Chemical Emergency Prevention & Planning Newsletter

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CHEMICAL EMERGENCY PREVENTION & PLANNING
Newsletter

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REPORT

CHEMICAL or OIL SPILLS
to the NATIONAL RESPONSE CENTER

1-800-424-8802

Process Hazard Analysis (40 CFR 68.67): The Risk Management Program (RMP) of the EPA requires the facility to perform an initial process hazard analysis (PHA) on Program 3 processes that are subject to OSHA Processes Safety Management (PSM). The PHA must identify, evaluate, and control any possible offsite impacts that could occur at your facility.

For More Information: RMP Guidance

Process Hazard Analysis (PHA)

The process hazard analysis (PHA) is a key requirement of EPA's Risk Management Program (RMP) rule, 40 CFR Part 68, and OSHA's Process Safety Management (PSM) standard, 29 CFR 1910.119. These regulations require that PHA address toxic, fire, and explosion hazards resulting from specific chemicals and their possible impacts on employees, the public and the environment.

PHA is a thorough, orderly, and systematic approach for identifying, evaluating, and controlling the hazards of processes involving highly hazardous chemicals. The facility shall perform a process hazard analysis on all processes covered by the EPA RMP rule or OSHA PSM standard.

The process hazard analysis methodology selected must be appropriate to the complexity of the process and must identify, evaluate, and control the hazards involved in the process.

First, the facility must determine and document the priority order for conducting process hazard analyses based on a rationale that includes such considerations as the extent of the process hazards, the number of potentially affected employees, the age of the process, and the operating history of the process. The process hazard analyses should be conducted as soon as possible.

Walk-around site inspection by PHA Team

The facility shall use one or more of the following methods, as appropriate, to determine and evaluate the hazards of the process being analyzed:

- What-if,
- Checklist,
- What-if/checklist,
- Hazard and operability study (HAZOP),
- Failure mode and effects analysis (FMEA),
- Fault tree analysis, or
- An appropriate equivalent methodology.

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Whichever method(s) are used, the process hazard analysis shall address the following:

- The hazards of the process;
- The identification of any previous incident that had a likely potential for catastrophic consequences;
- Engineering and administrative controls applicable to the hazards and their interrelationships, such as appropriate application of detection methodologies to provide early warning of releases.
- Consequences of failure of engineering and administrative controls;
- Stationary source siting;
- Human factors; and
- A qualitative evaluation of a range of the possible safety and health effects of failure of controls.

The process hazard analysis shall be performed by a team with expertise in engineering and process operations, and the team shall include at least one employee who has experience and knowledge specific to the process being evaluated. Also, one member of the team must be knowledgeable in the specific process hazard analysis methodology being used.

The facility shall establish a system to promptly address the team's findings and recommendations; assure that the recommendations are resolved in a timely manner and that the resolution is documented; document what actions are to be taken; complete actions as soon as possible; develop a written schedule of when these actions are to be completed; and communicate the actions to operating, maintenance, and other employees whose work assignments are in the process and who may be affected by the recommendations or actions.

At least every five years after the completion of the initial process hazard analysis, the process hazard analysis shall be updated and revalidated by a team meeting the program's requirements to ensure that the hazard analysis is consistent with the current process.

The facility shall keep on file and make available to EPA or/and OSHA, on request, process hazard analyses and updates or revalidation for each process covered by RMP or/and PSM, as well as the documented resolution of recommendations, for the life of the process.

(References: EPA's RMP; OSHA's PSM)

PHA Techniques

This article provides descriptions of each of the PHA techniques listed in the OSHA PSM standard and EPA RMP rule (§ 68.67). These descriptions include information on what each technique is, which types of processes they may be appropriate for, what their limitations are, and what level of effort is typically associated with each. This information is based on Guidelines for Hazard Evaluation Procedures, 2nd Ed., published by AIChE/CCPS. If you are interested in more detailed discussion and worked examples, you should refer to the AIChE/CCPS volume.

Neither the information below nor the full AIChE/CCPS volume will provide you with enough information to conduct a PHA. The rule requires that your PHA team include at least one person trained in the technique you use. Training in PHA techniques is available from a number of organizations. If you must conduct multiple PHAs, you are likely to need to update your PHAs frequently, or if you have a complex process that will take several weeks to analyze, you may want to consider training one or more of your employees. If you have a single process that is unlikely to change more than once every five years, you may find it more cost-effective to hire a trained PHA leader.

Descriptions of Techniques

▶ Checklists

Checklists are primarily used for processes that are covered by standards, codes, and industry practices—for example, storage tanks designed to ASME standards, ammonia handling covered by OSHA (29 CFR 1910.111), propane facilities subject to NFPA-58. Checklists are easy to use and can help familiarize new staff with the process equipment. AIChE/CCPS states that checklists are a highly cost- effective way to identify customarily recognized hazards. Checklists are dependent on the experience of the people who develop them; if the checklist is not complete, the analysis may not identify hazardous situations.

Checklists are created by taking the applicable standards and practices and using them to generate a list of questions that seek to identify any differences or deficiencies. If a checklist for a process does not exist, an experienced person must develop one based on standards, practices, and facility or equipment experience. A completed checklist usually provides

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"yes," "no," "not applicable," and "need more information" answers to each item. A checklist analysis involves touring the process area and comparing equipment to the list.

AIChE/CCPS estimates that for a small or simple system a checklist will take 2 to 4 hours to prepare, 4 to 8 hours to evaluate the process, and 4 to 8 hours to document the results. For larger or more complex processes, a checklist will take 1 to 3 days to prepare, 3 to 5 days to evaluate, and 2 to 4 days to document.

▶ What-If

A What-If is a brainstorming approach in which a group of people familiar with the process ask questions about possible deviations or failures. These questions may be framed as What-If, as in "What if the pump fails?" or may be expressions of more general concern, as in "I worry about contamination during unloading." A scribe or recorder takes down all of the questions on flip charts or a computer. The questions are then divided into specific areas of investigation, usually related to consequences of interest. Each area is then addressed by one or more team members.

What-If analyses are intended to identify hazards, hazardous situations, or accident scenarios. The team of experienced people identifies accident scenarios, consequences, and existing safeguards, then suggests possible risk reduction alternatives. The method can be used to examine deviations from design, construction, modification, or operating intent. It requires a basic understanding of the process and an ability to combine possible deviations from design intent with outcomes. AIChE describes this as a powerful procedure if the staff are experienced; "otherwise, the results are likely to be incomplete."

A What-If usually reviews the entire process, from the introduction of the chemicals to the end. The analysis may focus on particular consequences of concern. AIChE provides the following example of a What-If question: "What if the raw material is the wrong concentration?" The team would then try to determine how the process would respond: "If the concentration of acid were doubled, the reaction could not be controlled and a rapid exothermic would result." The team might then recommend steps to prevent feeding wrong concentrations or to stop the feed if the reaction could not be controlled.

A What-If of simple systems can be done by one or two people; a more complex process requires a larger team and longer meetings. AIChE/CCPS estimates that for a small or simple system a What-If analysis will take 4 to 8 hours to prepare, 1 to 3 days to evaluate the process, and 1 to 2 days to document the results. For larger or more complex processes, a What-If will take 1 to 3 days to prepare, 4 to 7 days to evaluate, and 4 to 7 days to document.

▶ What-If/Checklist

A What-If/Checklist combines the creative, brainstorming aspects of the What-If with the systematic approach of the Checklist. The combination of techniques can compensate for the weaknesses of each. The What-If part of the process can help the team identify hazards and accident scenarios that are beyond the experience of the team members. The checklist provides a more detailed systematic approach that can fill in gaps in the brainstorming process. The technique is generally used to identify the most common hazards that exist in a process. AIChE states that it is often the first PHA conducted on a process, with subsequent analyses using more detailed approaches.

The purpose of a What-If/Checklist is to identify hazards and the general types of accidents that could occur, evaluate qualitatively the affects of the effects, and determine whether safeguards are adequate. Usually the What-If brainstorming precedes the use of the checklist, although the order can be reversed.

The technique usually is performed by a team experienced in the design, operation, and maintenance of the process. The number of people required depends on the complexity of the process. AIChE/CCPS estimates that for a small or simple system a What If/Checklist analysis will take 6 to 12 hours to prepare, 6 to 12 hours to evaluate the process, and 4 to 8 hours to document the results. For larger or more complex processes, a What- If/Checklist will take 1 to 3 days to prepare, 4 to 7 days to evaluate, and 1 to 3 weeks to document.

▶ HAZOP

The Hazard and Operability Analysis (HAZOP) was originally developed to identify both hazards and operability problems at chemical process plants, particularly for processes using technologies with which the plant was not familiar. The technique has been found to be useful for existing processes as well. A HAZOP requires an interdisciplinary team and an experienced team leader.

The purpose of a HAZOP is to review a process or operation systematically to identify whether process

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deviations could lead to undesirable consequences. AIChE states that the technique can be used for continuous or batch processes and can be adapted to evaluate written procedures. It can be used at any stage in the life of a process.

HAZOPs usually require a series of meetings in which, using process drawings, the team systematically evaluates the impact of deviations. The team leader uses a fixed set of guide words and applies them to process parameters at each point in the process. Guide words include "No," "More," "Less," "Part of," "As well as," "Reverse," and "Other than." Process parameters considered include flow, pressure, temperature, level, composition, pH, frequency, and voltage. As the team applies the guide words to each process step, they record the deviation, with its causes, consequences, safeguards, and actions needed, or the need for more information to evaluate the deviation.

HAZOPs require more resources than simpler techniques. AIChE states that a simple process or a review with a narrow scope may be done by as few as three or four people, if they have the technical skills and experience. A large or complex process usually requires a team of five to seven people. AIChE/CCPS estimates that for a small or simple system a HAZOP analysis will take 8 to 12 hours to prepare, 1 to 3 days to evaluate the process, and 2 to 6 days to document the results. For larger or more complex processes, a HAZOP will take 2 to 4 days to prepare, 1 to 3 weeks to evaluate, and 2 to 6 weeks to document.

▶ Failure Mode and Effects Analysis (FMEA)

A Failure Mode and Effects Analysis (FMEA) evaluates the ways in which equipment fails and the system's response to the failure. The focus of the FMEA is on single equipment failures and system failures. An FMEA usually generates recommendations for increasing equipment reliability. FMEA does not examine human errors directly, but will consider the impact on equipment of human error. AIChE states that FMEA is "not efficient for identifying an exhaustive list of combinations of equipment failures that lead to accidents."

An FMEA produces a qualitative, systematic list of equipment, failure modes, and effects. The analysis can easily be updated for design or system changes. The FMEA usually produces a table that, for each item of equipment, includes a description, a list of failure modes, the effects of each failure, safeguards that exist, and actions recommended to address the failure. For example, for pump operating normal, the failure modes would include fails to stop when required, stops when required to run, seal leaks or ruptures, and pump case leaks or ruptures. The effects would detail both the immediate effect and the impact on other equipment. Generally, when analyzing impacts, analysts assume that existing safeguards do not work. AIChE states that "more optimistic assumptions may be satisfactory as long as all equipment failure modes are analyzed on the same basis."

An FMEA requires an equipment list or P&ID, knowledge of the equipment, knowledge of the system, and responses to equipment failure. AIChE states that on average, an hour is sufficient to analyze two to four pieces of equipment. AIChE/CCPS estimates that for a small or simple system an FMEA will take 2 to 6 hours to prepare, 1 to 3 days to evaluate the process, and 1 to 3 days to document the results. For larger or more complex processes, an FMEA will take 1 to 3 days to prepare, 1 to 3 weeks to evaluate, and 2 to 4 weeks to document.

▶ Fault Tree Analysis (FTA)

A Fault Tree Analysis (FTA) is a deductive technique that focuses on a particular accident or main system failure and provides a method for determining causes of the event. The fault tree is a graphic that displays the combinations of equipment failures and human errors that can result in the accident. The FTA starts with the accident and identifies the immediate causes. Each immediate cause is examined to determine its causes until the basic causes of each are identified. AIChE states that the strength of FTA is its ability to identify combinations of basic equipment and human failures that can lead to an accident, allowing the analyst to focus preventive measures on significant basic causes.

AIChE states that FTA is well suited for analyses of highly redundant systems. For systems vulnerable to single failures that can lead to accidents, FMEA or HAZOP are better techniques to use. FTA is often used when another technique has identified an accident that requires more detailed analysis. The FTA looks at component failures (malfunctions that require that the component be repaired) and faults (malfunctions that will remedy themselves once the conditions change). Failures and faults are divided into three groups: primary failures and faults occur when the equipment is operating in the environment for which it was intended; secondary failures and faults occur when the system is operating outside of intended environment; and

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command faults and failures are malfunctions where the equipment performed as designed but the system that commanded it malfunctioned.

An FTA requires a detailed knowledge of how the plant or system works, detailed process drawings and procedures, and knowledge of component failure modes and effects. AIChE states that FTAs need well trained and experienced analysts. Although a single analyst can develop a fault tree, input and review from others is needed.

AIChE/CCPS estimates that for a small or simple system an FTA will take 1 to 3 days to prepare, 3 to 6 days for model construction, 2 to 4 days to evaluate the process, and 3 to 5 days to document the results. For larger or more complex processes, an FTA will take 4 to 6 days to prepare, 2 to 3 weeks for model constructions, 1 to 4 weeks to evaluate, and 3 to 5 weeks to document.

▶ Other Techniques

The RMP rule allows you to use other techniques if they are functionally equivalent. The AIChE Guidelines include descriptions of a number of other techniques including Preliminary Hazard Review, Cause-Consequence Analysis, Event Tree Analysis, and Human Reliability Analysis. You may also develop a hybrid technique that combines features of several techniques or apply more than one technique.

Selecting a PHA Technique

Table 1 is adapted from the AIChE Guidelines and indicates which techniques are appropriate for particular phases in a process design and operation.

Table 1: Applicability of PHA Techniques (ref: AIChE)

Particular Phases in Process Design and Operation	Checklist	What-if	What-if/ Checklist	HAZOP	FMEA	FTA
R&D		✓				
Design	✓	✓	✓			
Pilot Plant Operation	✓	✓	✓	✓	✓	✓
Detailed Engineering	✓	✓	✓	✓	✓	✓
Construction/Startup	✓	✓	✓			
Routine Operation	✓	✓	✓	✓	✓	✓
Modification	✓	✓	✓	✓	✓	✓
Incident Investigation		✓		✓	✓	✓
Decommissioning	✓	✓	✓			

▶ Factors in Selecting a Technique

Type of process will affect your selection of a technique. AIChE states that most of the techniques can be used for any process, but some are better suited for certain processes than others. FMEA efficiently analyzes the hazards associated with computer and electronic systems; HAZOPs do not work as well with these. Processes or storage units designed to industry or government standards can be handled with checklists.

AIChE lists What-If, What-If/Checklist, and HAZOP as better able to handle batch processes than FTA or FMEA because the latter do not easily deal with the need to evaluate the time-dependent nature of batch operations. Analysis of multiple failure situations is best handled by FTA. Single-failure techniques, such as HAZOP and FMEA, are not normally used to handle these although they can be extended to evaluate a few simple accident situations involving more than one event.

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AIChE states that when a process has operated relatively free of accidents for a long time, the potential for high consequence events is low, and if there have been few changes to invalidate the experience base, the less exhaustive techniques, such as a Checklist, can be used. When the opposite is true, the more rigorous techniques are more appropriate.

A final factor in selecting a technique is time required for various techniques. Table 2 below summarizes AIChE's estimates of the time required for various steps. The full team is usually involved in the evaluation step; for some techniques, only the team leader and scribe are involved in the preparation and documentation steps.

Table 2: Time and Staffing for PHA Techniques (ref: AIChE)

Various Steps	Checklist	What-if	What-if/ Checklist	HAZOP	FMEA	FTA
Simple/Small System						
# Staff	1-2	2-3	2-3	3-4	1-2	2-3
Preparation	2-4 h	4-8 h	6-12 h	8-12 h	2-6 h	1-3 d
Modeling						3-6 d
Evaluation	4-8 h	1-3 d	6-12 h	1-3 d	1-3 d	2-4 d
Documentation	4-8 h	1-2 d	4-8 h	2-6 d	1-3 d	3-5 d
Large/Complex Process						
# Staff	1-2	3-5	3-5h	5-7	2-4	2-5
Preparation (hours)	1-3 d	1-3 d	1-3 d	2-4 d	1-3 d	4-6 d
Modeling						2-3 w
Evaluation	3-5 d	4-7 d	4-7 d	1-3 w	1-3 w	1-4 w
Documentation	2-4 d	4-7 d	1-3 w	2-6 w	2-4 w	3-5 w

Note: h = hours; d = days (8 hours); w = weeks (40 hours)

Upcoming Risk Management Training in 2013

Plan to attend the FREE EPA Risk Management Training Day

RISK MANAGEMENT PROGRAM (RMP) Training

Pocatello, Idaho - May 15, 2013

Additional information can be found on EPA Region 10's RMP Website:

Training Information

What happens when the lights go out?

Be prepared for utility failures!

(Process Safety Beacon 1/2012)

A maintenance worker went into the electrical room to shut off a non-process circuit. By mistake, he turned off the circuit breaker for the plant programmable logic controller (PLC) power. He realized his error, reset the PLC circuit breaker and turned off the intended circuit breaker. The short power interruption to the PLC caused some process equipment to stop while other equipment continued to operate. The result was a process trying to run with partial controls. The process operation was upset, isolation valves closed, and toxic material was vented at a rate that overloaded a vent scrubber. Fortunately, no one was injured and the release did not leave the plant site.

Why did this happen?

- We do not know how well the individual breakers were labeled, or how well the electrician was trained. In a process hazard analysis (PHA), this type of failure should be considered when discussing human factors. Unfortunately, the potential consequences of a small event such as this may be missed in the scope of a PHA.
- When doing a PHA, be sure that you know what happens to instruments, valves, and other equipment in case of failure of electric power or other utilities such as instrument air. Do they move to a "fail-safe" position or remain in their last position? If you are not sure, follow the rule: "when in doubt, check it out".
- Knowing the failure state of a single device may not be enough to understand what happens to a process if a large number of devices move to the failure position at the same time. Think about what happens if a lot of equipment loses power at the same time.

What can you do?

- Know what happens if the power fails for a single piece of equipment, or to a part of the plant, but the rest of the equipment continues to operate. What happens if power is lost to computer displays or the control panel, but not to the process?
- Ensure that all electrical controls, including electrical panels and circuit breakers, are properly and clearly labeled. At home you may be able to flip a few circuit breakers until you get the right one, but not at work!
- If you are asked by a PHA team to verify the proper operation of a device or procedure, take that task seriously. Follow the test procedure and document what you observe.
- When power failures occur, follow emergency procedures. These should tell you what actions are needed to keep the plant safe, and how to safely resume operation following a power failure.
- Review and practice utility failure procedures periodically and correct any problems or omissions. Confirm that you will be able to find the emergency procedures in the event of a power failure.

Startup Hazards

A number of chemical facilities have had disastrous events occur during startup activities. In many cases, these events point to the need for a higher level of attention and care than that needed for routine processing. WHY? Startup hazards are increased by inaccurate operating instructions, lack of experience in startup operations, and a plant in a non- standard condition – for example, feed tanks empty, manual valves in the wrong position, new or modified equipment. Time pressures to get the plant back in operation may be high, and operators may have worked long hours during the shutdown, making them less alert. Many plants require manual operation during startup. Continuous plants may startup so infrequently that plant personnel have little experience with required steps.

Did You Know

- Of 38 major incidents investigated by the U.S. Chemical Safety and Hazard Investigation Board (CSB) since 1998, three occurred during startup of continuous process equipment.
- These three incidents resulted in 22 fatalities and more than 170 injuries.
- Other serious incidents occurred during startup of batch processes or during maintenance operations that followed a power outage.
- Startups may be rare, so refresher training may be needed.

What You Can Do

- Have complete and accurate written startup procedures and checklists, and use them.
- Use Management of Change reviews before modifying any startup procedures.
- Ask questions and get help with startup operations which are not familiar to you.
- Check with the responsible people that shutdown activities have been completed and equipment approved for use.
- Verify equipment functionality and setup before startup, including pre-startup safety review after major maintenance or modifications.
- Make sure all valves are in the proper position.
- Maintain excellent communication between outside operations and the control room!

(Reference: Process Safety Beacon)

Plan For Safety From Start To Finish

OSHA Guide to Hazard Assessment

Initial hazard assessments should be performed prior to the introduction of new raw materials, equipment or processes to the workplace, or before major changes are made to processes, equipment or the work environment.

Regardless of the technique used, all employees should know how to report hazards to have them evaluated and corrected. Use of the reporting system should be encouraged by management. Employers need to respond to complaints in a timely fashion. The employees should be updated about the status of the complaint investigation and its outcome. The employees should also have the authority and ability to correct hazards themselves whenever feasible.

Some employers or safety committees feel there is benefit in having inspections or audits of a facility's safety and health program by someone from outside of the organization. This person may have more specialized knowledge in the safety and health field than most of the organization's safety committee members. He or she may have more sophisticated sampling or measurement equipment than the employer has readily available. An outsider may also recognize hazards the committee has overlooked.

After hazards are identified, they should be eliminated or abated to the degree that it is feasible. OSHA promotes a hierarchy of control measures. At the top of the hierarchy are engineering controls, which include tactics such as ventilation and raw material substitution. All reasonably feasible engineering controls should be exhausted before other measures are taken. Work practices, another technique for employee protection, involves modifying tasks and jobs to reduce hazards. Administrative controls, such as job rotation, are another tool employers sometimes use to reduce hazards. Personal protective equipment, such as respirators, gloves and safety glasses, should only be used as a last resort; after all feasible engineering and administrative controls and work practices have been implemented.

Employee input about abatement techniques is highly recommended. The employees may be able to provide insight regarding equipment and work procedures or have their own ideas about how to abate the hazards. They often are familiar with the history of the process and what measures have been tried in the past. Employees are also more likely to use the control measures and safe work practices if they feel some ownership in their establishment. Employee training may also be necessary, especially if new engineering controls or work practices are used.

Regular preventive maintenance of equipment is also important to prevent the occurrence of hazards. Some processing equipment may require a full mechanical integrity program with written inspection and testing procedures performed on a regular schedule.

(Source: OSHA)

Did you file your 2012 Tier II Emergency and Hazardous Chemical Inventory Report?

Facilities covered by Emergency Planning and Community Right-to-Know Act (EPCRA) requirements must submit an Emergency and Hazardous Chemical Inventory Form to the Local Emergency Planning Committee (LEPC), the State Emergency Response Commission (SERC), and the local fire department annually by March 1.

The quantities of materials that trigger reporting are 500 pounds or the listed threshold planning quantity, whichever is less, for extremely hazardous substances like ammonia and 10,000 for most other substances like diesel fuel. The list of extremely hazardous substances and their threshold planning quantities can be found at this link (under List of Lists): http://www.epa.gov/emergencies/tools.htm

All states in Region 10 either require the federal Tier II form or a state form. Some states have specific requirements in addition to the federal requirements. The State of Idaho and the cities of Anchorage and Fairbanks, Alaska accept Tier 2 Submit. Oregon and Washington have their own electronic reporting programs. Links to each state's reporting requirements are available at this link: http://www.epa.gov/osweroe1/content/epcra/tier2.htm

If your business is submitting by Tier Two Online in Washington State or by electronic reporting in other states, make sure you receive e-mail confirmation that you can print and save. If you are submitting by mail, you are urged to obtain a receipt for delivery. One way to do this is by certified receipt mail.

Penalties for failing to report under Section 312 of EPCRA can be up to $37,500 per day per violation. If you discover that you should have been reporting under this regulation, EPA's self audit policy (http://www.epa.gov/compliance/incentives/auditing/auditdisclose.html) can help you come into compliance.

On December 26, 2012, EPA announced an enforcement action against General Biodiesel of Seattle, WA for failure to file Tier II's for chemicals stored at their facility. The link to this article follows: http://yosemite.epa.gov/opa/admpress.nsf/d96f984dfb3ff7718525735900400c29/791948bec198e65185257ae0006a86f0!OpenDocument.

For more information regarding these requirements, contact your state EPCRA program:

Alaska: Alaska State Emergency Response Commission (SERC)

Idaho: Idaho Bureau of Homeland Security - Hazardous Materials

Oregon: Oregon Community Right to Know (CR2K) Program

Washington: Washington EPCRA Program

Where Do I Go For More Information?

RMP Materials EPA's Web site: http://www.epa.gov/emergencies/content/rmp/index.htm includes the Risk Management Program rule, Off-Site Consequence Analysis specific guidance and calculator, the list of regulated substances, fact sheets, guidance documents, industry-specific model plans, FAQs, the RMP*eSubmit Users' Manual, and other information.

EPA RMP Region 10

RMP Coordinator: Javier Morales 206-553-1255

EPA Region 10 RMP Website: http://yosemite.epa.gov/R10/airpage.nsf/Enforcement/rmp

Superfund, TRI, EPCRA, RMP & Oil Information Center - The information center can also answer questions related to Clean Air Act Section 112(r) and RMP reporting requirements. Contact the RCRA, Superfund, and EPCRA Call Center for your policy, regulatory compliance, and reporting requirements questions.

800-424-9346 Toll Free or TDD 800-553-7672 Monday – Thursday: 10:00 AM – 3:00 PM Eastern Time Extended Hours of Operation (May, June and July): Monday – Friday: 9:00 AM – 5:00 PM Eastern Time (Closed Federal Holidays) http://www.epa.gov/superfund/contacts/infocenter/

RMP*eSubmit Software Support Contact the RMP Reporting Center for specific software questions about RMP*eSubmit. (703) 227-7650 (phone) Monday – Friday: 8:00 a.m. – 4:30 PM ET. Closed Federal Holidays RMPRC@epacdx.net (e-mail)

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