

Department of Energy

Washington, DC 20585

January 5, 2006

MEMORANDUM FOR JERALD S. PAUL

PRINCIPAL DEPUTY ADMINISTRATOR FOR NATIONAL NUCLEAR SECURITY ADMINISTRATION

JAMES A. RISPOLI

ASSISTANT SECRETARY FOR ENVIRONMENTAL

MANAGEMENT

ROBERT L. MCMULLAN

ACTING DIRECTOR, OFFICE OF ENGINEERING AND

CONSTRUCTION MANAGEMENT

FROM: MARK B. WHITAKER, JR.

DIRECTOR, DEPARTMENTAL REPRESENTATIVE TO THE DEFENSE NUCLEAR FACILITIES SAFETY BOARD

SUBJECT: Defense Nuclear Facilities Safety Board Public Meeting –

Safety in Design – Path Forward

In his December 5, 2005 memorandum the Deputy Secretary directed programs to identify any specific implementation actions they will take to address the weaknesses and expectations described above and provide a listing of their implementation actions and schedules by January 31, 2006. Attached are two documents that are intended to assist you in meeting this deadline.

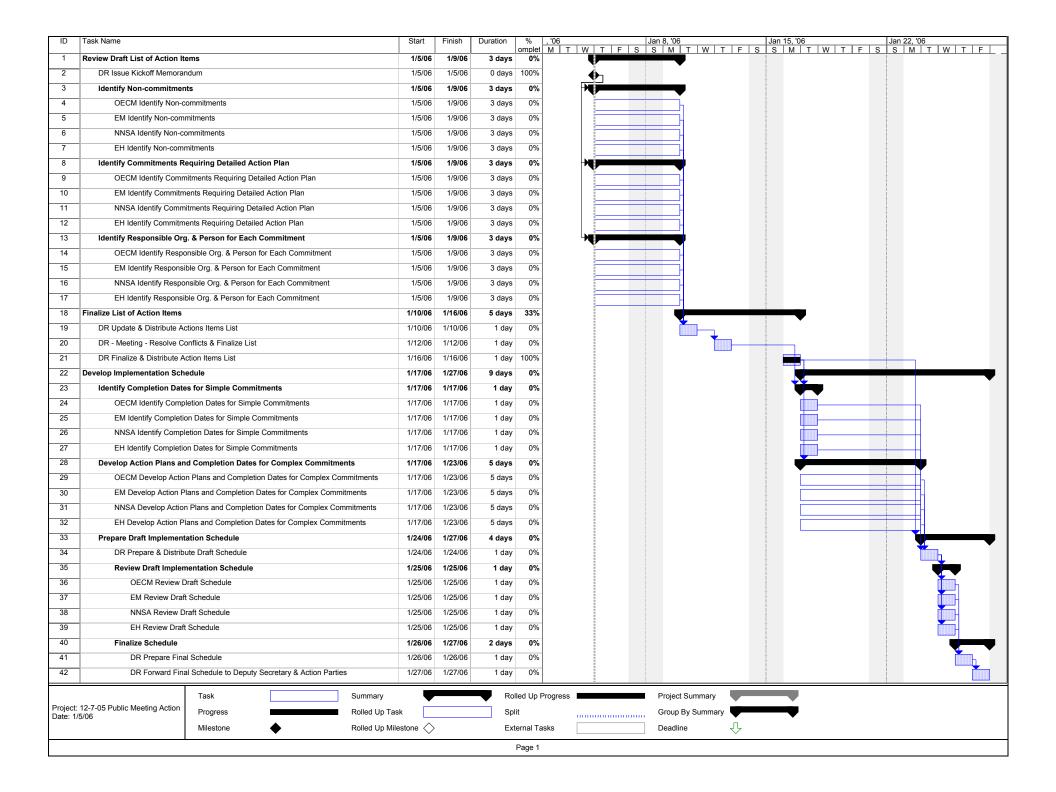
The first document is a detailed schedule which, when implemented will result on an integrated path forward for implementing the various commitments made by the Department during the public meeting. The second document is a table of the commitments included in the Department's testimony that has been derived from the Department's written testimony, the draft transcript of the meeting, and the videotape record.

My office will coordinate this effort and monitor progress against the attached schedule. Please submit the information identified in the schedule to Bob McMorland.

Attachments

cc (enc): Clay Sell

Adam B. Ingols
Ingrid A. C. Kolb
John Spitaleri Shaw
James J. McConnell
Richard H. Lagdon, Jr.
David J. Pepson
Charles S. O'Dell
Frank B. Russo
Theodore A. Wyka, Jr.



| No. | Action Description | Course | Responsible | Completion | Domonto |
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| NO. | Action Description | Source | Org./Mgr | Date | Remarks |
| Miscel | laneous Open Items | | | | |
| 1. | R. McMullan promised to get back to | R. McMullan | R. McMullan | 19 1 | |
| | K. Fortenberry regarding whether the | question | ,000 1 | INTERNAL CONTROL OF THE CONTROL OF T | |
| | open decision on the CMRR | response | Section 2. Section 2. Section 3. Section 3. Section 3. Section 3. Section 3. Section 3. | erroreste : error | |
| | ventilation system design is identified | | - gamenter | - 1 | |
| | in the monthly project status reports | | deline in statement in the statement in | to a common general company in a delica of the product of the pro | |
| | to the Deputy Secretary and Under | | | A GO COLLAND CONTROL C | |
| | Secretaries. | | | # 6000 | and the second s |
| 2. | J. Paul promised to get back to R. | J. Paul question | J. Paul | 100 (100 (100 (100 (100 (100 (100 (100 | |
| | Mathews regarding whether the | response | The second secon | | |
| | NNSA training program provides | | and the second s | | |
| | opportunities for personnel to manage progressively more complex | | Francisco de la constitución de | | |
| | projects. | 11 - 200 - 1 | | | |
| | projects. | 7: | 10000000000000000000000000000000000000 | | |
| Deputy | y Secretary Directions | | TO CONTROL TO THE STATE OF THE | | |
| 3. | Programs are requested to identify | C. Sell | PSOs | 01-31-06 | |
| | any specific implementation actions | 12-5-05 | The state of the s | | |
| | you will take to address the | memorandum – | angelor region system angelor Angelor | | |
| | weaknesses and expectations | Path Forward) | ************************************** | | |
| | described above. Provide a listing of | The state of the s | | | |
| | your implementation actions and | | | | |
| | schedules by January 31, 2006, to | The second secon | | | |
| | Ms. Ingrid Kolb | Mark Taller | 700 | | |
| 4. | I have directed my staff to identify | C. Sell written | PSOs | | |
| | and initiate those actions needed | statement to the | | : | |
| | within the Department so that the | Board, 2nd§ | | | |
| | Department can function safely and effectively on its own without the | C. Sell verbal | | | |
| | need for independent Board | testimony | | | |
| | oversight. | testimony | | | |
| L | Oversight. | | | | |

| | | | Responsible | Completion | |
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Directives Changes (Also see Integrated Safety Management, Design/Build, Early in Life Cycle, and Integrated Project Teams, And Lessons Learned, Continuous Improvement, & NNSA Pilot Effort)

| 5. | EH review the existing safety | C. Sell | EH A CONTRACTOR A |
|----|---|--|--|
| | directives and identify those that need | 12-5-05 | |
| | to be revised to provide clear | memorandum – | ACTIVITY |
| | requirements regarding safety in | Path Forward) | The state of the s |
| | early project phases. | 1441110111414 | 1 mg/s |
| | tuning project primates. | C. Sell written | |
| | | statement to the | -5-990-we MAN5-991-w5-991 |
| | | Board, | resident of the control of the contr |
| | | Path Forward | response on the contract of th |
| | | 100 (100 m) 100 (100 m) 100 (100 m) 100 (100 m) | (A) 7-10 (A) |
| | | C. Sell verbal | Sector 10 1. (1.17) 100 100 100 100 100 100 100 |
| | | testimony | 1 |
| 6. | We have an adequate foundation of | C. Sell written | THE CONTRACTOR OF THE CONTRACT |
| | DOE rules and directives, and we | statement to the | ongs |
| | need to build on this foundation by | Board, | |
| | making necessary clarifications and | <u>Program</u> | The state of the s |
| | amplifications. Our current safety | Strenghts # 4 | 6 Jahrson 5 No. 66 8 July 1 8 July 1 |
| | directives focus primarily on existing | | DY ON THE PROPERTY OF THE PROP |
| | facilities and we need to augment | 1 1 1 1 1 1 1 1 1 1 | |
| | them for new designs. | | |
| 7. | Remove watch list requirement from | R. McMullan | OECM |
| | O 413.3. | question | |
| | en Africanis de Herris e destruit Anny e men. | response | |
| 8. | a. O 413.3 is primarily a management | A.J. Eggenberger | OECM |
| | order. When it is revised consider | recommendations | |
| | how the engineering requirements | during R. | |
| | for the project will be handled to | McMullan | |
| | ensure they have "depth & | testimony | |

| NI - | A.C. D. C.C. | G | Responsible | Completion | D |
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| No. | Action Description | Source | Org./Mgr | Date | Remarks |
| | integrity". b. ESAAB needs to be able to look at the engineering details. | | | Special Control of Con | |
| 9. | a. Add to O 413.3 ability to warn management promptly of safety issues that could impact cost or schedule. b. Consider using Performance Categorization rather than \$400 | K. Fortenberry recommendations during R. McMullan testimony | OECM THE STATE OF THE STATE O | Control of the contro | |
| | million as the threshold for requiring ESAAB approval; c. Need to establish criteria for conducting EIRs for CD-2 and CD-3. d. Earned value should not be the only criteria for determining | 100 May 1 100 Ma | ### OFFICE AND ADDRESS OF THE PROPERTY OF THE | The second secon | |
| | whether a project is red, yellow, or green, (since it does not account for open safety issues that could have significant cost/schedule impacts). | Comment Comm | The second of th | | |
| 10. | Revise Order 413.3 to bring it into agreement with Manual 413.3-1 including: a. More complete description of safety expectations for early design steps as well as for project completion and turnover; | C. Sell 12-5-05 memorandum Program Weaknesses # 1. | OECM | | Begin Order revision by January 2006 and issue as a priority task. (Ref. C. Sell 12-5-05 memorandum— Path Forward & C. Sell Statement to the Board, Path Forward |
| | b. Clarification of the expected use of the graded approach by identifying clear expectations, including more complete expectations for | C. Sell written statement to the Board, Program | | | Note for item g. \$4M in C. Sell memo, but \$5M in C. |

| | | | Responsible | Completion | |
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| | | | | | |
| | acceptable use of design/build | <u>Weaknesses</u> | | 900. B (1970) | Sell Statement to the |
| | approaches; | # 1 | | Characteristics (Annual Characteristics) (Annu | Board. |
| | c. Clear requirements regarding | | | 900 9 | |
| | safety qualification of individuals | R. McMullan | de transporter de la constante | general | |
| | involved in project management | written statement | i na na haisa mehabapat na na na haiyadah n Ada masar madah na na | 1 | |
| | and integrated project teams; | to Board, <u>Ideas</u> | | in a contact a military a secondary and secondary and secondary and secondary | |
| | d. Clear references to the required | and Actions for | 2 Section 2 Sect | MacContaction (I) (economic months) """ economic months (I) (economic months) "" economic months (I) (econ | |
| | safety rules, directives, and | <u>Improvements</u> 1 st | | CONTROL OF THE | |
| | standards; | § | Section of the sectio | ************************************** | |
| | e. More complete coverage of | | | 3000 5°° 1000 1 | |
| | tailoring and safety issues at | R. McMullan | The second secon | | |
| | ESAAB meetings; | verbal testimony | 100 1000000 | | |
| | f. Provisions for safety oversight by | 10 00 00 00 00 00 10 00 00 00 00 00 10 00 00 00 00 00 00 10 00 00 00 00 00 10 00 00 00 00 00 10 00 00 00 00 00 | 10 mm 1 m | | |
| | the Chiefs of Nuclear Safety; | 1,000 - 100 y y 100 - 100 y 10 | - 50-00-1000 - 00-00-100 - 00-00-00-100 - 00-00-100 - 00-00-00 - 00-00 - 00-0 | | |
| | g. Provisions for safety engineering | Andrew Services | ************************************** | HX * | |
| | reviews by the Office of | | 1 | | |
| | Environment, Safety and Health | 000000 | | | |
| | for projects over \$5 million; | And the second of the second o | | | |
| | h. More complete requirements for | 100 cc c c c c c c c c c c c c c c c c c | m (fr.) | | |
| | after-action reports to promote | 1744414 17444144 1746717 1746717 1746717 | "1" THE MIND | | |
| | effective learning from experience. | | white in | | |

Tailoring/Graded Approach & ESAAB Meetings (Also see Directives Changes)

| 11. | In strengthening our existing process, | C. Sell written | OECM | See item 10.b |
|-----|--|------------------|------|---------------|
| | we must ensure that we preserve our | statement to the | | |
| | capability to wisely use a graded | Board, | | |
| | approach to tailor the process based | Program | | |
| | on complexity and risk; however, this | Strenghts # 2 | | |
| | graded approach must have | | | |
| | appropriate guidelines and | | | |
| | expectations to maintain necessary | | | |

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| | T | | T | | |
| | checks and balances. | | | A.C. | |
| 12. | Would not tailor: a. High hazard situations; | C. Sell question response | OECM | STORY OF THE STORY | |
| | b. Areas involving safety requirements. Tailoring is not expected to reduce safety | R. McMullan question | - Little (1990) The control of the | THE DRIVEN AND THE PROPERTY OF | |
| | requirements. | response | ************************************** | Comment of the commen | |
| | | J. Paul question response. | TOPOSTOCIAL PROPERTY OF TOPOST | | |
| 13. | We don't eliminate essential CD | R. McMullan | OECM ************************************ | | |
| | elements when tailoring | question response | VERTICAL TO A CONTROL OF THE CONTROL OF T | to dis- dis- dis-distribution de delle que della richia del que della richia della que della que della richia della que della richia della que | |
| 14. | No required documents can be omitted when tailoring | J. Rispoli question response | OECM | | |
| 15. | EM will use CD process for all projects regardless of project estimated cost. | J. Rispoli question response | EM INTER INTER | | |
| 16. | yes we do have a list of precisely what should be included before each critical decision. And we have incorporated the new CTA function into that list. | J. Rispoli question response | OECM | | The list referred to in this item was e-mailed to J. Batherson on 12-16-05 |
| 17. | I expect staff work and presentations to the ESAAB to be sufficiently complete so that they highlight tailoring issues and safety issues that need management attention. I expect every ESAAB review to include a | C. Sell 12-5-05 memorandum – Expectations # 5. | PSOs | | See item 10.e |

| No. | Action Description | Source | Responsible Org./Mgr | Completion Date | Remarks |
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| | discussion of relevant safety issues. | C. Sell written statement to the Board, Expectations # 5. | | The second secon | |
| | | C. Sell verbal testimony | un unique, 183, un unique, 183, un unique 183, un unique 183, uniq | The authorities I set THIS I will be a set of the authorities of the | |
| Design | -Build | | Section of the control of the contro | CTT COMPOSITION CONTROL OF CONTRO | |
| 18. | In response to J. Bader question regarding whether revised O 413.3 would include specific requirements to define the level of maturity of the design and how the design will be frozen before adopting a design/build approach R. McMullan responded that how to use a design/build approach will be addressed in the revised Order. | R. McMullan question response response **The state of the state of th | OECM 16 Months of Administration of Administrati | The Second Secon | See item 10.b |
| 19. | In response to a J. Bader suggestion the design build not be used for first time, one-of-a-kind, or fast track projects, R. McMullan agreed. | R. McMullan question response | OECM | | See item 10.b |
| 20. | I do believe that when we're talking about design build on a one-of-a-kind projects that I certainly believe that there should be a "devil's advocate", if you will, Dr. Mansfield, and that role would be played by the people I just mentioned and the organizations | R. McMullan question response | OECM/CTAs/E H | | |

| No. | Action Description | Source | Responsible Org./Mgr | Completion Date | Remarks |
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| | I just mentioned [CTAs & EH]. | | | 4.84 | |
| Early i | in the Life Cycle | | | The second of th | |
| 21. | Need: a. Credible project baselines including safety reviews; b. Selection of the most appropriate contract types; c. Realistic schedules; d. Early & frequent communications with stakeholders, regulators, committees, Congress, and contractors. | J. Rispoli verbal testimony | OECM | Per control of the co | |
| 22. | Need initial hazards assessment after CD-0 /before CD-1. | C. Sell question response J. Rispoli & R. McMullan question (to C. Sell) response | Applications of the control of the c | The Act I make you want to be a second or you wa | See item 10.a |
| 23. | Hazards analysis done prior to CD-1 to identify performance category that is to be used in the conceptual design | R. McMullan question response | OECM | | See item 10.a |
| 24. | We must institute safety reviews earlier in the design process. | J. Rispoli written statement to the Board, 11 th § J. Rispoli verbal testimony | OECM | | See item 10.a |
| 25. | Need to better review/resolve safety issues at CD-1 | C. Sell question response | OECM | | See item 10.a |

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| | | J. Rispoli verbal testimony | i wa mana mana mana mana mana mana mana m | | |
| 26. | Analysis, design, and procurement specification work must be complete and reviewed for quality early enough to be used as the basis for key decisions. For nuclear projects, the overall safety strategy and preliminary hazard analysis, accepted by the authorization basis manager, should be completed prior to CD-1. | J. Paul written statement to the Board, 3 rd § 2 nd ○ J. Paul verbal testimony | OECM TO THE STATE OF THE STAT | The state of the s | See item 10.a |
| 27. | Controversial, complicated, and/or potentially expensive issues must be resolved in a timely manner | J. Paul written statement to the Board, 3 rd § 3rd o J. Paul verbal testimony | OECM THE PROPERTY OF THE PROP | one of the control of | See item 10.a |
| 28. | Establish Performance Category, ventilation approach (i.e. active vs. passive), fire protection design concept at CD-1. Use conservative assumption at this time, but allow for later reduction in requirements if defensible based on design development. | J. Rispoli question (to J. Paul) response. | OECM | | See item 10.a |
| 29. | Second, the Department of Energy does not have a manual that sets design function expectations for hazardous nuclear facilities. I believe | J. Bader opening remarks | OECM | | See item 10.a |

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| | the existence of such a manual would reduce the number of occasions where significant design changes are made at late stages of projects | | | | |
| 30. | In order to determine the best design approach, it is essential to analyze the safety aspects of each alternative being considered It is of paramount importance that this occurs prior to CD-1 The hazards analysis conducted prior to CD-1 also identifies the project risks, from a safety perspective, which will need to be addressed during preliminary design. | R. McMullan written statement to the Board R. McMullan verbal testimony | OECM *** A STATE OF THE STATE | And the second s | See item 10.a |
| 31. | Certainly we need to look by CD-1 at whether or not we need an active confinement system. | J. Rispoli question response | OECM TOTAL CONTROL OF THE CONTROL OF | | |
| 32. | Need an updated hazards assessment before CD-2 | C. Sell question response | OECM | | See item 10.a |
| 33. | Line programs also need to more clearly define contractual expectations regarding the early integration of safety into the alternative studies and project design. | C. Sell 12-5-05 memorandum – Program Weaknesses # 2. C. Sell written statement to the Board, Program | PSOs/Office and Site Managers | | |

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| | | Weaknesses # 2. | | A 19 September 1 September 2 S | |
| | | C. Sell verbal testimony | | March | |
| 34. | Ensure that the design requirements are consistent with the specified safety standards | C. Sell written statement to the Board, 3 rd § | PSOs/Office and Site Managers | among the control of | |
| 35. | I expect safety to be fully integrated into design early in the project. Specifically, by the start of preliminary design, I expect a hazards analysis of alternatives to be complete and the safety requirements for the design to be established. | C. Sell 12-5-05 memorandum Expectations # 1. C. Sell written statement to the Board, Expectations # 1 C. Sell verbal testimony | CASTON AND AND AND AND AND AND AND AND AND AN | | OECM resolve need to revise Order and/or Manual. |
| 36. | The conceptual design phase requires a hazard analysis and selection of safety related systems, structures, and components. | J. Rispoli written statement to the Board, 6 th § | OECM | | OECM resolve need to revise Order and/or Manual. |
| 37. | It is imperative that we establish an appropriate safety strategy which includes identification of safety class safety significant structures, systems | J. Paul written statement to the Board, 2 nd § 3 rd | OECM | | OECM resolve need to revise Order and/or Manual. |

| No. | Action Description | Source | Responsible Org./Mgr | Completion Date | Remarks |
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| | | | | <u> </u> | |
| | and components for nuclear projects early in the project's life. | J. Paul verbal testimony | | A A A A A A A A A A A A A A A A A A A | |
| 38. | In response to a J. Bader request for a | C. Sell question | OECM | on Marian | See item 10.a |
| 36. | more formal CD-1 process and better | response | OECM | Supplemental I managemental | See hem 10.a |
| | definition of safety requirements, C. | response | -0 000 -0 000 -0 000 -0 000 -0 000 | University of the second of th | |
| | Sell replied that a greater emphasis | | and the second s | 100 (100 (100 (100 (100 (100 (100 (100 | |
| | on safety design requirements will be | | The second of th | The state of the s | |
| | implemented for CD-1 | | 1/4 | 10 A | |
| | implemented for CD-1 | | | WHAT | |
| Risk I | dentification & Management | | PO 0000 C 00000 P P P P P P P P P P P P P | | |
| 39. | Need to do better with: | J. Rispoli verbal | OECM | | |
| | a. Identifying project uncertainties; | testimony | | | |
| | b. Developing better risk | 200 200 3 20 3 20 3 20 20 20 20 20 20 20 20 20 20 20 20 20 | 101 101 102 103 | rajo S. Salvos . Salv | |
| | management systems. | | | olection: | |
| 40. | Need effective identification and | J. Rispoli verbal | OECM | | |
| | management of risk | testimony | 9,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0 | | |
| | The state of the s | | | | |
| | And Application and Applicatio | | Position | | |
| Later i | n the Life Cycle | CONTRACTOR | Top own proper in annual in approximate, annual in approximate, annual in approximate annual in annual in an annual in an annual in annual in annual in an annual in annual in an annual in annual | | |
| 41. | Ensure that construction is consistent | C. Sell written | Office and Site | | |
| | with the design requirements | statement to the | Managers | | |
| | ************************************** | Board, | | | |
| | ************************************** | 3 rd § | | | |
| 42. | A Preliminary Documented Safety | J. Rispoli written | OECM | | OECM resolve need to |
| | Analysis must be prepared and | statement to the | | | revise Order and/or |
| | approved by DOE as a prerequisite | Board, 6 th § | | | Manual. |
| | for approval of the final design for | | | | |
| | Hazard Category 3 or higher | | | | |
| | facilities. | | | | |

| No. | Action Description | Source | Responsible Org./Mgr | Completion Date | Remarks |
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| Person | nel – General | | | | |
| 43. | Need qualified personnel | J. Rispoli verbal testimony | OECM | No. 1 State and 1 | |
| 44. | Goal – Re-establish technical competence and expertise of the DOE staff. | C. Sell verbal testimony | PSOs/Office and Site Managers | Secretary Secret | |
| 45. | Line programs need to better staff their project teams with the necessary design engineering and safety expertise to ensure safety requirements are properly identified, translated into the project's design documents, and maintained in effect throughout the procurement, construction, and testing phases of the project. | C. Sell 12-5-05 memorandum — Program Weaknesses # 2. C. Sell written statement to the Board, Program Weaknesses # 2. C. Sell written statement to the Board, Program Weaknesses # 2. | PSOs/Office and Site Managers Verification Verification | The second content of | |
| 46. | I expect line project teams to have the necessary experience, expertise, and training in design engineering, safety analysis, construction, and testing. | C. Sell 12-5-05 memorandum – Expectations # 3. C. Sell written statement to the Board, | PSOs/Office and Site Managers | | |

Follow Up Actions From the December 7, 2005 DNFSB Safety in Design Public Meeting

| No. | Action Description | Source | Responsible Org./Mgr | Completion Date | Remarks |
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| 110. | Action Description | Source | Org./Mgr | Date | Remarks |
| | | Expectations | | | |
| | | # 3. | | | |
| | | C. Sell verbal | 11 vid | gr | |
| | | testimony | | 100 (100 (100 (100 (100 (100 (100 (100 | |
| 47. | There are two key areas in need of | J. Rispoli written | PSOs | Contraction of State Contracti | |
| | immediate attention the experience | statement to the | . 35 (* 15 * * 1.0.) - 1.0.50 (* | | |
| | level of our people. | Board, 8 th § | To Proper Control of the Control of | Nondoment of the property of t | |
| | We will review the Integrated Project | J. Rispoli written | Third VALOROPIN TO PROVIDE TO THE | The control of the co | |
| | Teams, especially projects requiring | statement to the | ***** ******************************** | . " | |
| | nuclear facility expertise, to assure | Board, 10^{th} § | 1 1 1 1 1 1 1 1 1 1 | | |
| - | they are appropriately staffed with | 10 Middle out 2 | awayu a dhanan a na a na a na a na a na a na | | |
| | sufficient expertise in areas such as | 1071 1 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | | | |
| 40 | engineering and quality assurance. | *** | | oteoor I | |
| 48. | [DOE] technical expertise needs to | J. Rispoli | PSOS *********************************** | | |
| | equal or exceed that of its contractors. | question | | | |
| 49. | EM ongoing technical skills gap | response J. Rispoli | EM | | |
| 77. | analysis will look at projects | question | to approximate to a constraint of the constraint | | |
| | currently using contracted resources. | response | | | |
| 50. | The resources (time, people, and | J. Paul written | PSOs | | |
| | expertise) applied to the evaluation of | statement to the | | | |
| | changes to analysis, design, and | Board, 3 rd § | | | |
| | procurement specifications and to | 4 th 0 | | | |
| | physical construction deviations are | 35 D 1 1 1 | | | |
| | sufficient to identify and resolve | J. Paul verbal | | | |
| | issues that can adversely affect the safety of the final facility or activity. | testimony | | | |
| | safety of the inial facility of activity. | | | | |

Integrated Project Team (IPT) – (Also see CTAs, CNS, and CDNS)

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| 51. | The IPT must possess the requisite | J. Rispoli written | OECM | | See item 10.c |
| | skills for safety basis authorization, | statement to the | | 27 Maria | OECM resolve need to |
| | which could be vested in the Federal | Board, 7 th § | | | revise Order and/or |
| | project Director himself or one or | | | er i Service i Service i | Manual. |
| | more of the IPT members. | | | | |
| 52. | There are two key areas in need of | J. Rispoli written | PSOs | 2 | See item 10.c |
| | immediate attention the experience | statement to the | 2 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 | T VIII TO THE TOTAL | |
| | level of our people. | Board, 8 th § | The Pills of the P | 1 | ' |
| | | | The second control of | 1999 1111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | |
| | As we put certified Federal project | J. Rispoli written | Application of the control of the co | | |
| | Directors in place, the certification | statement to the | 1 (1971) | | |
| | process will assure that each | Board, 10 th § | MARTINI, DORTHUM. MONTHAL THE STATE OF THE | | |
| | individual has the specific training | 99900000 36179 5 3.1. ***PARAMENTAL of " * * * * * * * * * * * * * * * * * * | 10 (1000) | | |
| 53. | and experience requirements. | J. Paul written | PSOs | | See item 10.c |
| 33. | the Federal project Director and one or more members of the IPT | statement to the | PSUS | | OECM resolve need to |
| | must have the requisite safety | Board, 3 rd § 1 st \circ | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | revise Order and/or |
| | management experience to execute | Board, 5 g 1 | | | Manual. |
| | complicated projects with significant | J. Paul verbal | 21 | | Wanuai. |
| | nuclear safety implications. | testimony | | | |
| 54. | our IPTs require access to needed | J. Paul written | PSOs | | See item 10.c |
| | experts in a wide variety of | statement to the | | | OECM resolve need to |
| | disciplines, including project | Board, 3 rd § 1 st \circ | | | revise Order and/or |
| | management, safety basis | The course of th | | | Manual. |
| | development, and specific scientific | J. Paul verbal | | | |
| | and engineering functions. | testimony | | | |
| 55. | We expect that the IPT members will | J. Paul written | NNSA | | See item 10.c |
| | be actively involved with project | statement to the | | | OECM resolve need to |
| | deliverables as the project proceeds | Board, Last page | | | revise Order and/or |
| | and will work with their contractor | item #1. | | | Manual. |
| | counterparts to ensure that project | | | | |

| | | | Responsible | Completion | |
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| No. | Action Description | Source | Org./Mgr | Date | Remarks |
| | | | | | |
| | deliverables properly integrate safety | | | | |
| | into design | | | Lines a common | |
| 56. | Ensure that NNSA project managers | J. Paul written | OECM | | |
| | and IPT members have the | statement to the | | The second secon | |
| | appropriate trainingwe will | Board, Last page | | St. Tool Best St | |
| | ensure that Federal Project Directors | item #3. | A CONTRACTOR OF THE CONTRACTOR | - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 | |
| | and IPT personnel have adequate | | | 1 - MORPHONE TO A 1 - MARKET T | |
| | training to understand the principle of | J. Paul verbal | 2 | 2013 - 1745 2013 - 1745 23 2745 23 2749 | a a |
| | integrating safety into design. | testimony | 2000/2008/100 1.111 1.11 | - 1000000 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - | |
| CITE : | ONG LODNG | | | | |
| | CNS, and CDNS | | 2 50 - 30 000 00000 - 1000 - 40 000 0000 - 100 - 10 000 0000 - 10 000 0000 0000 - 10 000 0000 0000 | f | |
| 57. | Chiefs of Nuclear Safety will: | C. Sell | CNS/CDNS | | |
| | a. Provide effective oversight on the | 12-5-05 | 1981 A *********************************** | | |
| | selection of safety requirements | memorandum – | | Experiment of the control of the con | |
| | and standards for design and | Program | VIII. VIIII. VIII. VIIII | | |
| | construction, and translation of | Weaknesses | age ago | | |
| | expectations into contract | THE CONTRACTOR | | | |
| | requirements. | A MARINE CONTRACTOR OF THE CON | www. | | |
| | b. Review project team make-up and | C. Sell written | ************************************** | | |
| | contractor oversight. | statement to the | And the second of the second o | | |
| | c. Sample safety hazards analyses, | Board, | *** | | |
| | facility hazard classification, safety | Program | | | |
| | analyses, safety system | Weaknesses | | | |
| | identification and performance | # 3. | | | |
| | categorization, and resolution of | 100 000 000 000 000 000 000 000 000 0 | | | |
| | design and construction safety | C. Sell verbal | | | |
| | issues so that they can provide | testimony | | | |
| | feedback and input to their Central | # 1000 1011* 1012* | | | |
| | Technical Authority regarding | | | | |
| | whether they have confidence that | | | | |
| | the project teams have effectively | | | | |

| No. | Action Description | Source | Responsible Org./Mgr | Completion Date | Remarks |
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| | integrated safety considerations into design and construction work activities. | | | THE STATE OF THE S | |
| 58. | I expect that the Chiefs of Nuclear safety will provide safety oversight during the design, construction, and testing phases of our projects. | C. Sell 12-5-05 memorandum – Expectations # 4. C. Sell written statement to the Board, Expectations # 4. C. Sell verbal testimony | CNS/CDNS and a second of the control | 1 | |
| 59. | For all nuclear projects, NNSA CTA via the Chief of Defense Nuclear Safety, will review and offer counsel on the composition of the IPT that is approved by the Site Manager. The CTA review will validate that the federal personnel assigned to the IPT are appropriately qualified and that the level of effort expected from them is appropriate | J. Paul written statement to the Board, Last page item #1. | CDNS Finds Fin | | |
| 60. | In response to a J. Bader question regarding whether the \$400,000 threshold would be reduced for CD-2 and CD-3 EIRs, R. McMullan | R. McMullan question response | OECM/EH | | |

| No. | Action Description | Source | Responsible Org./Mgr | Completion Date | Remarks |
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| 1100 | rection Description | Source | Org.//vigi | Date | Remarks |
| | replied: We have discussed how we | | | | |
| | can ensure that we have properly | | | A CONTRACTOR OF THE CONTRACTOR | |
| | addressed the safety aspects of our | | | | |
| | projects. And we believe that the | | and the second | 5 · · · · · · · · · · · · · · · · · · · | |
| | increased focus on and involvement | | | - Control of the Cont | |
| | of the Chiefs of Nuclear safety as | | 2 | 100 100 100 100 100 100 100 100 100 100 | |
| | well as the Office of Environment, | | Company Compan | *** 1 | |
| | Safety and Health, we would like to | | 10000 | ************************************** | |
| | see how that works. | | Comment | *** A 61 *** SARATA** (*** A 62 *** A 6 | |
| | | | | | |
| Extern | al Oversight Reviews | | The second secon | | |
| 61. | Need better funding source for | C. Sell question | OECM | | |
| | External Independent Reviews | response | | | |
| | (EIRs). Working with CFO to | - 1,000 - 1,00 | | | |
| | determine if EIRs can be funded from | R. McMullan | ************************************** | | |
| | working capital funding. | written statement | The state of the s | | |
| | Services, amount of the control of t | to the Board 11 th | 1700 SV | | |
| | | § | | | |
| | Anticology of the control of the con | Water Courts Vogs Courts 4 courts 1 colors | 100000 10000 101.00 | | |
| | 1 Configuration | R. McMullan | Thermal Community of the Community of th | | |
| | | verbal testimony | 400 f 1 cel f 2 cel f | | |
| 62. | We will continue to increase our | R. McMullan | | | |
| | focus on the safety aspects of EIRs to | written statement | | | |
| | better ensure the incorporation of | to the Board | | | |
| | safety systems. We will also | Ideas and | | | |
| | emphasize that the review of start-up | Actions for | | | |
| | testing plans include an assessment of | <u>Improvement</u> | | | |
| | whether the safety is adequately | 2 nd § | | | |
| | addressed in the start-up tests to be | | | | |
| | performed, as well as whether the | R. McMullan | | | |
| | Performance Baseline includes | verbal testimony | | | |

| No. | Action Description | Source | Responsible Org./Mgr | Completion Date | Remarks |
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| | sufficient costs and schedule for conducting these tests. | | | Agents - The Control of the Control | |

Oversight

| 63. | Goal - Continue to institutionalize | C. Sell verbal | PSOs/Office | 100 100 100 100 100 100 100 100 100 100 |
|-----|---------------------------------------|--|--|--|
| | [DOE] oversight. | testimony | and Site | \$\sigma\$ \(1.5\sigma\$ \) \(25\) \(\sigma\$ \) \(\sigma* |
| | | | Managers | - FERRENCE - CONTROL - CON |
| | | C. Sell question | 00000000000000000000000000000000000000 | ************************************* |
| | | response | ************************************** | rate, falls, fall of the control of |
| 64. | Implement planned improvements in | C. Sell verbal | PSOs | |
| | HQ oversight. | testimony. | William State Market State Sta | |
| 65. | We are also looking for | J. Rispoli written | PSOs | |
| | enhancements to the | statement to the | THE CONTROL OF THE CO | New Arrange Control of the Control o |
| | mechanism/processes used to ensure | Board, 10^{th} § | ************************************** | |
| | technical competence of Federal staff | | (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) | |
| | who oversee project management | ************************************** | V | |
| | activities. | ** I Deep 1 ** 1 ** 1 ** 1 ** 1 ** 1 ** 1 ** 1 | Aug. | |
| 66. | DOE oversight must be present | J. Rispoli written | PSOs | |
| | throughout an entire project using | statement to the | | |
| | qualified and technically competent | Board, 11 th § | ** # * | |
| | personnel. | - All Andrews - All Andrews - Andrew | | |

Lessons Learned, Continuous Improvement, & NNSA Pilot Effort

| 67. | e. Need real time feedback of lessons | J. Rispoli verbal | OECM | |
|-----|--|---------------------|-------|---------------|
| | learned "Management of the second of the sec | testimony | | |
| 68. | I expect that we will learn effectively | C. Sell | EH(?) | See item 10.h |
| | from our project experience so that | 12-5-05 | | |
| | future projects are more likely to be | memorandum – | | |
| | completed on time and on budget | <u>Expectations</u> | | |

| No. | Action Description | Source | Responsible Org./Mgr | Completion Date | Remarks |
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| | | | | | |
| | with all mission and safety objectives | # 6. | | | |
| | satisfied. | | | | |
| | | C. Sell written | | | |
| | | statement to the | and the state of t | The second secon | |
| | | Board, | 1 (II) 10 0 (II) | ph-160 | |
| | | Expectations # 6. | | 50 (10 to 10 | |
| | | # 0 . | Section 1997 (1997) (19 | "HINNED BAIL AND SOME STATE OF THE STATE OF | |
| | | C. Sell verbal | | TORROGO SON TORROG | |
| | | testimony | 1 | ************************************** | |
| 69. | Goal – Establish a system on | C. Sell verbal | EH (?) | | See item 10.h |
| | continuous improvement | testimony | 1011 (.) | | See Rem 16.n |
| | venimus us mipro venient | Marie Mari | THE PERMITTER TH | | |
| | | C. Sell question | | | |
| | | response | * ************************************ | entron | |
| 70. | Perform a lessons learned review of | A.J. Eggenberger | PSOs | | |
| | previous projects to better understand | recommendation | 1988 9000 V 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | |
| | how/why decisions were made so as | during R. | ************************************** | | |
| | not to repeat the same mistakes. | McMullan | Collin Miles Miles Collector | | |
| | | testimony | * 101/0000 // ************************** | | |
| 71. | If a lessons learned review is | J. Bader | PSOs | | |
| | performed look at 5 nanophase labs | recommendation | A | | |
| | lessons learned. | during R. | | | |
| | The second secon | McMullan | | | |
| | 95.0001.000 | testimony | | | |
| 72. | Lessons learned from prior | J. Paul written | PSOs | | |
| | experience and the experiences of | statement to the | | | |
| | others are reflected in systematic | Board, 3 rd § | | | |
| | improvements to processes and | 5 th 0 | | | |
| | procedures for designing and | I D1 1 1 | | | |
| | constructing defense nuclear facilities | J. Paul verbal | | | |

| No. | Action Description | Source | Responsible Org./Mgr | Completion Date | Remarks |
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| | | testimony | | | |
| 73. | training should include case studies where nuclear safety issues were not addressed in a timely manner in an effort to ensure we learn from our past. An existing training module on this topic in the NNSA Project Management Career Development Program will be considered as a prospective template for the content of the requisite training. | J. Paul written statement to the Board, last page item #3. J. Paul verbal testimony | OECM | The second secon | See item 10.c |
| 74. | EM developing a set of lessons learned. | J. Rispoli verbal testimony (during J. Paul testimony) | EM "100 (100 to 100 to | | |
| 75. | finally I would add to my list based on some of the comments I heard earlier, a commitment on our part to consider some form of a lessons learned project. | J. Paul verbal testimony Application of the state of the | NNSA Sabel S | | |
| 76. | Pilot an effort to improve the implementation of existing guidance by focusing on a document titled "Project Management Practices," and subtitled "integrated Safety." NNSA will share the result of our pilot project with the other program offices and will use our experience to suggest further improvements in the directives | J. Paul written statement to the Board, last page item #2. J. Paul verbal testimony | NNSA | | |

| | | | Responsible | Completion | |
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| No. | Action Description | Source | Org./Mgr | Date | Remarks |

| Integra | ated Safety Management | | | 1998 (1997) 1997 (1997) 1977 | |
|---------|--------------------------------------|---|--|---|----------------------------|
| 77. | The Department has strong Integrated | C. Sell written | Office and Site | | |
| | Safety Management systems | statement to the | Managers | 600 | |
| | implemented at our facilities We | Board, | = = = = = = = = = = = = = = = = = = = | emporarilli managisti ti maketti | , |
| | need to build on this program and | <u>Program</u> | | **** ********************************* | |
| | better understand how to apply it to | Strenghts # 5 | Committee Statistics (Committee) Committee Committee Committee Committee Committee Committee Committee Committee Committee Comm | 101 - Andrew Comment | |
| | design and construction phases. | | | contract of specific contracts of specific c | |
| 78. | Goal – Strengthen safety culture of | C. Sell verbal | PSOs/Office | (g) (10 (5 (- 3 (- 3 (- 3 (- 3 (- 3 (- 3 (- 3 (| |
| | DOE. | testimony | and Site | | |
| | | | Managers | | |
| 79. | DOE Order 413.3does not provide | R. Kasdorf | OECM | | The theme of developing |
| | specific requirements for applying | opening remarks | en in Maria III e e e e e e e e e e e e e e e e e | | more specific requirements |
| | integrated safety management | | 2 A24 | | is repeated throughout R. |
| | principles to the design and | Ann. | | 10 | Kasdorf's remarks. |
| | construction process. The staff | | | | |
| | believes that correction of this | | Countries representation open contribution of the countries of the countries open | | |
| | fundamental problem requires the | AND TOTAL CONTROL OF THE STATE | | | |
| | development of more specific | \$200 M. Anterwind, ************************************ | ### ### ############################## | | |
| | requirements and guidance based on | 11111111111111111111111111111111111111 | | | |
| | DOE and industry experience and | 1500000 | | | |
| | practice. | A | | | |