TO: PSM Coordinators

FROM: D. C. Skokna

DATE: September 1, 1994

Interoffice Communication

SUBJECT: **Q&A SESSION WITH OSHA**

VISTA

The attached are notes taken at a Q&A session with Russ Elveston of OSHA's Houston, South Office on 6-16-94.

Of the 50 questions covered, Mechanical Integrity drew the most (12 questions).

For reference, see below

o	Employee Participation	-	none
o	Process Safety Information	-	#10, 40, 41
o	Process Hazards Analysis	-	#11, 12, 13, 28
		-	Please read #13 as it gives guidance on the criteria OSHA uses to determine when a PHA is done.
o	Siting	-	(part of PHA, but in these forums it usually gets high profile) - #17, 18, 35, 36
o	Operating Procedures	-	#2, 27, 33, 38, 39, 48
o	Operator Training	-	#5, 6, 50
		-	Union plants, please read #50 as it gives some guideance on the training requirements for supervisory personnel used for "strike coverage".
o	Mechanical Integrity	-	#1, 3, 7, 14, 15, 21, 22, 29, 30, 31, 46, 49
o	PSSR/MOC	-	#8

o	Contractors	-	#9, 16, 19, 20, 42
o	Incident Investigation	-	#4
o	Audit	-	#23, 24, 25, 26
o	EPA's RMP	-	#34
o	Other	-	#32, 47

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QUESTIONS FOR PSM FORUM
RUSS ELVESTON
ON
JUNE 16, 1994

1. Must maintenance procedures contain or reference specific inspection acceptance and rejection criteria in order to determine whether a deficiency exists or not? Or can the determination of a deficiency be left up to the judgment of a trained inspector? (A)

   Since the starting point should be the manufacturer's recommendations, the procedures should list at least those criteria. If specific information is not in the maintenance procedures, you should document why it is not needed. It is not a good idea to leave the determination of a deficiency to the judgment of a trained inspector. Different inspectors may have different methods of performing the inspections and the inspections would not be consistent.

2. What is the purpose of the safe work practice to provide control over the entrance into a facility (1910.119 f)? Is it to ensure that an accurate headcount can be made in case of an evacuation? Is it to ensure that only "Authorized Personnel" are admitted to an area? Or is there some other reason for this provision? (A)

   The intent is to prevent a catastrophic release. People in units unknown to operating personnel, performing work unsupervised by those responsible for operations, have contributed to hazards in the past. Everyone entering a unit should check in and operations should know who is in the unit, what they are doing, and where they are at all times, so that an accounting of the personnel may be made and rescue operations performed in the case of an incident. Reprimands need to be in place for personnel who do not follow the control over entrance plan. OSHA does not want to see fences around a unit which may impede the egress of personnel from a unit.

3. We have internal Corporate Standards for all kinds of designs, specifications, and procedures. They are not mandatory and contain a statement that they are "advisory in nature, and their use is voluntary...conditions may exist which permit less expensive alternative solutions." Are we required to comply with these kinds of "standards" to meet regulatory requirements or can we use other good engineering practice? If alternatives to the "standards" are used, must we justify and document why we're using an alternative design and not the one in the "standard"? (B)

   Citations have been issued when corporate standards were not followed, even when the standards used exceeded the OSHA minimums. Company standards would have to be significantly "out of sync" with industry standards to justify a citation if they were followed. If you deviate from company standards, document it thoroughly to avoid a citation.

4. During incident investigations at other Company sites, many recommendations are made to prevent recurrence of the incident. Many of these recommendations apply to my Plant and will be implemented here. Some recommendations are not applicable at my Plant and I don't want to do them here. Is this OK? (B)

   If the investigation results in recommendations for an area covered by OSHA 1910.119, compare it to your situation and document your actions, especially if the incident does not apply. If you have reasons for not doing something, you should document why you are not doing it *before OSHA begins an audit.*

5. Refresher training is a regulatory requirement. We do this by taking an electronic test which provides refresher type information and asks questions to verify that we know the material. This is a form of "testing out". If we fail the test, further action is required. Does this meet the intent of refresher training? (B)

This would probably meet the intent of refresher training. If the operators are doing the same job every day or at least every week, refresher training may not be needed. Specialized or emergency procedures may also need refresher training. At some time during the three year period, every procedure must be addressed by operations supervision to see what training is needed for each person. If supervision is ever involved in operation of a covered process, they must also have refresher training.

6. In regards to documentation, a training program is given as a part of the three (3) year refresher training. (C)

A. How much and what kind of backup documentation is needed to show this action was taken?

It is up to the plant to determine what is best for their situation. The type of document storage can be electronic or hard copy, but in either case, should show enough detail to determine adequacy.

B. Is the supervisor's written notation in the training file adequate?

This may not be enough information.

C. Can a computer network system be used instead of handwritten?

Yes.

D. Do we need the employee's signature on a roster?

This is not required by 1910.119. The regulation requires only name, identity and verification of understanding of the training given.

E. Does every class have to be followed with a test to show understanding or can an advisory suffice?

Testing after every class is not required by 1910.119, but it is the most common means of verifying understanding. Other means may be used.

7. Refer to same questions as in 6. Would it be different for any other training? (C)

No, not at this time, except for the mechanical integrity portion of 1910.119. This is being studied by OSHA at this time. Watch for future documentation requirements from OSHA on training.

8. When you are closely following the MOC Program, at what point should you be considering performing a Pre-Startup Safety Review? The information requested for a PSSR is redundant in most of our cases! (C)

   You can do either or both as long as all of the requirements of 1910.119 are met. OSHA is not particular as to which method you use as long as everything is considered. PSSR's seem to apply to new processes and at the restart of a covered process following a shutdown. MOC, on the other hand, applies more to changes which do not affect PSI. If modifications to processes are controlled by an MOC procedure, a PSSR is not necessary. Document your program and be consistent.

9. During times of shutdowns or turnarounds, we have a large number of contractors working in our refinery. Have there been any problem areas you have run across in relation to contractors working in refineries that we should be made aware of? (C)

   You must have control of the contractors. Make sure contractors have proper documentation for employer training, etc. Perform periodic evaluations of contractors. OSHA looks for patterns of how you address contractors. At some point during a shutdown, if the covered chemicals are removed from the unit, the unit may no longer be a covered process. PSSR should be applied before chemicals are reintroduced.

10. Do the P&ID's have to be located on a process unit or can they just be accessible 24 hours/day and within a reasonable distance of the process unit? What about for PSI? (C)

    A system defining where this and other PSM information can be found has to be available. The information does not have to be located within the covered process unit, but the location must be known to all involved. Provisions must be made so that information is available when and where it is needed.

11. Now that May 26, 1994 has passed, will OSHA ask for information showing that 25% of the Process Hazard Analysis (PHA's) have been accomplished, if they visit a facility? (D)

    Yes.

12. If the PHA's are only 25% complete for all areas within the facility, will the facility be cited? (D)

    You must be at 25% or more at this time, but the interpretation of percentage may be negotiable.

13. What are the exact OSHA requirements for a "completed" Process Hazard Analysis? (D)

    The PHA must be completed by following all of the requirements listed in 1910.119. It is not complete until all recommendations have been resolved. Resolved means one must have a documented plan that defines the resolution to be performed, a time schedule for its completion and personnel assigned to the individual task to assure completion.

14. I am revising existing standards to require "qualified" rather than "certified" personnel for use in inspection and testing of equipment. I personally do not feel that these areas require a formal certification. I will set the standards for what qualified means for each area of testing or inspection. These will be based on the experience and knowledge of the individuals who perform the testing and inspection. As long as I am satisfied with the results of the inspection or test on forms and documentation created by me or my staff, I feel that I am in compliance with 29 CFR 1910.119. Am I in compliance even though I do not follow exactly such existing standards published by API, ASME, ANSI, etc. (D)

    If it is not specified by 1910.119, industry standards will be applied. Internal plant standards may be developed in this way and should be based on one of the "consensus" standards. Use of good engineering practice is expected. OSHA will compare your program to industry practices that are being used in similar facilities. If it is required by a State Code, then that code must be followed. If a deviation from these is necessary, then document the reasons thoroughly.

15. I am revising some existing standards, changing the words "shall and will" to "may". This is done throughout all standards used by this facility for testing and inspection. An example would be, as written in the standard, "You will inspect above ground tanks every five years," which I would change to, "You may inspect above ground tanks every five years". Does this meet the requirements of 1910.119? (D)

    This probably would not work if applied to PSM requirements. Standards should meet or exceed at manufacturer's recommendations. Document any deviations from these or internal standards.

16. In the training of contractor personnel, we are seeing organizations, such as the ABC schools, give short time courses of approximately six to ten weeks and claim to completely train people. Are the short "wonder courses", which may last from a few hours to a few weeks, acceptable as full training or should they have multiple year apprenticeship training? (D)

    Citations have been issued to both contractors and owners where such training programs were used, but the reasons were because the actions of contract employees showed evidence of insufficient training. OSHA looks for in-depth knowledge, and "wonder courses" should not be relied upon as the only training unless results indicate thoroughness. OSHA is interested in the results of training, not the length.

17. Would a citation be issued if a control room or other building normally occupied by personnel is located too close to a covered process on which a PHA has been performed? Consider the situation of the building location being ignored in the PHA. Consider the situation of it not being ignored, but no action was taken to remediate the problem. (D)

    Control rooms and other pieces of equipment must be covered in the PHA. Citations have been issued for not properly addressing facility siting. If there are siting problems found in the PHA, OSHA expects to see an action plan for remediation and a timetable for accomplishment. What is done to protect personnel in the meantime is very important to OSHA. Actions such as non-essential personnel being removed from the area and other actions taken to assure the safety of personnel should be implemented.

18. If a facility is cited for a control room or other normally occupied building being too close to a covered process, how much time would OSHA allow for the remediation of the problem? If the control room has to be moved, how much time would OSHA allow and would the process have to be shutdown if the control room cannot be relocated within the specified time allocated? (D)

This depends on many factors which would be specific to the situation. A relocation plan or other plans to mitigate the problem should be developed and a timetable for implementation established. Interim steps should have been taken to maintain the safety of employees until the final resolution. One facility in Oklahoma was closed for two days until the imminent danger was corrected.

19. Should non-English speaking contractor employees be allowed to work in a PSM covered facility if the facility does not have training and documentation available in their language? (e.g. Many asbestos workers speak only Spanish). (D)

All personnel, including contractors, have to be able to read and understand the procedures used by a covered facility. Using non-English literate employees would require procedures, labels, etc. printed in their language. Alarms would have to be made in their language, if verbal. Hearing and sight impaired employees present similar problems.

20. Should non-English speaking employees be allowed to work in a PSM covered facility if the facility does not have training and documentation available in their language? (D)

No, see 19 above.

21. Our facility has some replacement parts manufactured by companies other than the original manufacturer. How do we document the quality control of these replacement parts in order to meet the requirements of 29 CFR 1910.119? (D)

Even original equipment manufacture's replacement parts must meet the requirements of quality assurance. An adequate program will have a method of controlling quality and will establish sampling procedures. ISO 9000 procedures might help.

22. Can we vary the amount of quality control for spare parts based on the criticality of the application? (D)

Probably. The amount of checks may vary. Critical equipment must be checked and even utility equipment may be covered if it could contribute in any way to a possible catastrophic event.

23. The compliance audit required by paragraph (o) of 29 CFR 1910.119 will be conducted based on the OSHA Instruction CPL 2-2.45A, Appendix A, PSM Audit Guidelines. If we meet the criteria listed in this, will we satisfy the requirements of paragraph (o)? (D)

Probably. A yes answer to all of the questions would indicate a very good program.

24. Paragraph (o)(4) states: The employer shall promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that "deficiencies have been corrected". How is this different than the language for PHA's where it states that recommendations must only be "resolved" in a timely manner? (D)

All of the PSM programs have been in place long enough for covered facilities to have all deficiencies corrected by the end of the third year after promulgation, which is May 26, 1995. The audit should be begun early enough to have the deficiencies corrected. If a major problem that cannot be corrected in the time frame allowed is discovered, and the audit was not performed at the last moment, document the reasons. If you can do it, you should do it. OSHA will issue a citation if they feel that you had enough time to make the correction.

25. Paragraph (o)(4) states: The employer shall promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected. Does this mean that the audit is not complete until this is accomplished? (D)

Yes. See the answer to 24.

26. Paragraph (o)(4) states: The employer shall promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected. Would a citation be issued if all deficiencies are not corrected by May 26, 1995? (D)

Yes. See the answer to 24.

27. Is the following language detailed enough for use in operating procedures. Would this be in compliance? (D)

    1. Line up the system from crude tank, TK-101, to the crude charge pump, P-001.
    2. Open the block valves on both sides of the desalter pressure control valve, PV-001, and close the bypass valve.
    3. Verify that the block valve that ties C.U. #1 charge pumps discharge is closed.
    4. Verify that the block valve to the crude booster pumps that is located above the incoming crude FCV is open.

This type of an operating procedure might possibly be sufficient, but if the operator does not understand the procedure or know how to perform the operation, the owner will be cited. This procedure does not address all the various types of operating procedures required by 1910.119, such as emergency shutdown, startup after emergency shutdown, etc. Operating personnel will be asked if they think procedures are adequate, and their answers will be important in OSHA's analysis. Those not familiar with the operation may need additional training in addition to the procedure. Checklists, in addition to or supplementing operating procedures, are helpful. It may take years to work out all of the bugs in operating procedures.

28. Is there a requirement for "certification" of PHA facilitators? If so, what constitutes an acceptable certification agency. If not, is there any thought within OSHA for eventually requiring certification? (D)

No. OSHA looks at the results of the PHA, not the qualifications of the facilitator. Because of the importance of the results of this study, facilitators should be highly qualified in the use of the selected methodology, just as PHA team members should be highly qualified in the fields of their expertise. The PHA is the focal point of the program, and multiple citations have been made where a lack of thoroughness was determined by OSHA.

29. ISO 9000 makes requirements for recording calibration error data when performing scheduled instrumentation calibrations. Will OSHA expect to see similar calibration records for instrument loops and electrical shutdown devices covered under mechanical integrity? (E)

Possibly. Inspection and testing activities must be documented. The original manufacturer's standards are a minimum. While OSHA does not now require maintenance activities to be documented, the issuance of EPA's Risk Management Plan (RMP) it may require this.

30. Process safety information must be maintained for the life of the process. How long must mechanical integrity inspection records be maintained? For vessel wall thickness, it is obvious that it would be appropriate to retain the records for the life of the vessel, but alarm inspection records may have very little use after several inspection periods. (E)

OSHA has not resolved the answer to this question. It could be that these records will be required to be maintained for the life of the equipment also. As a minimum, keep the information for at least the 5 year period which the PHA covers.

31. Will piping and vessel inspection data, specifically wall thickness measurements that are made in one process unit, be acceptable as representative of several units in identical service or will each unit require wall thickness data to be in compliance with (j)(4)(i)? (E)

No. OSHA has never seen *identical* units. If this technique is used, OSHA will expect justification documentation. Each and every item of the covered process must be tested. Techniques developed for one covered process may be used in another covered process. If problems in one area are found, then other similar areas must be checked.

32. In a compliance audit (PQV) will you audit against 1910.119 or our own internal systems? (F)

A PQV, when performed, will be based on 1910.119.

33. Refer to 1910.147, Control of Hazardous Energy, Section (f)(2) Group Lockout or Tagout. Does group lockout, which has the primary responsibility for lockout assigned to one authorized employee for a set number of employees, still require each individual working under the authorized employee to affix their own personal lock to the group lockout? If this is required, what is the purpose of having group lockout if that responsibility can't be assigned to one person? (G)

This is probably OK if a well written procedure is used and the users of the procedure are well trained.

34. Are there any plans to reduce or eliminate duplication of the safety provisions between OSHA's 29 CFR 1910.119 and the EPA's Risk Management Plan portion of the Clean Air Act? (H)

As of May 1994, EPA is still considering changes. There will be differences between OSHA's 29 CFR 1910.119 and the EPA's Risk Management Plan portion of the Clean Air Act because OSHA is covering inside the fence line and EPA is covering outside the fence line. It is not clear who will have jurisdiction for overlaps.

35. What would OSHA suggest as a suitable document for determining risk mitigation and alternates to spacing for existing buildings? (H)

The DOW procedure and NFPA are good sources. Also, refer to the citations OSHA made for the Ashland Oil audit (See note below)

NOTE: Following is a brief description of the Ashland citation.

In a Citation and Notification of Penalty issued to Ashland Petroleum Company and its successors issued 11/18/93, OSHA states; The following accepted industry guidelines for compliance and hazard evaluation were not addressed in the PHA. The PHA needs to address plant layout and spacing, including but not limited to:

1. Compliance with NFPA 496 requires that the control room is built to prevent the introduction of flammable vapors, gases or liquids. The employer shall ensure the source of air purging the control room is free of hazardous concentrations of flammable vapors, gases, contaminants or other harmful materials. The employer shall install monitoring devices for flammable or combustible vapors, gases and oxygen content to ensure breathing air quality; ensure that positive pressure is maintained and provides the required pressure through out all of the control room; provide alarms

and other warning devices to alert control room personnel that the positive pressure system has failed.

2. Compliance with accepted industry guidelines for plant layout and spacing, including but not limited to: the Dow Chemical Company, "Fire and Explosion Index Hazard Classification Guide," or the Loss Prevention Data Sheet by Factory Mutual, "Spacing of Facilities in Outdoor Chemical Plants" FM Data Sheet 7-44; or, if adequate spacing cannot be achieved, alternate methods of protection must be implemented. The control room building, a critical work area, shall be afforded protection through explosion resistant construction or adequate barricading. The control room shall be diked (spill containment) or raised to prevent the entry of flammable or combustible liquids into the control room.

36. Is OSHA aware of the API's RP-752, "Management of Hazards Associated with Location of Process Plant Buildings?" There is an API Committee drafting a book, a copy of which has been sent to OSHA for comment. Are you aware of this draft book? Could you conceive of it becoming an industry standard? (H)

OSHA accepts consensus standards. Always seek and use the best technology available. CCPS is also working on a book on this subject. OSHA is using AIChE and CCPS books and documentation in court cases. The Dow Chemical Company, "Fire and Explosion Index Hazard Classification Guide," or the Loss Prevention Data Sheet by Factory Mutual, "Spacing of Facilities in Outdoor Chemical Plants" FM Data Sheet 7-44 are being used by OSHA at this time. Mr. Elveston had not seen the API publication.

THE FOLLOWING QUESTIONS WERE SUBMITTED FROM THE FLOOR FOLLOWING THE REVIEW OF QUESTIONS SUBMITTED PRIOR TO THE MEETING. ANSWERS REPRESENT THE BEST INTERPRETATION AVAILABLE

37. What kind of documentation is required for routine maintenance?

Normally, routine repairs (with replacement parts) need not be documented. OSHA would expect that special inspections required at the completion of the work to assure safety, quality, and reliability would have been performed and documented.

38. What level of detail is required for Emergency Operating Procedures relative to normal operating procedures?

Since emergency procedures are seldom used and need to be followed exactly to assure safety, they are special procedures and must be more detailed. (Note: On the other hand, time is usually critical during emergencies and people do not have time to read and digest lots of details).

39. How do I manage many different standards for Operating Procedures in different areas for a large complex facility?

Provide more detail for the more critical operations.

40. How do I document what codes my facility needs to meet?

Per your internal standards and guidelines and industry practice.

41. What is considered "available" for documentation?

An auditor will check that people know how and are able to efficiently access and use important documentation. The proof is in the results.

42. What is required around Maintenance Contractor training?

The operating facility has responsibility for assuring that the Maintenance Contractor meets all the requirements of Mechanical Integrity and that important Maintenance Procedures are available. OSHA will interview the contract employees to determine their skill levels, availability of information, quality of training, understanding of lockout rules, etc. - the overall level of compliance of the facility owner.

43. What is the definition of "critical" facilities?

Those that serve to prevent or mitigate catastrophic releases, for example, the plant's fire water distribution and deluge system.

44. What are "covered" processes?

Whatever might contribute to or cause a catastrophic release.

45. The regulation uses words like "might cause" or "potential" for, etc. when dealing with catastrophic events. I feel we really need to deal with the issue of probabilities of events and agree on where the "cut points" are for making decisions. For example, I have a large inventory of hazardous materials. If I accept that there is a finite "potential" for releasing the entire contents, I would need to move the control room several miles away to be outside the zone of hazardous consequences. I have limited resources - do I spend it on moving things miles away or in improving the layers of protection to reduce the likelihood of failure? Clearly, preventing the catastrophic event is more cost-effective than mitigating it or staying outside the affected zone; but, no matter what I do to the process, there is always still a finite "potential" for a catastrophic event.

OSHA does not have any guidelines around "acceptable" probability values. At the present time, many facilities are too far away from the kind of "fine" decision making you are talking about. We are trying to get the bigger "problem areas" into compliance. You can probably use internal (or industry) standards and "good engineering practice" to help you (or the Process Hazards Analysis team) make those decisions.

46. What constitutes adequate "Process Overviews" for my mechanics or contract maintenance?

What would you want your new workers to know about what's going on in the unit? Let employees determine their "comfort level" for too little or too much information. For mechanics loaned to other units, you may need to cover the specific process and safety information pertinent to that unit.

47. What is your definition of a "serious" injury?

One that reduces the capacity of the worker to do his job temporarily or permanently - such as loss of a finger, limb, or eye.

48. In developing procedures for various tasks, I am organizing the materials around groups of tasks that are related to cut down on the amount of writing. Is this acceptable?

The important considerations are: Do the employees accept this form of the information? Do they feel the training and procedures are adequate? Can they find and use the information when it is needed?

49. Does a mechanic need to know the details of how the portion of the process on which he is to perform maintenance was cleared?

Generally, the mechanic doesn't need to be cross-trained on the details of the operator's duties and procedures.

50. We expect to be using supervisory personnel for "strike coverage." What level of training should they get?

Anybody operating a covered unit needs to get enough training for what's required to safely perform the tasks and avoid catastrophic releases. If the supervisors are promoted employees who were former top-notch operators, you should not have much of a training effort to bring them "up-to-speed." Probably, they are not covered by any "grandfathering" clause.