of the facility.</p> <p>Requires OES to develop a fee system to cover costs incurred in administering program. Fees to consider same factors as those required a local level.</p>	<p>Administering agency may adopt fees to cover cost of program when authorized by majority vote of city council or board of supervisors, as appropriate. Fee may not, for any one facility, exceed the cost of administering the program with respect to that facility.</p> <p>No provision for fees at State level.</p>

4087

Comparison of Proposed and Existing Regulatory Programs Governing Accidental Releases of Hazardous Materials

	Existing California RMPP	Proposed Federal RMP	Cal/OSHA Process Safety Management
Applicability	Based on federal list of extremely hazardous substances. Threshold for chlorine is 100 pounds. Existing facilities requested to prepare RMPP based on administering agency assessment of potential and relative risk.	Based on list developed to implement the rule. Includes flammables and explosives. Threshold for chlorine is 2500 pounds.	Based on list developed by federal OSHA to implement rule. Threshold for chlorine is 1500 pounds.
Program Elements *			
Hazard Assessment	X	Includes analysis of worst case release; defined as instantaneous release and failure of all mitigation systems	Not applicable - focus is on-site consequences/worker safety.
Process Hazard Analysis	X	X	X
Process Safety Information	X	X	X
Standard Operating Procedures	X	X	X
Training	X	X	X
Maintenance	X	X	X
Pre Start Up Review	Not addressed	X	X
Management of Change	Not addressed	X	X
Safety Audits	X	X	X
Accident Investigation	X	X	X
Emergency Response	X	X	X
Documentation	Information submitted to administering agency and available for public review	Information submitted to various agencies and available for public review.	Documentation retained by facility. No submittals required.
Contractors	Not addressed	Not addressed	X
Hot Work Permit	Not addressed	Not addressed	X
Illness and Injury Prevention Plan	Not addressed	Not addressed	X

* Note that although each of the indicated elements is addressed in the California RMPP requirements, the program is primarily driven by the results of the process hazard analysis rather than specific, mandated requirements.

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ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS -
RELATED LEGISLATIVE PROPOSALS

AB 3480 - "Hazardous Materials: Risk Management and Prevention Plans" (Bates, D-Oakland)

Imposes requirement on facilities handling hazardous materials to install secondary containment (methods, structures, techniques, or equipment capable of preventing release to ambient air) if the administering agency finds:

- a significant risk of release;
- that emergency response measures and mitigation technologies are likely to fail or cannot prevent a release from migrating offsite; and
- dispersion of material is likely to endanger people in the vicinity, result in evacuation, disrupt economy, and close transportation routes.

Provides a process by which the facility may dispute the finding; however, the ultimate authority to require containment rests with the administering agency.

AB 3276 - "Hazardous Materials: Risk Management and Prevention Plans" (Baca, D-San Bernadino)

Limits the extent to which air districts play a role in implementing accidental release programs for hazardous materials so that the program would be implemented along existing lines of authority (i.e. Office of Emergency Services at the state level and delegated to local administering agencies such as fire departments).

Also requires that higher risk facilities (as designated by the administering agency) be given higher priority in implementing the program. For example, these facilities would be inspected every two years rather than every three years.

Requires that notice be given and a revised RMPP be submitted to the administering agency 30 days prior to handling additional chemicals or revising existing processes.

AB 3264 - "Air Pollution: Acutely Hazardous Material: Penalty (Campbell, D-Martinez)

Adds to existing penalty structure for violation of air rules to extend penalties to the accidental release of hazardous materials.