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RMP Compliance

Stephen T. Roth
University of Pennsylvania

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Presented to the Faculties of the University of Pennsylvania in Partial Fulfillment of the Requirements for the Degree of Master of Environmental Studies 2006.

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RMP Compliance

Abstract

After the Clean Air Act Amendments became finalized in 1996, the subsequent requirement of Risk Management Plan (RMP) submission by certain large chemical facilities to the EPA was mandated within 3 years. Because of the complexity of many environmental regulations on facilities and the natural gap created by different levels (and agencies) of Government, total compliance with this most important emergency planning regulation could not be verified. This project is meant to assist in bridging the gap between the Local and State knowledge of facility information and assisting the EPA in identifying all potential RMP facilities. By sharing information in both directions, the hope is also to narrow the gap among emergency planning entities to ultimately make the community a safer place.

Comments

Presented to the Faculties of the University of Pennsylvania in Partial Fulfillment of the Requirements for the Degree of Master of Environmental Studies 2006.

RMP COMPLIANCE

EXECUTIVE SUMMARY:

After the Clean Air Act Amendments became finalized in 1996, the subsequent requirement of Risk Management Plan (RMP) submission by certain large chemical facilities to the EPA¹ was mandated within 3 years. Because of the complexity of many environmental regulations on facilities and the natural gap created by different levels (and agencies) of Government, total compliance with this most important emergency planning regulation could not be verified. My project is meant to assist in bridging the gap between the Local and State knowledge of facility information and assisting the EPA in identifying all potential RMP facilities. By sharing information in both directions, my hope is also to narrow the gap among emergency planning entities to ultimately make the community a safer place.

In conjunction with the Philadelphia Fire Department, HazMat Administrative Unit (HMAU), my project initially involves working with the Chemical Emergency Preparedness and Prevention Office (CEPPO) of the EPA Region III² to ensure maximum facility compliance for Risk Management Plans for the city/county of Philadelphia. After acquiring the entire chemical database from the HMAU,³ we broke down the facilities in a manageable format and proceeded to contact the numerous companies listed to confirm or make certain that quantities were correct on the SARA forms. Although other informational sources were utilized and considered, this database proved to be the most fruitful. Using techniques and data analysis compiled from this

¹ United States Environmental Protection Agency; the branch of the Federal Government charged with implementing the CAAA.

² EPA region III is the geographical area comprised of PA, MD, DEL, VA, W VA & Wash DC

³ Listing of all facilities that filed "Tier II" chemical inventory forms that are required by the Superfund Amendments & Re-authorization Act (SARA –Title III) of 1986.

effort, we hope to apply lessons learned to use for the remainder of the State and Region III to assist in attaining 100% compliance of RMP throughout the region.

INTRODUCTION:

Thirty years ago, I was assigned to the firehouse, Engine 29, as a new, rookie Fireman straight out of Fire school, at 4th St & Girard Ave. in the Northern Liberties section of Philadelphia. Besides being almost overwhelmed by the constant action that this busy station afforded me, there was something that made an even deeper impression on my psyche, which molded much of my thinking today. In the rear of the apparatus floor, there was a trophy case commemorating one of the most tragic fires that ever occurred in the Philadelphia Fire Department history. There were seven helmets, which were worn by the brave Philadelphia Firemen, who succumbed to a fire and explosion that happened in the Berg chemical factory at 5th & Berks Sts. in North Philadelphia in 1954⁴. As a result of this fire, the City of Philadelphia established the famous Thrill show and subsequent “Hero Scholarship Fund,” which attempts to compensate the surviving families for their loss due to this event and any other Police or Fireman family that suffers this supreme sacrifice.

I spent many an agonizing night thinking how these deaths may have been prevented and although the job of a firefighter is inherently dangerous, these lives could have been saved. One of the many benefits that have come from this country’s environmental regulations is safety precautions that chemical facilities must enact to prevent accidents in their workplace. Coupled with the pre-planning requirements that the emergency response community bears in conjunction with the facility, many unknown hazards (such as the alien chemical mixture in the tank at the Berg laboratories) have been eliminated. When I fast-forwarded twenty years later as a

⁴ See www.philly.com/mld/dailynews/8010427.htm for recent historical account entitled “They Died For Us”

Hazardous Material (HazMat) Lieutenant, I was charged with the responsibility to act as the “SARA”⁵ coordinator for the Fire Department, and thus became an avid inspector, vigilantly looking for these potential hazardous facility locations. Ever since I entered the MES program, I assumed that I would be working on some type of Capstone that would be linked to my background; this project fits the bill perfectly.

During my previous experience as a HazMat investigator and SARA Title III Coordinator for the Philadelphia Fire Department, I saw the need for cooperation and assistance between the Federal EPA and local agencies. Specifically, when the requirements for the Clean Air Act Amendments (CAAA) Risk Management Plans (RMP) were finalized in June 1996, I knew there had to be some bridging of regulatory philosophies in order to accomplish the ultimate goal of total compliance of all RMP facilities. Thus, being a former and current member of the Philadelphia and Chester County Local Emergency Planning Committees (LEPC), I felt that I had the right background to provide a conduit to assist all affected entities. This project and subsequent Capstone thesis should provide a “win-win-win” situation that should benefit everyone. Not only should this meet my client’s needs of compliance, but the RMP info should enhance the future emergency planning requirements for these facilities that can assist the LEPC and the Fire Department.

DESCRIPTION OF PROJECT:

Working with my Client (EPA, Region 3, CEPPO office), we hope to have identified any potential facility that is required to file Risk Management Plans in the Philadelphia area. Along with the ultimate goal of ensuring 100% compliance in the City of Philadelphia (*the goal of my client*), an analysis was developed to determine the types of facilities that have already filed,

⁵ Superfund Amendment and Reauthorization Act of 1986

along with their respective chemical inventories. We will then develop a template of knowing which facilities to target as we proceed along to this final capstone. While performing this analysis, all information will be updated and shared in both directions with the Fire Department HMAU,⁶ LEPC and the EPA.

CLIENT MISSION:

EPA's Chemical Emergency Preparedness and Prevention Office (CEPPO) provides leadership, builds partnerships, and offers technical assistance to: prevent and prepare for chemical emergencies; respond to environmental crises; inform the public about chemical hazards in their community; and share lessons learned about chemical accidents.⁷ EPA's Region III office, based in downtown Philadelphia @ 1650 Arch St., has as its' CEPPO chief, Mr. Jerry Heston. His team of Perry Pandya (Ch E), Jennifer Shoemaker (Ch E, PM), Mike Welsh (PE, OSC), Al Baginski (PE, DEE) and Bill McHale (PE)⁸ are assisting in this initiative.

HISTORY:

Ever since the catastrophic, toxic release of Methyl Isocyanate at a Union Carbide plant in Bhopal, India in December, 1984, which killed over 2,000 people and injured thousands others, there has been a strong *federal* government movement in this country to protect against this kind of event ever happening in the United States. As a result, initially in 1986, Congress enacted SARA Title III, aka, EPCRA⁹, which mandated facilities to report chemical storage above certain thresholds to three (3) distinct entities: Fire Departments, LEPC's¹⁰ and the State Emergency Response Commission (SERC). This reporting mechanism served as the basis for

⁶ Phila. Fire Dept's. Hazardous Material Administrative Unit-the unit that processes SARA Tier II forms

⁷ <http://yosemite.epa.gov/oswer/ceppoweb.nsf/content/mission.htm>

⁸ Because of budget cutbacks, Mr. Pandya & Baginski were not available during the latter part of the project

⁹ Emergency Planning & Community Right-to-Know Act

¹⁰ SARA also created LEPC's, which were made up of representatives of industry, government and related entities affecting the community

chemical emergency preparedness. When LEPC's received this information from facilities on "Tier II" forms, companies that showed Extremely Hazardous Substances (EHS's) above respective thresholds¹¹, needed to have an "Off-site" emergency response plan formulated by the committees. These "worse case scenario" plans gave a footprint into the community of a toxic material release and describe how the emergency response community would have handled a release.

In 1990, the Clean Air Act Amendments (CAAA) were passed and initiated a requirement for facilities who had very large quantities of certain toxics and flammables¹² to develop a Risk Management Plan (RMP), based on their "Off-site consequence analysis" of a release of a chemical in process. This requirement was not finalized until June 1996, and it gave facilities three years to comply. In addition to requiring *facilities* to develop release response and prevention activities, it also mandated facilities to send their RMP's into EPA for review and initially required community unveiling, which was later scaled back because of Terrorism awareness. What is significant to note is that many SARA chemicals (although not all) are also RMP chemicals, but the thresholds are much higher for RMP filing.¹³ The other significant point of these two comparisons is where this information is required to be filed. Tier II chemical inventory forms are sent on an annual basis to three *Local* and *State* government representatives; RMP information is sent to the *Federal* EPA. Now one can understand why a BRIDGE must be formed to combine the compliance efforts and benefit from each one's informational base.

¹¹ 40 CFR, part 355, appendices A & B contains the listing of EHS's and related Threshold Planning Quantities

¹² 40 CFR, part 68 delineates provisions for these 77 acutely toxics and 63 flammables.

¹³ A listing of both chemical criteria can be found in EPA's publication: "List of Lists", Oct. 2001. See: www.epa.gov.ceppo

INITIAL ACTIVITIES:

For this project, we identified all potential RMP facilities in Philadelphia by mid-November and followed-up with verification by the first week of December. Concurrent with the compliance issue, an analysis was developed as a prediction for future RMP projects. The following are the initial steps taken:

- Visited the region 3 reading room¹⁴ to identify all current RMP's listed on EPA's national database. This database, dated June 2003, listed approximately 20 facilities, some of which I knew had previously gone out of business.
- Several phone calls were made to CEPPO to set up a series of meetings (roughly every 2 weeks) beginning on Sept. 30th, to discuss strategies. The initial meeting unveiled the more current RMP database from CEPPO, which had only 16 facilities listed. After consulting with the Fire Department, I later informed CEPPO that two had "downsized" their inventory, leaving only 14 current RMP facilities for the county.
- A meeting was convened with the Phila. Fire Dept. / HMAU to discuss this project and obtain their "SARA" Database. Of the more than 400 facilities identified, over 140 contain Extremely Hazardous Substances (EHS's) above their thresholds, while the remainder has other hazardous substances more than 10,000 lbs. All of the approximately 360 EHS's established by SARA are by definition, extremely toxic, and thus are a good barometer for the toxics list for RMP. The remaining RMP flammable category and some other toxics may be found in the SARA category of other hazardous substances over 10,000 lb. Also, as part of this initiative, I offered my assistance to the HMAU for any future Emergency planning issues stemming from our results.

¹⁴ Located in the EPA bldg. @ 1650 Arch St.

- During the November PLEPC bi-monthly meeting, Mr. Heston and I informed the committee of our initiative.
- In subsequent meetings with CEPPPO, we agreed to divide the SARA list up and attempted to compare both criteria. From there, a rough list was developed for further research.

METHOD OF RESEARCH/SOURCES OF DATA:

Using the list of toxics and flammables provided by EPA, we compared this list to the SARA database from the PFD. Because SARA requires only a reporting range and not an exact amount, there is some question whether the proper thresholds are being met. A potential list of approximately 15 facilities was created that may be RMP facilities due to the SARA range within RMP thresholds. Another 20 companies have the potential chemicals, but show below the range. In both cases, these needed further verification. Another possible inadequacy with SARA is that the information is already dated when it is received. SARA, Tier II forms are due on March 1st every year, for chemicals that were on hand the previous year. As one can see, this is one possible *inadequate source of data* to be resolved.

Another inadequate source is the OSHA database of Process Safety Management (PSM).¹⁵ Many similar chemical thresholds and subsequent requirements exist for PSM facilities and RMP's. The main problem is that OSHA does not have a central database of filers; they mandate hazard analysis in their processes, but the records remain on site, not sent to OSHA. After several inquiry attempts, I successfully found that the only real listing that's available as public information is the list of facilities that had been cited for non-compliance of PSM's *after* an OSHA inspection was conducted. Even though this may only be a partial list,

¹⁵ See 29 CFR 1910.119 promulgated by the Occupational Safety & Health Administration of the U.S. Dept. Of Labor

some information is better than none. By citing the Freedom of Information Act,¹⁶ I wrote a formal letter to the regional Administrator requesting this information for the entire region III of OSHA, which takes in the same States as EPA's region III. In January, I received a reply listing all facilities in region 3 of OSHA that have been cited for PSM violations due to an inspection since 1990. This "limited" list will be reviewed against the SARA list.

Other sources of information that EPA has used in the past are the other databases that are compiled on their website known as "Envirofacts."¹⁷ These databases integrate many previous regulatory efforts by EPA into one central location that can be used to compare facilities that generate hazardous waste, emit toxics into the environment, or have permits for other concerns. This information was previously reviewed by EPA/CEPPO, but may be revisited as the need arises.

ANALYSIS:

Applying the "Environmental Management" class lesson on environmental indicators to this project, one might feel that this command and control project is dealing strictly with low-level regulatory inputs. Actually, because health and safety issues are at the core of the emergency planning process, the highest priority to protect responders and the community in general ensures prime value to this project. It also serves as a confidence builder, knowing that much is being done to keep our community safe, and should an emergency arise, the potential for saving unnecessary injuries and deaths may never actually be measured, but is priceless.

If one wanted to prioritize the potential risk of these facilities, there are a few barometers that could be met when dealing with the specific chemicals. One category of poisonous chemicals has assigned values for RMP known as "toxic endpoints." These can be defined as the

¹⁶ Passed by congress in 1966 and amended in 1974.

¹⁷ See www.epa.gov/enviro

maximum airborne concentration below which is believed individuals could be exposed to for up to one hour without experiencing serious health effects.¹⁸ This is part of the “dose-response” assessment when EPA looks at Risk Characterization. The other category of RMP chemicals is the flammables. All of these materials must have a National Fire Protection Association (NFPA)¹⁹ rating of 4 for flammability, which is the highest degree of hazard because of having liquid flashpoints below 73 degrees F. and boiling points below 100 degrees F. The potential of these flammables is calculated based on the 1 lb. overpressure distance of the vapor cloud explosion.

Another potential method of prioritizing the risk associated with these highly hazardous substances is to compare the “Threshold Quantities” that EPA assigns to RMP toxics. For the 77 acutely toxic materials, there is a range from a low of 500 lbs. (assigned to the chemical *Phosgene*, which has been identified as a potential chemical Weapons of Mass Destruction, *WMD*),²⁰ to the high of 20,000 lbs. (for *Ammonium Hydroxide* and nine other somewhat less toxic materials).

For our purposes on this immediate project, any SARA facility that meets the criteria for RMP in Philadelphia will be studied equally. The number of facilities is not that great and meeting the already large criteria puts all of these companies in a risk class by themselves; EPA assigns a high “threshold” for disclosure on RMP’s for these potent chemicals.²¹

¹⁸ According to the Emergency Response Planning Guideline 2 (ERPG-2) developed by the American Industrial Hygiene Association

¹⁹ National Fire Protection Association 704 Standard for Identification of Hazards of Materials

²⁰ As determined by the Dept. of Justice; see Law Enforcement Response to WMD, a 16 hr. course geared to the Police response community, DOJ/LSU

²¹ See “List of Lists”, last column entitled “CAA 112® TQ”

CURRENT RMP DATA:

The most current data on file at CEPPO for Philadelphia lists the following chemicals, and I have them ranked by their toxic endpoints:

Hazardous Substance	# of Facilities	Toxic Endpoint
<i>Chlorine</i>	3	(.0087)
<i>Oleum</i>	2	(.010)
<i>Hydrogen Fluoride (HF)</i>	1	(.016)
<i>Hydrochloric Acid (HCL)</i>	1	(.026)
<i>Anhydrous Ammonia</i>	7	(.14)

An interesting coincidence with these 14 chemicals is that they all are considered “corrosives”; which is the effect they have on moist human tissue when one comes in contact with them. Not every “EHS” is toxic by its caustic effect on the body; some exhibit poisonous effects through other methods.

Note that *Anhydrous Ammonia* and *Chlorine* comprise 10 of the 14 (71%) of the total facilities. According to our CEPPO office, this is slightly less than the national average, which is approximately 80%. This information will be useful as we proceed to the remainder of the State and region.

An analysis of the *type* of RMP facilities shows most of the Anhydrous Ammonia²² facilities are cold storage food warehouses, while one is the main distributor of Ammonia in this area. The three Chlorine facilities are water treatment plants, which eventually are planning to

²² Anhydrous Ammonia is 100% gaseous Ammonia without water

switch to a weaker solution of Sodium Hypochlorite²³; this future action will eventually de-list them from RMP requirements. The remaining four are: 2 chemical distributors, 1 pesticide distributor, and 1 refinery.

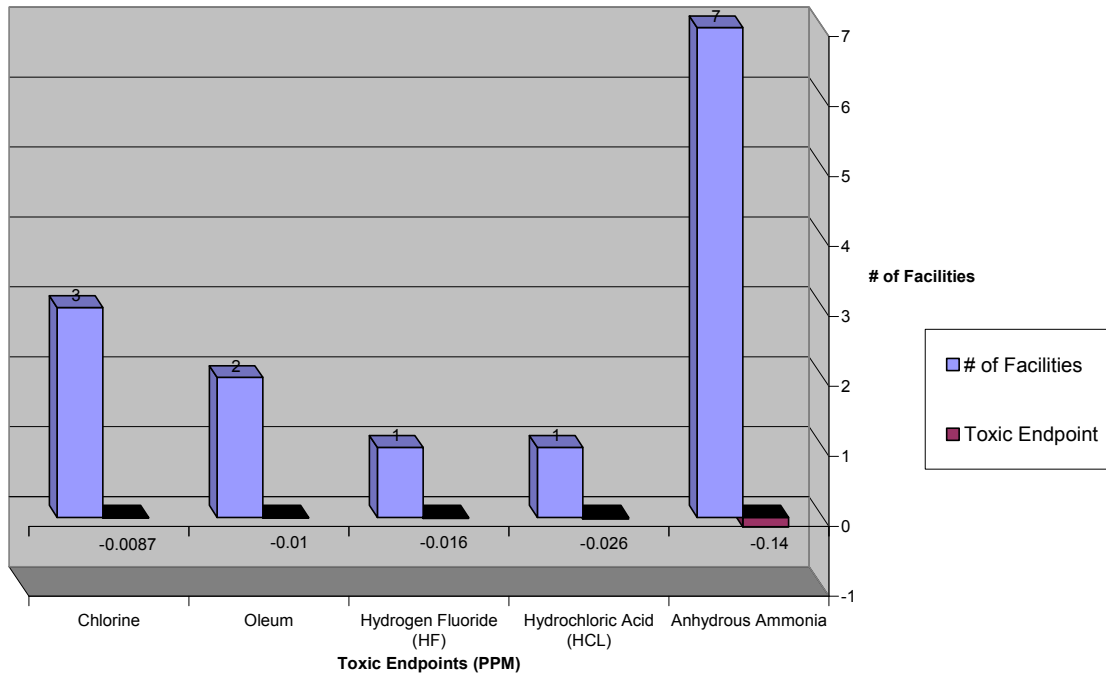
Clearly, based on the toxic endpoint, Chlorine would be the riskiest chemical to the community and thus would have the largest impact for a potential release area. Another important fact about Chlorine is the type of container that is used to transport it. Generally, one will find Chlorine either in “1 ton containers” or 90-ton rail cars. A release from either one of these pressurized vessels will generally only get worse because of the corrosive effect of the hydrochloric acid²⁴; therefore an impact area will be affected in less time than many other chemicals. The cold storage facilities would pose the least risk among the RMP facilities, not only because of the higher toxic endpoint, but also because Anhydrous Ammonia has a very low odor threshold. When the average person begins to detect Ammonia odor, they generally have plenty of time to escape before they succumb to its hazardous effects.²⁵

²³ Sodium Hypochlorite contains approx. 12.5% Chlorine in solution

²⁴ Hydrochloric acid is formed when water comes in contact with Chlorine gas.

²⁵ Odor detectable by most people is 25 ppm, according to “Emergency Response to Ammonia Incidents”, PFD/HMAU, Dec. 1993

PHILADELPHIA RMP CHEMICALS (Facilities)



REGION III RMP DATA:

As a comparison to these 14 facilities in Philadelphia, the following other information is shown for the rest of the region (by State):

■PA	=	418
■VA	=	187
■MD	=	124
■W VA	=	86
■DEL	=	37
■DC	=	2
RMP'S IN REGION 3 (as of 11/03)		(854 Total)²⁶

²⁶ From the Ceppo "intranet" info at EPA region III

(In Nov.1999, EPA listed a total of 16,517 RMP's nationwide in their Envirofacts database on the Internet; 468 in PA).²⁷

POTENTIAL FACILITIES:

The following represents Hazardous Substances that have been reported on SARA forms by facilities that have the *potential* threshold criteria for RMP:²⁸

TOXICS: Hydrochloric Acid (HCL), Hydrofluoric Acid (HF), Nitric Acid, and Ammonium Hydroxide

FLAMMABLES: Ethylene, Dimethylamine (*Propane* has been also listed on many Tier II forms, but recently has been exempted from RMP's if used as fuel)²⁹

FINDINGS:

The *flammable Ethylene*, which is the primary component in Natural Gas, is also exempted from RMP's for similar reasons as Propane; it is being held for sale as a fuel. The facility using **Dimethylamine** was determined to have incorrectly over-reported their quantity of this product on their Tier II form; they had less than 10,000 lbs.

The *toxics* breakdown was as follows:

- 6 Facilities had **HCL**, but their total aggregate was less than 15,000 lbs., which is the RMP threshold. The quantity must be more than a 37% concentration and then you need to reach the above threshold. Ironically, HCL was de-listed from SARA EHS thresholds shortly after SARA was enacted, due to strong industry lobbyist efforts.

²⁷ From www.epa.gov/ceppo, which has since been removed from the public eye due to Terrorism concerns

²⁸ On the tier II form, the range indicated for most of these substances was between 10,000 & 100,000 lbs.; while for HF the range was 1,000 to 10,000 lbs. RMP criteria doesn't use ranges, it's more specific.

²⁹ This exemption is due to lobbyists arguing that many facilities use Propane only as a backup for fuel shortage supplies in extreme weather and or other unusual circumstances.

- 6 Facilities had **Ammonia Hydroxide**³⁰ and although they appeared to reach the thresholds, the percentage of Ammonia in water needed to be greater than 20 and it had to exceed 20,000 lbs. This threshold was not met.
- 1 Facility had **Nitric Acid** greater than 15,000 lbs., but not at the 80% or greater mixture that RMP's mandate.
- 1 Facility had **HF** above the 1,000 lb. threshold, but not at the required 50% mixture.

All of these toxics were also "corrosives."

NOTE: Due to new security concerns after 9-11, the facility information cannot be openly disclosed to the general public, although all of our emergency entities involved will be given the entire information, if desired. Although we cannot use specific company names, the following represents the *type* of facilities that use the corresponding Chemicals:

<u>TOXICS</u>			
<u>Ammon.Hydroxide</u>	<u>HCL</u>	<u>Nitric Acid</u>	<u>HF</u>
Paper company	Chem. dist	Chem. distributor	Auto clean. supplier
Water treatment	Electric parts		
Container mfr	Metal refinisher		
Steam energy supplier	Rail yard		
Cleaner mfr/dist	Cleaner mfr/dist		
Chemical distributor	Paper co.		

³⁰ Ammonium Hydroxide is the dilute form of Ammonia in a solution of water. This is considered a strong caustic material.

FLAMMABLES

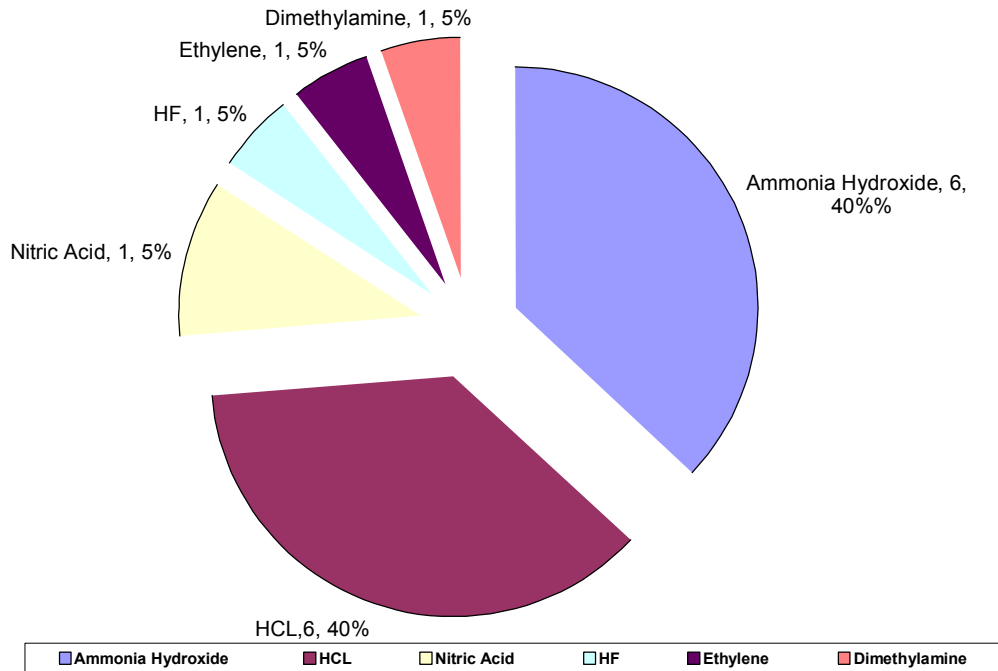
Ethylene

Dimethylamine

Gas company

Chemical distributor

CHEMICALS (*Facilities*) w/in RMP range

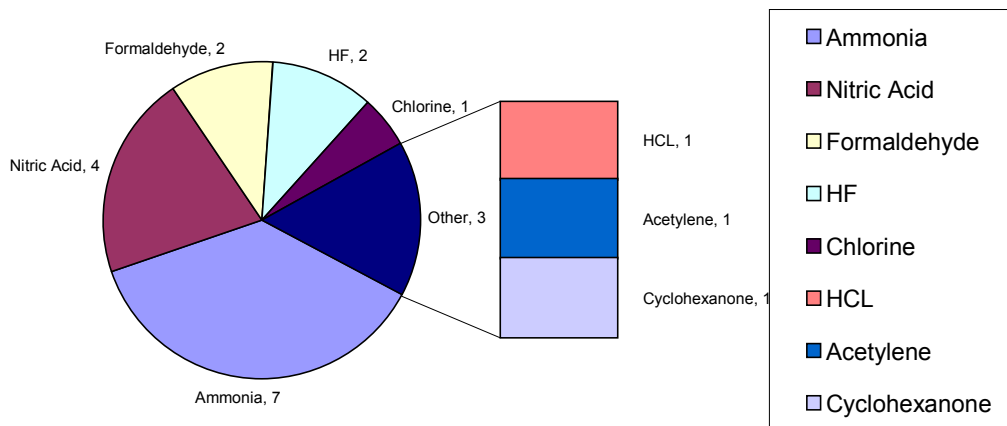


**FACILITIES LISTING RMP CHEMICALS ON THEIR TIER II,
BUT SHOWING BELOW RANGE**

The following Hazardous substances are from facilities that indicated RMP chemicals in the range *below* the RMP criteria; we determined we needed to verify this information to make certain. Even though all facilities fell below the requirements, many were close enough to ascertain total storage.

Hazardous Substance	RMP Threshold	# of Facilities
Anhydrous Ammonia	10,000 lbs.	7
Nitric Acid	15,000 lbs.	4
Formaldehyde	15,000 lbs.	2
Hydrofluoric Acid	1,000 lbs.	2
Chlorine	2,500 lbs.	1
Hydrochloric Acid	15,000 lbs.	1
Acetylene	10,000 lbs.	1
Cyclohexanone	10,000 lbs.	1

Facilities w/ Chemicals below TPQ



Even though all of the above facilities indicated lower quantities than the RMP threshold, it was important to ascertain exact amounts because of some prior knowledge about how facilities report chemicals. Sometimes there is confusion of how long a substance must be on

hand in order to report it on a Tier II. Even if a material is there for one minute, it also qualifies for storage requirements. By double-checking with these facilities, we were also letting them know the potential for any future compliance requirements, should they decide to increase their inventory.

SUMMARY OF FINDINGS FOR PHILADELPHIA COUNTY:

As the above data makes evident, despite placing all of the facilities under a microscope, we were unable to find any that were not already in compliance with our regulatory effort. At face value, it would appear that this initiative was not necessary, but in actuality, there can be many benefits that came from our efforts. First of all, much information has been updated from both the RMP facilities and from some SARA facilities. We have shared these updates with the affected entities. It has also become evident that through the efforts of many concerned groups such as the PLEPC, the PFD/HMAU and region III of EPA, a great deal of information has been disseminated to facilities throughout this county and the subsequent messages have been received. This confirms that this region has been successful in accomplishing its mission, and our efforts have validated this point. During the years following the SARA mandates, the HMAU and the PLEPC, coupled with the enforcement actions of EPA/CEPPO were extremely pro-active in trying to identify all possible chemical facilities. Making them aware of environmental regulations in general, probably helped to keep them abreast of the newer laws such as the Clean Air Act Amendments' RMP. Our project has also helped to ensure cooperation between different government levels, which can be invaluable during a subsequent emergency.

FUTURE BENEFITS:

As we proceed forward to study the remainder of PA and region III, there have been some concrete analysis factors that can be used. First, the exact percentage of certain substances is especially vital when it comes to RMP compliance issues. With SARA, once specific substances were identified, the only other real criterion for compliance issues was the total quantity that could be found at any one time. Secondly, percentage of substances was not nearly as important as with the RMP corrosives. Whether through shear accident or if this was purposely planned, there are built-in incentives by EPA to reduce inventory of hazardous substances. Either by keeping percentages down or reducing of inventory, many facilities can eliminate the need for sometimes-expensive compliance paperwork. In the long run, this is also beneficial to the community because they will not need to be concerned about a large hazardous release.

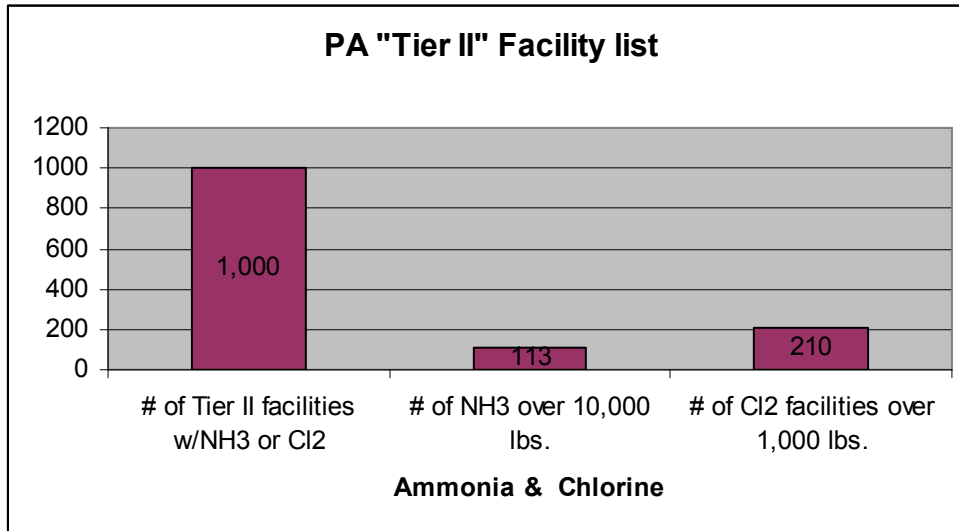
Looking at our current and potential RMP facilities, there are common prime, potential other companies that can be looked at as a first priority when we go outside of Philadelphia County. It's apparent that all *cold storage facilities, water treatment plants and chemical distributors* should all be scrutinized to make sure their inventories are identified. We can also compare some of the similar smaller companies that came close to the threshold in Philadelphia; in a larger rural area, space isn't as much of a premium and therefore inventories may be larger.

Looking at the remainder of the State, there are some specific informational sources that need to be studied. Instead of contacting each one of the 67 individual LEPC's associated with each county of PA, we will go over the SARA information that was sent to "Pennsafe" (State of PA entity that receives a copy of the Tier II form). In January, EPA contacted this PA Department of Labor and Industry division, requesting all of the Tier II information that was sent

to the State, in order to sift out the Extremely Hazardous Substances and any extremely flammables. Because of the large volume of information, Pennsafe suggested to just look at two major possible RMP chemicals, and compare this listing to what already has been filed. In the future, we can then look at other RMP chemicals that have been filed on Tier II forms, prioritizing them based on quantities disclosed.

We have recently received a 62-page report listing all of the facilities in the State that file Tier II forms for either Chlorine or Anhydrous Ammonia. Of the over 1,000 facilities³¹ that reported, 113 are listed having Anhydrous Ammonia over 10,000 lbs. Assuming that this information is still accurate, and because this is the threshold for RMP purposes, we can make the assumption that this is the same number of facilities required to file RMP's based on Ammonia. The number of Chlorine facilities that reported having quantities exceeding 1,000 lbs. numbered 210. Remembering that the RMP threshold is 2500 lbs., we can make the assumption that some of these facilities may exceed the threshold, although some may not. This listing needs further investigation.

³¹ This 1,000 facility number is only an approximate value that is estimated because we don't have the entire database



From this listing of Ammonia and Chlorine facilities, we will then compare the current RMP database in region 3. This comparison should give us a fairly accurate listing of any potential non-compliance facilities. While EPA has not made a final decision on how they will enforce any non-compliance, these facilities will definitely be put on notice of their responsibilities for RMP's.

Another central database source from the State of PA would be the listing of "Off-site" plan facilities that reside with the PA Emergency Management Agency (PEMA). These plans, which are submitted to PEMA for approval, by each individual county, should list all facilities that have Extremely Hazardous Substances (EHS) above their respective thresholds for Emergency planning purposes. Keep in mind that not all Tier II substances are considered extremely hazardous, only the over 300 that are listed in the section 302 column of the List of lists. This database from PEMA should delineate more specifically a narrower range for both Chlorine and Ammonia, thereby helping to determine whether the facility is over the threshold.

We were hoping that once this information was received, not only can we narrow down the field of Chlorine users that are over 2500 lbs., but also we can then begin to search the other RMP toxic substances listing. Even though we were verbally informed by PEMA that this info

was obtainable, we received a recent E-mail from them explaining that we must go through each individual LEPC to get specific “Off-site” plan chemical info. Based on this new information, a new strategy needs to be considered. Perhaps, possibly sending questionnaires of general RMP information to LEPC’s and in turn, informing them of the EPA information available to them.

Until this information is received, the current strategy by the CEPPO office is to take the Tier II information and compare what Ammonia and Chlorine facilities definitely report over the RMP thresholds and then compare this list to those that have already filed RMP’s. Based on this diligent comparison performed by CEPPO, 20 facilities were identified as being remiss. CEPPO has determined to issue these facilities a 15-day response letter that mandates that they answer the informational request or are subject to fines/penalties under the Clean Air Act.

Some other possible sources that should be considered in the future are any local Fire Department and Hazardous Material Units records and related industry suppliers and associations.³² I am sure as we start looking at other counties, there may be specific industries that are indigenous to them, that may have their own type of toxics and/or flammables. We’ll have to study them on a case-by-case basis. Also, if needed, each individual county can be contacted to verify the same information that was sent to the State, although this process could be very labor intensive and for our purposes, may not be an effective management of time.³³ One could also look at any of these databases for facility *types* (e.g. chemical distributors).

For the remainder of this region, and as a blueprint for any other region’s efforts to attempt this same initiative, I am including a crosswalk checklist as an appendix to easily assist others in possible identifications. Because these RMP plans need to be updated every 5 years, this is an especially good time to send out information to all potential facilities. Not only will

³² Each 1 of 67 counties in the State of PA must have their own HazMat response unit, or 1 on retainer that could respond with/in 2 hours

³³ By soliciting individual LEPC’s, an incentive of information sharing can be utilized

information serve as a reminder to current compliers, but also a tickler will help to bring any facilities that “sit on the bubble.”

SUMMARY:

In addition to meeting my client’s goal of total RMP compliance, I feel many benefits will come of this initiative. Besides the interactive cooperation that needs to continually transpire between governmental agencies, information sharing both ways will yield some expected and unexpected results. When emergency response entities plan together, a smoother experience results should the real emergency happen. Obviously, this effort has served as a blueprint for our future endeavors; hopefully it can be useful to others who need to accomplish similar goals.

FINAL CONCLUSION AND RECOMMENDATIONS:

Because most of the individual LEPC’s have an intimate knowledge of what is in their planning districts, it may be advantageous to enlist their assistance in this endeavor. If we can provide some incentive to them to assist us, they may be more apt to be diligent about their investigation. If we provide them some educational tools to assist us (e.g. giving them a current listing of the facilities in their counties, providing them RMP info and thresholds, and showing them how this could help them in their planning process), they may want to be proactive to bring all of their potential non-compliers on line. Because many LEPC’s are understaffed and strictly volunteer, this may be easier said than done, but it is worth the effort to at least try, if it hasn’t already been done. Also, because of the political arena involved with some localities, this just may not be possible.

We have just been informed that effective April 9, 2004, the new rule has been signed by the EPA administrator, amending the submission and data requirements for the RMP program.

As part of this rulemaking, EPA has clarified specific 5-year deadline requirements for the updating of RMP's. This rulemaking can be an opportune time to seek the LEPC help, by informing them of these requirements and asking them if they would like to send out information to their respective facilities. We plan to do just that in Philadelphia.

APPENDIX "A"

(CHECKLIST FOR RMP SEARCH)

- Research current “Envirofacts” from EPA website
- Acquire “Tier II” database from State Emergency Response Commission (SERC)
 - If necessary, individual counties may need to be contacted for verification
- Acquire “Off-Site plan” database from SERC (If possible)
 - If necessary, individual counties may need to be contacted for verification
- Acquire corresponding OSHA region’s PSM inspection database
- Using RMP criteria for toxics AND flammables, compare above info
- If necessary, verification with facilities may be made either through phone calls, informational letters (preferably certified mail) or through site inspections
- Additional cross-referencing can be made with local Fire Departments, Hazardous Material Response Units, or other local entities that have jurisdiction over chemical storage, use or discharges (e.g. Water, Air, Health, &/or License Depts.)
- Other potential cross-referencing could be accomplished through trade associations, chemical suppliers or “non-government associations” (NGO’s) that may have information for other purposes
- Send out 5 year update information (due in 2004) to both previous filers & potential future filers to bring everyone into the fold
- Enlist LEPC’s assistance wherever possible

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