

INTEGRATED SAFETY MANAGEMENT

REMARKS PREPARED

FOR

ISM FORUM

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BY

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I AM GLAD TO BE HERE ONCE AGAIN TO SHARE WITH YOU SOME THOUGHTS ON THE SAFETY MANAGEMENT PROGRAM OF THE DEPARTMENT OF ENERGY (DOE). THE SPONSORSHIP BY DOE OF THIS FORUM AND THE CONTINUED LEADERSHIP BY GENERAL JOHN GORDON AND UNDER SECRETARY ROBERT CARD OF EFFORTS TO TAKE ISM TO A HIGHER PLATEAU ARE STRONG EVIDENCE OF COMMITMENT BY DOE TO SAFETY IN THE PERFORMANCE OF ITS MISSIONS.

ALTHOUGH CONSIDERABLE ADVANCE HAS BEEN MADE BY DOE IN BRINGING ITS HAZARDOUS OPERATIONS INTO COMPLIANCE WITH PRACTICES REQUIRED BY STATUTES FOR THE WORKER, THE PUBLIC AND ENVIRONMENTAL PROTECTION, ROOM FOR IMPROVEMENT STILL REMAINS. FURTHER, AS YOU WELL KNOW, ACHIEVING SAFETY IS NOT AN END, IT IS A JOURNEY.

IN PREPARING MY REMARKS FOR THIS MEETING, I FOUND MYSELF PARTICULARLY CHALLENGED. THIS BEING PERHAPS MY LAST TIME TO ADDRESS YOU, I HAVE HAD TO ASK MYSELF WHAT ARE SOME LAST THOUGHTS I WOULD LIKE TO SHARE WITH YOU? SOME ISSUES ARE ON THE TABLE FROM THE DECEMBER SESSION. I FELT THE NEED TO MAKE SOME COMMENTARY ON THOSE BUT WHAT ELSE? AFTER DELIBERATING ON THIS FOR AWHILE, I DECIDED THAT WHAT MIGHT BE MOST USEFUL TO YOU IS TO REFLECT A BIT ON WHY WE EMBARKED ON THIS JOURNEY, COMMENT ON HOW FAR ALONG I THINK WE HAVE PROGRESSED AND SUGGEST WHERE I THINK FUTURE EFFORTS SHOULD NEXT FOCUS. IN THE PROCESS I COULD TOUCH UPON THE TASKS THAT WERE THE OUTGROWTH OF THE DECEMBER MEETING. I HAVE STRUCTURED MY REMARKS ACCORDINGLY.

WHY THIS JOURNEY?

THE DECADE OF THE 1970'S USHERED IN AN ERA OF NATIONAL DEDICATION TO THE PROTECTION OF PEOPLE AND THE ENVIRONMENT FROM POTENTIAL HARMFUL EFFECTS OF HAZARDOUS MATERIALS AND INDUSTRIAL PROCESSES. DOE'S WEAPONS PRODUCTION PROGRAM BECAME SUBJECT TO THE PRESSURES OF THAT MOVEMENT. DOE'S PREDECESSOR AGENCIES DID NOT RESPOND WELL. CONGRESSIONAL DISAFFECTION WITH DOE'S RESPONSE LED TO TWO VERY SEMINAL ACTIONS. IN 1988, CONGRESS ESTABLISHED THE DEFENSE NUCLEAR FACILITIES SAFETY BOARD (BOARD) TO PROVIDE EXTERNAL OVERSIGHT OF DOE'S NUCLEAR SAFETY PROGRAM FOR THESE FACILITIES AND, IN 1992, ENACTED THE FEDERAL FACILITY COMPLIANCE ACT. CONGRESSIONAL EXPECTATIONS WERE MADE QUITE CLEAR. FEDERAL FACILITIES INCLUDING THOSE OF DOE'S WEAPONS ESTABLISHMENT WERE EXPECTED TO BRING THEIR OPERATIONS INTO

COMPLIANCE WITH FEDERAL STATUTES FOR PROTECTION OF THE PUBLIC, THE WORKERS AND THE ENVIRONMENT.

## THE JOURNEY THUS FAR

THE BOARD SINCE 1989 HAS MADE 42 RECOMMENDATIONS TO THE DEPARTMENT FOR IMPROVING ITS SAFETY (ES&H) PROGRAMS. IT IS INFORMATIVE IN RETROSPECT TO LOOK AT THE TOPICS THE BOARD HAS HAD DOE TARGET FOR THEIR SAFETY IMPROVEMENT PROGRAM. THESE ARE SHOWN IN TABLE 1. THEY ARE GROUPED IN KEEPING WITH THE BOARD'S STATUTORY REQUIREMENTS TO REVIEW THE ADEQUACY OF SAFETY STANDARDS USED BY DOE AND THEIR APPLICATION IN THE DESIGN, CONSTRUCTION, OPERATION AND DE-COMMISSIONING OF DEFENSE NUCLEAR FACILITIES. CONGRESS ALSO EXPRESSED AN INTEREST IN HAVING THE BOARD ASSIST DOE WITH THE HUMAN RESOURCES ISSUE.

NOT SURPRISING THE BOARD'S RECOMMENDATIONS FOCUSED MOST OFTEN DURING THE PAST DECADE ON OPERATIONAL SAFETY ISSUES. RELATIVELY FEW FACILITIES HAVE BEEN IN THE DESIGN/CONSTRUCTION STAGES AND THE BOARD HAS LIMITED ITS DECOMMISSIONING OVERSIGHT TO THE EARLY STAGE OF CLEANUP WHEN SUBSTANTIAL AMOUNTS OF RESIDUAL RADIOACTIVE MATERIALS ARE INVOLVED.

IN ADDITION TO RECOMMENDATIONS, THE BOARD HAS ALSO USED THE MANDATORY REPORTING PROVISION OF ITS STATUTE TO ELICIT ATTENTION BY DOE TO SIGNIFICANT SAFETY ISSUES. IT IS INTERESTING TO NOTE (FIGURE 1) THAT THE NUMBER PER YEAR OF BOARD RECOMMENDATIONS HAS DECREASED WITH TIME BUT THE NUMBER OF REPORTING REQUIREMENTS HAS INCREASED. THE BOARD FOUND THAT OFTEN THE REPORTING REQUIREMENT RESULTED IN MORE EXPEDITIOUS RESPONSE BY DOE TO THE SAFETY ISSUES IDENTIFIED.

DOE HAS RESPONDED VERY POSITIVELY TO BOARD RECOMMENDATIONS AND REPORTING REQUIREMENTS, BUT NOT ALWAYS EXPEDITIOUSLY. CROSS CUTTING ISSUES HAVE BEEN THE MOST TROUBLESOME FOR DOE IN ACHIEVING CONSENSUS ON A PATH FORWARD. DOE HAS ENDORSED A NUMBER OF GOOD, INTERNALLY GENERATED SAFETY INITIATIVES. NOTABLE AMONG THESE ARE ENHANCED WORK PLANNING (EWP) AT THE ACTIVITY LEVEL, THE VOLUNTARY PROTECTION PROGRAM (VPP), THE RE-TOOLING OF THE WEAPONS PRODUCTION/WEAPONS DIS-ASSEMBLY LINES AT PANTEX USING A CONCEPT CALLED SS21, AND THE PIONEERING OF THE ACTIVITY CONTROL ENVELOPE (ACE) CONCEPT AT ROCKY FLATS.

SINCE THE COMMITMENT BY DOE TO THE INTEGRATED SAFETY MANAGEMENT CONCEPT IN 1996, CONSIDERABLE PROGRESS HAS BEEN MADE COMPLEX-WIDE IN UPGRADING ITS SAFETY MANAGEMENT PROGRAM. I CAN SAY TO YOU WITH CONSIDERABLE SATISFACTION THAT I BELIEVE THE SAFETY MANAGEMENT PROGRAM OF DOE TODAY IS A MUCH BETTER ONE THEN IT WAS TEN YEARS AGO. ALL OF YOU KNOW, HOWEVER, ENSURING SAFETY IS EVER A WORK IN PROGRESS.

WHERE THEN SHOULD FUTURE EFFORTS FOCUS? ARE THERE ENOUGH INITIATIVES ON THE PLATE ALREADY? SHOULD CURRENT EFFORTS BE COURSE-CORRECTED? HOPEFULLY ADDED INSIGHTS WILL EMERGE FROM EXCHANGES THAT WILL TAKE PLACE IN THIS FORUM.

BEFORE TARGETING A NUMBER OF ISSUES, LET ME FIRST SHARE WITH YOU A BIT OF SAFETY-RELATED PHILOSOPHY.

I WAS STIMULATED LATELY BY OBSERVATIONS OF AN ITALIAN PHILOSOPHER BY THE NAME OF LUCIANO DE CRESCENZO. LIKE ME, LUCIANO STARTED OUT AS AN ELECTRICAL ENGINEER BUT HE TURNED TO WRITING AND PHILOSOPHY. THIS CAREER TURN CAME OUT OF HIS INTEREST IN GREEK HISTORY AND ADMIRATION FOR THE GREAT THINKERS OF THE GOLDEN AGE OF GREECE. WHEN ASKED WHAT IS PHILOSOPHY, HE EXPLAINED IT THUS:

THERE ARE THINGS IN LIFE WE KNOW WITH REASONABLE CERTAINTY. THESE WE ACCEPT AS A PART OF SCIENCE. THEN THERE ARE THINGS WE DO NOT KNOW FOR CERTAIN BUT WE BELIEVE AND THESE MAKE UP WHAT WE CALL RELIGION. FINALLY THERE ARE THINGS THAT WE DO NOT REALLY KNOW NOR DO WE REALLY FULLY BELIEVE AND THAT IS WHAT WE CALL PHILOSOPHY. I BELIEVE DOE'S SAFETY MANAGEMENT PROGRAM MUST ENCOMPASS A BIT OF ALL OF THESE—SCIENCE , RELIGION, AND PHILOSOPHY.

WHAT DE CRESCENZO OBSERVED ABOUT THIS GOLDEN AGE OF GREECE WAS THE UNUSUAL NUMBER OF MEN OF EXCEPTIONAL INTELLECT WHO LIVED DURING THE SAME ERA—AROUND THE 5<sup>TH</sup> CENTURY A.D.—AND WITHIN A FEW KILOMETERS OF ONE ANOTHER. MEN SUCH AS ARISTOTLE, PLATO, SOCRATES, HERODOTUS, AND PHIDIAS. THESE GREAT THINKERS ADVANCED IDEAS NOT ALWAYS UNDERSTOOD NOR ACCEPTED BY THEIR CONTEMPORARIES. THEY ARRIVED AT MUCH OF WHAT THEY ADVOCATED THROUGH A PATH WE SAILORS CALL 'TACKING,' THAT IS A MENTAL ZIG ZAG. THEIR CREATIVE MINDS BOUNCED IDEAS OFF ONE ANOTHER, FREQUENTLY IN THE OPEN MARKET PLACE CALLED THE "AGORO" IN GREEK. THEIR IDEAS WERE REFINED AND STRENGTHENED BY THE

CHALLENGES OTHER CREATIVE INTELLECTS BROUGHT TO THE EXCHANGES IN THOSE PUBLIC FORUMS. CREATIVITY IS OFTEN MARKED BY A CHALLENGE TO WHAT PASSES AT THE TIME FOR ORDER—ORDER BEING AN ACCEPTED WAY OF THINKING OR DOING THINGS. MOST OF US FEEL MORE COMFORTABLE IN A SOCIETY THAT IS BASED ON ORDER. DOE ORDERS AND ASSOCIATED GUIDES ARE A CASE IN POINT. THEY OFFER A SAFE HARBOR. YET THERE ARE THOSE WHO FEEL THEY ALSO INHIBIT CREATIVITY. I BELIEVE THAT BOTH POINTS OF VIEW HAVE MUCH MERIT.

SOMEHOW WE MUST BE CREATIVE ENOUGH TO DEVELOP OUR SAFETY MANAGEMENT PROGRAM THAT IS A COMBINATION OF BOTH THE ORDERED AND THE DIS-ORDERED. WE NEED TO SET BOUNDS THAT ARE DICTATED BY THE STATUTORY RESTRAINTS OUR SOCIETY HAS PLACED UPON US AND TO FASHION OUR RESPONSE TO THOSE RESTRAINTS AS TO ALLOW CREATIVE MINDS TO MOVE US INTELLECTUALLY TO NEW HEIGHTS. I LIKE TO THINK THAT IS WHAT WE ARE ENGAGED IN RIGHT NOW. HOWEVER, SOME OF THE COMMENTARY I HAVE HEARD AND READ IN RECENT DAYS CONVINCES ME THAT NOT ALL ARE SUPPORTIVE OF THE EFFORTS TO RAISE THE BAR ON WHAT IS ACCEPTABLE SAFETY PERFORMANCE.

WITH THIS BIT OF PHILOSOPHICAL OUTLOOK, I OFFER THE FOLLOWING AS TARGETS FOR IMPROVEMENT EFFORTS:

1. ARTICULATING NEW FUNDAMENTAL SAFETY GOALS

IT HAS BEEN A LONG TIME SINCE I HAVE HEARD THE LEADERSHIP IN OUR NUCLEAR SAFETY COMMUNITY, EITHER IN GOVERNMENT OR IN THE PRIVATE SECTOR, TALK MUCH ABOUT THE SAFETY GOALS OUR NUCLEAR SAFETY PROGRAM SHOULD TARGET. THE COMMITMENT OF DOE TO “DOING WORK SAFELY” IS A GOOD SLOGAN BUT HARDLY AS COMPELLING AS THE STATEMENT OF OBJECTIVES THAT SERVED YEARS AGO TO FOCUS THE NUCLEAR SAFETY PROGRAM FOR THE COMMERCIAL NUCLEAR POWER INDUSTRY. NAMELY:

- (1) THERE MUST BE NO RELEASE OF RADIOACTIVE MATERIAL IN DANGEROUS QUANTITIES FROM A NUCLEAR FACILITY TO THE GENERAL PUBLIC. THERE MUST BE NO “PUBLIC SAFETY ACCIDENTS”
- (2) THE LIKELIHOOD OF A SERIOUS ACCIDENT THAT WOULD RESULT IN SEVERE DAMAGE TO A NUCLEAR FACILITY SHOULD BE KEPT AS SMALL AS POSSIBLE. THE “ECONOMIC ACCIDENT” SHOULD BE PREVENTED.

- (3) EVERY REASONABLE EFFORT SHOULD BE MADE TO ELIMINATE ACCIDENTS INVOLVING PLANT EMPLOYEES. THE FREQUENCY OF THE “INDUSTRIAL PERSONNEL ACCIDENT” SHOULD BE REDUCED TO THE LOWEST POSSIBLE LEVEL, CERTAINLY LOWER THAN THAT OF OTHER COMPARABLE INDUSTRIES.
- (4) SYSTEM MALFUNCTIONS AND DEVIATIONS FROM NORMAL BEHAVIOR SHOULD BE REDUCED TO A MINIMUM, ESPECIALLY SINCE A SYSTEM WITH MINOR FAULTS IS MORE LIKELY TO DEVELOP MAJOR ONES. THE NUMBER OF “OPERATIONAL PROBLEMS” SHOULD BE KEPT TO A MINIMUM.

TO THESE COULD WELL BE ADDED :

- (5) NUCLEAR AND CHEMICAL HAZARDS OF ANY FACILITY OR PROCESS SHOULD BE MANAGED WITH A COMMON SAFETY MANAGEMENT SYSTEM.
- (6) THE PROGRAM FOR PROTECTION OF THE PUBLIC, THE WORKERS AND THE ENVIRONMENT AND THE STEWARDSHIP OF GOVERNMENT PROPERTY SHOULD BE ADMINISTERED AS AN INTEGRATED WHOLE.

NOW, WHY DO I BELIEVE IT IMPORTANT TO STATE SUCH CORE OBJECTIVES? IT HELPS PROVIDE ORDER FOR OUR CREATIVE THOUGHT PROCESSES. JUST AS THE FIVE FUNCTION WHEEL OF ISM HAS PROVIDED STRUCTURE FOR DIALOGUE AND COMMUNICATION ON WHAT NEEDS TO BE DONE TO “DO WORK SAFELY,” SO, I SUBMIT, WILL A CLEAR STATEMENT OF FUNDAMENTAL SAFETY GOALS HELP DIALOGUE AND FOCUS ON THE PROTECTIVE SECTORS THAT ISM ENCOMPASSES. OF THE PROTECTIVE SECTORS—THE PUBLIC, THE WORKERS, THE ENVIRONMENT, AND PROPERTY—WHERE DO YOU BELIEVE SAFETY IMPROVEMENT EFFORTS SHOULD FOCUS? IS PRIORITY ATTENTION BEING GIVEN TO THAT SECTOR OR SECTORS ? I SUSPECT EACH OF YOU WOULD HAVE A SOMEWHAT DIFFERENT ANSWER TO THESE QUESTIONS—AND THAT IS MY POINT. THERE WOULD BE A BASIC FRAMEWORK FOR DIALOGUE ON THOSE DIFFERENCES THAT HOPEFULLY WOULD LEAD TO IDENTIFICATION AND FOCUS ON PRIORITY NEEDS.

*(REFERENCE: DNFSB/TECH-16, INTEGRATED SAFETY MANAGEMENT)*

## 2. DEFINING NECESSARY AND SUFFICIENT REQUIREMENTS

NOW I KNOW THERE ARE THOSE AMONG YOU, BOTH DOE AND CONTRACTOR, WHO ARE BEMOANING WHAT APPEARS TO YOU TO BE NEEDLESS AND BURDENSOME REQUIREMENTS. THIS IS NOT THE FIRST TIME THIS TOPIC HAS EMERGED NOR I SUSPECT WILL IT BE THE LAST. DOE TOOK A MAJOR STEP FORWARD SEVERAL YEARS AGO IN SETTING THE FRAMEWORK FOR DIALOGUE ON THIS MATTER. THIS WAS DONE THROUGH CHANGES IN DOE'S ACQUISITION REGULATIONS, SPECIFICALLY THE LAWS CLAUSE. UNDER THESE PROVISIONS DOE CONTRACTORS ARE ENTITLED TO WORK WITH DOE IN IDENTIFYING A LIST OF SAFETY REQUIREMENTS NOT ESTABLISHED BY RULES YET PERTINENT TO THE HAZARDOUS WORK TO BE PERFORMED. I BELIEVE THAT ALLOWING SUCH TAILORING WAS A VERY ENLIGHTENED APPROACH BY DOE IN RESPONSE TO OBSERVATIONS BY CONTRACTORS THAT ANY ONE SET OF SAFETY REQUIREMENTS WOULD NOT FIT ALL SITUATIONS. THE SET SO ESTABLISHED BECOMES CONTRACTUALLY BINDING UPON THE CONTRACTOR.

THE ESTABLISHMENT OF THIS SET OF SAFETY REQUIREMENTS, LIKE OTHER CONTRACT TERMS AND CONDITIONS, CAN BE A TOUGH TASK. A NATURAL TENDENCY FOR TOUGH TASKS IS TO SHIRK THEM OR LAY THEM OFF ON OTHERS TO DO. THE BOARD IS NOT SYMPATHETIC TO EITHER OF THESE TACTICS.

SINCE THE SAFETY MEETING LAST DECEMBER, DOE HAS HAD TWO DIFFERENT GROUPS LOOKING AT THE POTENTIAL FOR REDUCING REQUIREMENTS IN SAFETY RELATED ORDERS. THE BOARD BY LETTER DATED MARCH 29, 2002, PROVIDED A NUMBER OF COMMENTS ON THIS INITIATIVE. THE CENTRAL THRUST OF THE BOARD'S MESSAGE WAS AS FOLLOWS:

*"THE BOARD UNDERSTANDS THE MOTIVATION FOR THIS INITIATIVE. HOWEVER, THE BOARD CAUTIONS AGAINST ACTIONS THAT WOULD CAUSE DOE'S SAFETY ASSURANCE PROGRAM TO BE DIMINISHED OR LEAD THE PUBLIC TO PERCEIVE A DECREASED EMPHASIS ON SAFETY IN DOE OPERATIONS."*

I KNOW THAT THIS SUBJECT IS ONE OF THOSE SCHEDULED FOR BREAKOUT DISCUSSION. I WOULD REFER PARTICIPANTS TO CONSIDER COMMENTS THE BOARD PROVIDED DOE ON THIS MATTER BY ITS LETTER DATED MARCH 29, 2002. AS MY LONG TIME COLLEAGUE AND NAVY FRIEND JACK CRAWFORD WOULD SAY, THE BOARD'S LETTER IS A "SHOT ACROSS THE BOW" FOR

THOSE WHO WOULD SEEK TO REPLACE WITH VAGARIES THE COMMITMENT TO GOOD SAFETY PRACTICES THAT HAVE EVOLVED OVER THE YEARS.

3. ATTRACTING AND RETAINING TOP-NOTCH TALENT

THIS HAS BEEN AND CONTINUES TO BE ONE OF THE GREATEST CHALLENGES THE CONTRACTORS AND DOE HAVE. THE CHALLENGE DOES NOT APPEAR TO BE UNIQUE TO DOE BUT GOVERNMENT-WIDE. A NUMBER OF YEARS AGO THE DEPARTMENT ESTABLISHED A TECHNICAL CAPABILITY PANEL TO ADDRESS THIS ISSUE FOR THE SENIOR MANAGEMENT OF DOE. SOME SUCCESSFUL INITIATIVES RESULTED BUT NOT WITH ENOUGH SUBSTANCE TO JUSTIFY OPTIMISM THAT THIS ISSUE IS WELL IN HAND. THE WHITE HOUSE LAID UPON ALL CABINET OFFICERS THE TASK OF GIVING PRIORITY ATTENTION TO THIS HUMAN RESOURCE PROBLEM IN FASHIONING LONG TERM STRATEGIC PLANNING OF THEIR PROGRAMS. THE PROBLEM OF ATTRACTING GOOD PEOPLE TO GOVERNMENT SERVICE IS CURRENTLY BEING SURFACED AGAIN IN CONGRESS. THE HEAD OF THE OFFICE OF PERSONNEL MANAGEMENT HAS ALSO BEEN VOCAL ON THE SUBJECT. MORE COMPETITIVE SALARIES SEEMS TO BE THE MAJOR THRUST OF THESE EFFORTS. IN MY VIEW SALARIES ARE NOT THE ONLY ISSUE. A CHALLENGING AND REWARDING WORKING ENVIRONMENT IS IMPORTANT. THE OPPORTUNITY TO MAKE A DIFFERENCE, TO SATISFY A NATIONAL NEED—THESE THINGS ARE STILL MOTIVATIONAL. INSPIRED MANAGEMENT MAKES FOR INSPIRED EMPLOYEES.

A NUMBER OF YEARS AGO, DOE, WITH BOARD URGING, WORKED WITH CONGRESS TO GET AN ADDED ALLOTMENT OF EXEMPT CIVIL SERVICE SLOTS. AS YOU KNOW THIS ALLOWS HIRES OUTSIDE OF NORMAL OFFICE OF PERSONNEL MANAGEMENT (OPM) CONSTRAINTS. IT IS NOT EVIDENT THAT THIS AUTHORITY HAS BEEN USED BY DOE TO ITS FULL ADVANTAGE. THE OPM, WHICH PROFESSES TO BE THE GOVERNMENT WORKERS CHAMPION HAS NOT HELPED. OPM HAS DISCOURAGED THE USE OF EXEMPTED SERVICE HIRES IN SUPERVISORY ROLES.

THE HUMAN RESOURCE ISSUE CONTINUES TO BE ONE OF THE MOST INTRACTABLE OF SAFETY-RELATED CHALLENGES DOE'S SENIOR MANAGERS FACE. THE PROBLEM IS NOT ONLY ONE OF RECRUITMENT AND RETENTION OF HIGHLY COMPETENT STAFF BUT ONE OF OPTIMUM PLACEMENT OF THE TALENT AVAILABLE. THE SENIOR EXECUTIVE SERVICE (SES) SYSTEM THAT WAS SET UP A NUMBER OF YEARS AGO WAS SOLD ON THE PROMISE TO EMPLOYEES OF ADDED SECURITY BUT ALSO TO MANAGEMENT BY THE



PROSPECT OF GREATER FLEXIBILITY IN DEPLOYMENT OF SENIOR RESOURCES. IN REALITY, THE SES SYSTEM HAS BEEN USED TOO INFREQUENTLY BY MANAGEMENT TO EFFECT NEEDED REALIGNMENTS TO OPTIMIZE USE OF EXISTING TALENT. RECENTLY, NNSA ADMINISTRATOR GENERAL JOHN GORDON AND ASSISTANT SECRETARY JESSIE ROBERSON ANNOUNCED MAJOR PERSONNEL RE-ALIGNMENTS. THESE ARE EXCEPTIONAL AND COMMENDABLE ACTIONS THAT PROMISE IMPROVED PERFORMANCES OF THEIR ORGANIZATIONS. WHAT I HAVE YET TO SEE IS THE SUCCESSION PLANNING THAT PROMISES TO HOME GROW THE STAFF NEEDED TO MAINTAIN AND CONTINUE TO IMPROVE THE SAFETY MANAGEMENT PROGRAM OF DOE.

4. SELF REGULATION FOR RADIOLOGICAL SAFETY

AS YOU KNOW DOE UNDER THE ATOMIC ENERGY ACT HAS BOTH THE RIGHT AND RESPONSIBILITY TO DEVELOP AND IMPLEMENT REQUIREMENTS NECESSARY TO ENSURE RADIATION SAFETY FOR THE PUBLIC, THE WORKERS, AND THE ENVIRONMENT. THE FULFILLMENT OF THAT RESPONSIBILITY IS MANIFEST IN TYPICAL REGULATORY FUNCTIONS SUCH AS:

- \* THE DEVELOPMENT AND ISSUANCE OF GENERALLY APPLICABLE REQUIREMENTS (RULES)
- \* THE ESTABLISHMENT OF WORK-SPECIFIC REQUIREMENTS THROUGH CONTRACT TERMS AND CONDITIONS—INCLUDING AUTHORIZATION AGREEMENTS FOR HIGH HAZARD FACILITIES
- \* THE MONITORING OF CONTRACTOR PERFORMANCE FOR COMPLIANCE WITH PRE-AGREED CONDITIONS
- \* ENFORCEMENT ACTIONS WHEN NECESSARY TO EFFECT THE SAFETY PERFORMANCE SOUGHT

IF YOU THINK ABOUT THESE FUNCTIONS FOR A MOMENT THE THING THAT SHOULD STRIKE YOU IS THAT THEY ARE EACH PERFORMED BY ONE OR MORE SEPARATE ORGANIZATIONAL UNITS. I BELIEVE THAT ONE OF THE MAJOR CHALLENGES AHEAD FOR DOE IS TO BRING THESE DIFFERENT REGULATORY FUNCTIONS INTO A MORE COMPLEMENTARY WHOLE. IT NOW FALLS TO DOE'S CHIEF OPERATING OFFICER'S TO PERFORM THIS FUNCTION. MY VIEW HAS BEEN THAT THIS FUNCTION SHOULD BE DELEGATED TO A CAREER STAFFER WITH REGULATORY EXPERTISE WHO WILL PROVIDE CONTINUITY AND CONSTANCY AS ADMINISTRATORS OF THE

DOE CHANGE. THIS IS NOT A MATTER THAT YOU WITH CURRENT RESPONSIBILITIES FOR A REGULATORY FUNCTION CAN CHANGE. BUT YOU CAN WORK IN CLOSER COLLABORATION WITH THOSE WHOSE EFFORTS YOU COMPLEMENT. I KNOW THE ASSISTANT SECRETARY FOR ES&H BEVERLY COOK IS WORKING TO THIS END AND DESERVES FULL COOPERATION IN HER ENDEAVORS.

5. TRANSITION IN REGULATORY REGIMES

A FEW YEARS AGO DOE ISSUED A NEW ORDER ENTITLED LIFE CYCLE ASSET MANAGEMENT. THIS ORDER FULFILLED A NEED. IT REMINDED ALL INVOLVED WITH NUCLEAR FACILITIES THAT SAFETY IS A CONTINUUM THAT MUST BE MAINTAINED THROUGHOUT THE ENTIRE LIFE OF THE FACILITY (DESIGN, CONSTRUCTION, OPERATION AND DECOMMISSIONING). DURING MOST OF THIS LIFE CYCLE THE NUCLEAR SAFETY REQUIREMENTS OF DOE ARE DOMINANT ALTHOUGH ENVIRONMENTAL PROTECTION REQUIREMENTS OF EPA AND THE STATES MUST EQUALLY BE SATISFIED. THE PRINCIPLES AND FUNCTIONS OF INTEGRATED SAFETY MANAGEMENT PROVIDE THE BASIC FRAMEWORK FOR NUCLEAR SAFETY MANAGEMENT THROUGH THE OPERATIONAL PHASE INTO DECOMMISSIONING. HOWEVER, DURING DECOMMISSIONING AS THE CLEAN OUT OF NUCLEAR RESIDUALS IS ACCOMPLISHED AND ENVIRONMENTAL RESTORATION BEGINS, THE DOMINANT REGULATORY FRAMEWORK SHIFTS FROM ISM TO THAT ESTABLISHED BY EPA AND THE STATES UNDER THE RESOURCE RECLAMATION AND RECOVERY ACT (RCRA) OR THE COMPREHENSIVE ENVIRONMENTAL LIABILITIES ACT (CERCLA). THOSE OF US WHO HAVE BEEN ACTIVE IN PROMOTING ISM WERE DESIROUS OF SETTING IN PLACE A PROCESS THAT WOULD EASILY TRANSITION TO THE REGULATORY REGIME WHERE RCRA REQUIREMENTS RATHER THAN THOSE OF THE ATOMIC ENERGY ACT DOMINATE. THOSE OF YOU FAMILIAR WITH RCRA KNOW THAT THE CLEAN UP OF CONTAMINATED SITES MUST FOLLOW A PRESCRIBED PROCESS THAT IS QUITE SIMILAR TO THAT OF ISM. i.e; (1) AN IDENTIFICATION OF ALL APPLICABLE REQUIREMENTS, (2) DEFINITION OF A WORK PLAN, (3) DEFINITION OF A SAFETY PLAN, (4) IDENTIFICATION OF PERSONNEL SAFETY MEASURES.

IT IS NOT EVIDENT, HOWEVER THAT HOW BEST TO TRANSITION FROM ONE REGULATORY REGIME TO ANOTHER HAS YET BEEN WELL ESTABLISHED. I BELIEVE THESE TACTICS NEED TO BE FURTHER DEVELOPED IN TAKING ISM INTO THE DECOMMISSIONING AND CLEANUP STAGE OF THE FACILITY LIFE CYCLE. IN GENERAL, IT WILL REQUIRE CLOSE AND EARLY COLLABORATION WITH EPA AND STATE REGULATORY AUTHORITIES.

IN THIS SAME VEIN, DOE, IN MY VIEW, NEEDS TO LOOK BEYOND THE CURRENT LOAD OF FORMERLY USED FACILITIES THAT NEED CLEANUP AND DISPOSITION. NEW FACILITIES AND OPERATIONS ARE BEING PLANNED. WILL THESE FACILITIES INCORPORATE CAPABILITIES TO TREAT HAZARDOUS WASTES AND PRODUCTION RESIDUALS IN KEEPING WITH THE INTENT OF RCRA OR WILL DOE CONTINUE TO USE A SEPARATE PROGRAM AND FACILITIES FOR TREATMENT AND FINAL DISPOSITION OF WASTES. I KNOW THIS IS A MATTER SENIOR MANAGEMENT OF DOE IS CONSIDERING. THE DECISION WILL AFFECT THE DESIGN OF NEW FACILITIES. MY OWN PERSONAL VIEW IS THAT NEW FACILITIES SHOULD BE DESIGNED TO THE UNDERLYING PRINCIPLE OF RCRA HAZARDOUS WASTES RESULTING FROM OPERATIONS SHOULD BE TREATED AND MADE READY FOR FINAL DISPOSAL AS AN INHERENT PART OF DESIGN.

6. COORDINATION OF CONTRACTOR OVERSIGHT

BY POLICY 450.5, DOE MADE CONTRACTOR SELF-ASSESSMENT THE FUNDAMENTAL BASE OF ITS SAFETY OVERSIGHT PROGRAM. THIS BASE PROGRAM IS MONITORED BY FEDERAL STAFF IN THE FIELD OFFICES AND DOE HEADQUARTERS ON BEHALF OF THE PROGRAM SECRETARIAL OFFICERS (OR NNSA ADMINISTRATOR). SENIOR DOE HEADQUARTERS MANAGEMENT ALSO DEPLOYS, PERIODICALLY, AN OFFICE OF INDEPENDENT OVERSIGHT AND PERFORMANCE ASSURANCE AND AN OFFICE OF PRICE-ANDERSON ENFORCEMENT. AS MENTIONED ABOVE, EACH UNIT PERFORMING A SELF-REGULATION FUNCTION OPERATES TO A CHARTER OF ITS OWN. DOE'S PROGRAMS ARE ALSO SUBJECT TO A SUBSTANTIAL AMOUNT OF INDEPENDENT EXTERNAL SAFETY REVIEW BY THOSE HAVING NO MISSION RESPONSIBILITIES. THESE INCLUDE THE GAO, THE DEFENSE NUCLEAR FACILITIES SAFETY BOARD, THE INSPECTOR GENERAL, THE ENVIRONMENTAL PROTECTION AGENCY AND THE STATES.

FOR THOSE STRAINING TO FULFILL MISSION REQUIREMENTS THE MULTIPLICITY OF GROUPS CONSTANTLY LOOKING OVER THEIR ACTIVITIES CAN AT TIMES SEEM EXCESSIVE. RELIEF FROM EXTERNAL REVIEWS IS NOT LIKELY TO COME UNTIL DOE AND ITS CONTRACTORS DEMONSTRATE STRONG AND EFFECTIVE SELF-ASSESSMENT PROGRAMS. DOE MANAGEMENT CANNOT CURTAIL EXTERNAL ASSESSMENTS BUT CAN DO MUCH TO MINIMIZE INTERFERENCE PATTERNS OF THE INTERNAL STAFFS SUPPORTING THEM.

DOE'S INTERNAL REVIEWERS ARE REALLY STAFF SUPPORT TO DOE SENIOR MANAGERS AND HENCE MUCH MORE SUBJECT TO CONTROL BY THEM. THE NEED FOR BETTER COORDINATION OF INDEPENDENT INTERNAL ASSESSMENTS IS A TOPIC OF ONE OF THE BREAKOUT SESSIONS. I SUBMIT THAT DOE'S SENIOR MANAGEMENT (ADMINISTRATOR, NNSA AND THE UNDER SECRETARY) SHOULD MAINTAIN CONTROL OVER THE TIMING AND PERIODICITY OF COMPREHENSIVE REVIEWS PERFORMED ON THEIR BEHALF AS SAFETY ASSURANCE CHECKS. WHILE SERIOUS SAFETY INFRACTIONS JUSTIFIABLY TRIGGER IMMEDIATE INVESTIGATIONS, THE PERIODIC REVIEWS SUCH AS CONTRACTOR SELF-ASSESSMENTS, ISM ANNUAL UPDATES, PRICE-ANDERSEN REVIEWS, AND OFFICE OF INDEPENDENT OVERSIGHT REVIEWS MERIT LONGER TERM PLANNING, WITH THE VARIOUS REVIEWS SEQUENCED AND COORDINATED TO FOSTER ORDER AND COST-EFFECTIVENESS. THE CONTRACTORS SHOULD BE GIVEN THE OPPORTUNITY TO PERFORM THEIR SELF-ASSESSMENTS BEFORE DOE SENIOR MANAGERS SEND IN THEIR INDEPENDENT ASSESSORS. (OA)

7. QUALITY ASSURANCE

THE QUALITY ASSURANCE PROGRAM OF DOE IS NOT WHAT IT SHOULD BE. IT GOT OFF TRACK SEVERAL YEARS AGO. THE BOARD HELD A NUMBER OF OPEN MEETINGS LAST YEAR ON THIS SUBJECT IN AN EFFORT TO PIN POINT DEFICIENCIES AND IDENTIFY GOOD PRACTICES. THE BOARD ALSO ISSUED SEVERAL TECHNICAL REPORTS ON THE SUBJECT. DOE WAS URGED TO DEVELOP AN UPGRADE EFFORT, PARTICULAR TO THE SUBJECT OF SOFTWARE QA. ONLY RECENTLY HAS A DRAFT ACTION PLAN EMERGED THAT PROPOSES TO ADDRESS SOME OF THE DEFICIENCIES IDENTIFIED. THIS DRAFT PLAN, NOTWITHSTANDING, DOE'S QA PROGRAM MERITS A MORE COMPREHENSIVE LOOK. ITS USE AS THE MAIN TOOL FOR PRICE-ANDERSON (NUCLEAR SAFETY) ENFORCEMENT HAS STRETCHED QUALITY ASSURANCE CONCEPTS WELL BEYOND THEIR ORIGINAL PURPOSE.

8. CROSS CUTTING ISSUES

THE DIVERSE ACTIVITIES OF DOE HAVE LED TO SEGMENTATION OF THE MISSIONS OF DOE. THE WEAPONS PROGRAM, THE ENVIRONMENTAL REMEDIATION PROGRAM AND THE SCIENCE PROGRAM ARE MAINLINE ACTIVITIES. THESE FALL UNDER THE DIRECTION OF SEPARATE PROGRAM SECRETARIAL OFFICERS. YET THERE ARE ANY NUMBER OF TECHNICAL ACTIVITIES THAT HISTORICALLY HAVE PROVIDED SCIENTIFIC AND TECHNICAL INPUTS TO EACH OF THESE MAINLINE PROGRAMS BUT DO SO AS A SHARED RESOURCE. FUNDING HAS ALWAYS BEEN A PROBLEM. THE CRITICALITY FACILITY AT LOS ALAMOS AND THE HEPA FILTER TESTING FACILITY AT OAK RIDGE ARE EXAMPLES . THE SOFTWARE QA ISSUE IS A SIMILAR PROBLEM IN THE MAKING. WHO, FOR EXAMPLE WILL SUPPORT THE CONFIGURATION MANAGEMENT OF ANALYTICAL MODELS USED IN SAFETY ANALYSIS? THESE ARE DECISIONS THAT NEED TO BE MADE AT LEVELS ABOVE THE PROGRAM SECRETARIAL OFFICERS. IN YEARS PASSED SUCH ISSUES WERE RESOLVED BY THE CHIEF BUDGETING OFFICER AS BUDGETS WERE FORMULATED. CURRENTLY THERE IS NO FORMAL MECHANISM FOR DEALING WITH CROSS-CUTTING, SAFETY-RELATED ISSUES OF THIS NATURE.

9. FEEDBACK AND IMPROVEMENT

OF ALL THE FUNCTIONS OF ISM, THIS FUNCTION HAS APPEARED MOST FREQUENTLY IN SELF AND INDEPENDENT ASSESSMENTS AS IN NEED OF BETTER IMPLEMENTATION. WHEN A PROBLEM LIKE THIS PERSISTS, A MULTIPLICITY OF CAUSES ARE SUGGESTED. IT CANNOT BE DUE TO A LACK OF OBSERVATIONS ON PERFORMANCES FOR THE REPORTING SYSTEMS OF DOE AND ITS CONTRACTORS ARE AWASH IN DATA. OBVIOUSLY ALL DATA COLLECTED IS NOT OF INTEREST OR UTILITY TO ALL PARTIES DRAWING UPON THE DATA BASE. NOR IS IT EVIDENT WHO THE CUSTOMERS ARE FOR THE DATA COLLECTED. BOTH OF THESE ASPECTS NEED TO BE EXAMINED. ONE SET OF CUSTOMERS IS QUITE CLEAR—THOSE MANAGING THE SAME OR SIMILAR HAZARDOUS WORK. ANOTHER SET IS REPRESENTED BY OVERSIGHT AGENCIES SUCH AS THE EPA AND CONGRESS WHO HAVE STATUTORY PROVISIONS TO SATISFY.

THE EXTERNAL DRIVERS FOR DOE ES&H DATA HAVE BEEN IN PLACE FOR YEARS. IT BEHOOVES DOE TO EXPLORE WITH THESE EXTERNAL CUSTOMERS THE COST BENEFITS OF CONTINUING .

IN SUPPORT OF DOE'S INTERNAL IMPROVEMENT PROGRAM, IT SEEMS TO ME THAT ONE MUST TAKE THE EXISTING DATA BASE AND ATTEMPT TO SORT OUT DATA STREAMS INTENDED TO SERVE DIFFERENT MANAGEMENT LEVELS—BOTH GOVERNMENT AND CONTRACTOR. EVERY MANAGER MUST SERVE BOTH AS A SUPPLIER AND USER OF OPERATIONAL INFORMATION. MORE IMPORTANTLY, MANAGERS AT THE DIFFERENT MANAGEMENT LEVELS MUST DEFINE THEIR NEEDS. THE OBJECTIVE IS TO SECURE THAT INFORMATION THAT FOSTERS THEIR WORK AND TO PROVIDE INFORMATION THAT ENABLES OTHERS TO BETTER PERFORM THEIRS.

## CONCLUSION

THIS ADDRESS TO YOU IS THE LAST I WILL BE DOING AS A MEMBER OF THE BOARD, A POSITION I HAVE HELD FOR THE PAST TEN YEARS. I HAVE CHOSEN TO STEP DOWN, EFFECTIVE JUNE 1. I LEAVE WITH THE SATISFACTION OF KNOWING THAT THE SAFETY MANAGEMENT PROGRAM OF DOE TODAY IS MUCH IMPROVED OVER WHAT IT WAS TEN YEARS AGO. I LIKE TO THINK THAT THIS RESULT IS DUE IN NO SMALL PART TO THE WORK OF THE BOARD AND THE EXCEPTIONAL STAFF THE BOARD HAS BEEN ABLE TO ATTRACT AND DEPLOY. THE BOARD AND ITS STAFF HAVE ENDEAVORED TO SERVE NOT ONLY AS A FORCING FUNCTION BUT ALSO AS AN ADVISOR AND COLLABORATOR ON FIXES WE BELIEVED NECESSARY. THE IMPROVEMENTS EFFECTED, HOWEVER, ARE THE RESULTS OF THOSE OF YOU WHO HAVE RESPONDED POSITIVELY AND CREATIVELY TO THE BOARD'S SUGGESTIONS AND RECOMMENDATIONS. THOSE OF YOU WHO HAVE CONTRIBUTED OR ARE CONTRIBUTING TO THESE EFFORTS TO ACHIEVE GREATER SAFETY IN OPERATIONS ARE TO BE COMMENDED FOR YOUR EFFORTS. WORKING TO ENSURE SAFETY OF YOUR FELLOW WORKERS, THE PUBLIC, AND TO PROTECT THE ENVIRONMENT IS AN ENDEAVOR THAT IS WORTHY OF YOUR BEST EFFORTS.

I AM GRATIFIED BY HAVING HAD THE OPPORTUNITY TO HAVE SHARED THIS JOURNEY WITH YOU. I THANK YOU ALL AND WISH YOU WELL!

TABLE 1  
SUMMARY OF RECOMMENDATIONS  
BY THE  
DEFENSE NUCLEAR FACILITIES SAFETY BOARD, 1989-2001

HUMAN RESOURCES

- 90-1 TRAINING OF REACTOR PLANT OPERATORS/SR
- 92-2 FACILITY REPS
- 92-7 TRAINING AND QUALIFICATION
- 93-2 CRITICAL EXPERIMENT CAPABILITY
- 93-3 IMPROVING TECHNICAL CAPABILITY
- 93-6 MAINTAINING ACCESS TO WEAPONS EXPERTISE

SAFETY STANDARDS

- 90-2 ADEQUACY FOR HIGH PRIORITY FACILITIES
- 91-1 STRENGTHENING THE NUCLEAR STANDARDS PROGRAM
- 91-6 RADIATION PROTECTION/WORKERS AND PUBLIC
- 93-1 STANDARDS UTILIZATION

SAFETY MANAGEMENT

- 93-4 ENVIRONMENTAL RESTORATION CONTRACTS
- 94-5 INTEGRATION OF SAFETY RULES, ORDERS AND STANDARDS
- 95-2 INTEGRATED SAFETY MANAGEMENT
- 98-1 CORRECTIVE ACTION FOR SAFETY FINDINGS

DESIGN/CONSTRUCTION

- 92-4 SYSTEMS ENGINEERING

94-3 ROCKY FLATS PU STORAGE FACILITY DESIGN UPGRADE  
96-1 ITP TANK PRECIPITATION AT SR

#### OPERATIONAL SAFETY

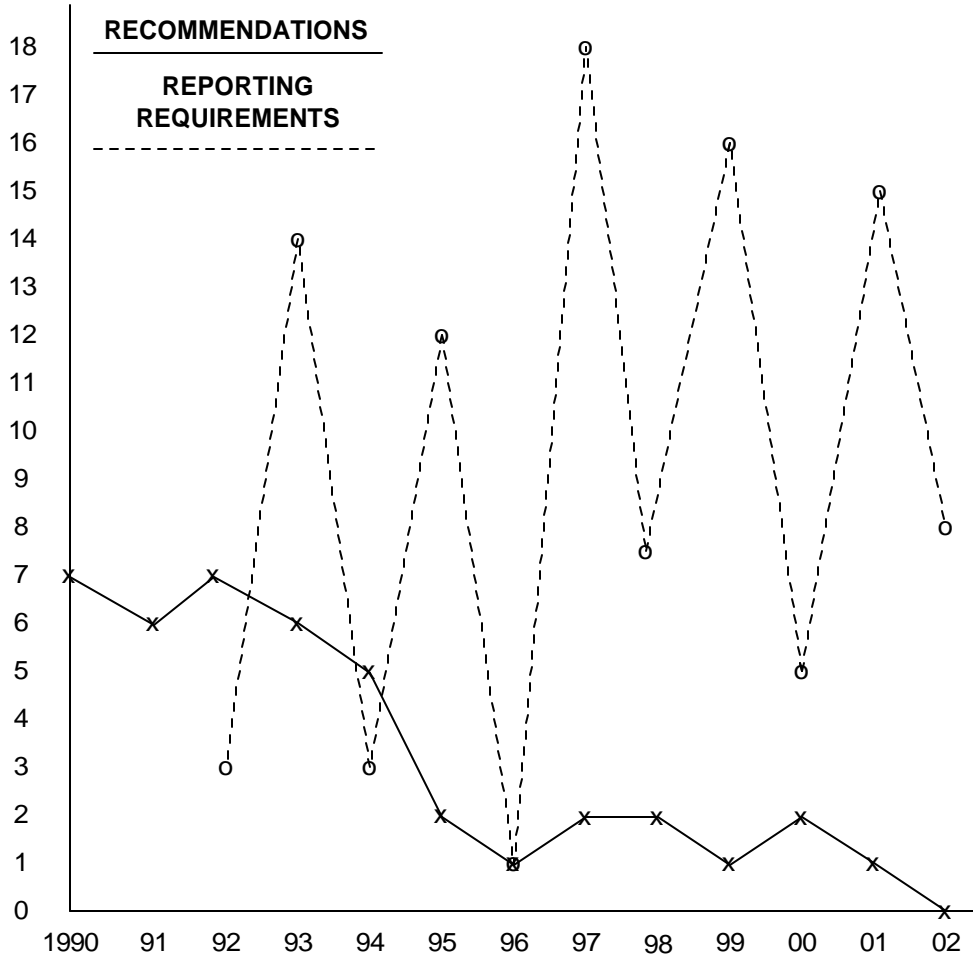
90-3, 90-7 SINGLE SHELL TANKS  
90-4, 90-6, 91-4 ROCKY FLATS/PU PROCESSING  
90-5 ROCKY FLATS FACILITIES STATUS  
91-3 WIPP  
91-2, 91-5 K-REACTOR  
92-1, 92-3 HB LINE/SR  
92-5 DISCIPLINE OF OPERATIONS  
  
92-6 OPERATIONAL READINESS REVIEWS  
93-5 HANFORD  
94-2 LOW LEVEL NUCLEAR WASTE SITES  
94-4 CRITICALITY SAFETY/Y-12 OAK RIDGE  
98-2, 99-1, SAFE MANAGEMENT AND STEWARDSHIP OF NUCLEAR  
WEAPONS STOCKPILE AND COMPONENTS  
95-1 DEPLETED URANIUM STORAGE  
97-1 SAFE STORAGE OF U-233/OAK RIDGE  
97-2 CRITICALITY SAFETY COMPLEX WIDE  
2000-2 CONFIGURATION OF VITAL SAFETY SYSTEMS  
2001-1 HLW MANAGEMENT AT SR

#### DE-COMMISSIONING

93-4 EM PROJECTS AT FERNALD  
94-1 STABILIZATION AND SAFE STORAGE OF RESIDUALS OF  
WEAPONS PRODUCTION  
2000-1 PRIORITIZATION OF STABILIZING OF RESIDUALS



**Figure 1 - Board Recommendations and Reporting Requirements**



**Figure 1 - Recommendations and Reporting Requirements**