Office of Nuclear Safety and Environmental Assessments Protocol for Site Leads

PROTOCOL – EA-31-01
Revision 2

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Office of Enterprise Assessments
U.S. Department of Energy

Office of Environment, Safety and Health Assessments
Protocol for Site Leads

June 2020

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1.0 PURPOSE

The purpose of this protocol is to establish the requirements and responsibilities for the Office of Nuclear Safety and Environmental Assessments (EA-31) Site Leads. Site Leads are assigned to U.S. Department of Energy (DOE) major sites with nuclear facilities. This protocol also establishes requirements and processes for (1) the development of Site Briefing Notes (SBNs), (2) the selection of Topical Area Assessments, and (3) the development and approval of Site-Specific Planned Activity Lists and the maintenance of an integrated, resource-loaded Master Planned Activity List.

2.0 APPLICABILITY

This protocol is applicable to EA-31 with support from EA-32 and EA-33.

3.0 REQUIREMENTS

General

- The Site Lead program embodies the Office of Enterprise Assessments (EA) methodology for collecting and analyzing information and identifying sites' oversight-related activities, including independent assessments and operational awareness. Collectively, these help EA provide meaningful independent oversight of high-hazard high-consequence nuclear facilities.

- The Site Lead program also facilitates other Office of Environment, Safety and Heath Assessments (EA-30) assessments such as worker safety and health assessment activities and emergency management assessment activities. These activities may result from significant performance deficiencies, response to external stakeholders, or requests from line organizations.

- Site Leads serve as the primary liaison and point of contact for EA-31 to the DOE site offices that have nuclear facilities.

- Site Leads are assigned to DOE/National Nuclear Security Administration (NNSA) sites or groups of sites with nuclear facilities that are categorized as hazard category 1, 2, or 3 in accordance with the provisions of 10 CFR 830 and DOE Standard 1027. These sites currently include:

    - Argonne National Laboratory
    - Hanford Reservation (Richland and Office of River Protection)
    - Idaho Site
    - Lawrence Livermore National Laboratory
    - Los Alamos National Laboratory
    - Nevada National Security Site
    - NNSA Production Office (Pantex and Y-12 National Security Complex including the Uranium Processing Facility Project Office)
    - Oak Ridge (Oak Ridge National Laboratory and Environmental Management)
    - Pacific Northwest National Laboratory
    - Paducah
    - Portsmouth

- Sandia National Laboratories
- Savannah River Site
- Waste Isolation Pilot Plant
- West Valley Demonstration Project

- Site Leads maintain operational awareness of their assigned sites using such information sources as identified in Appendix A.

- Cross-cutting targeted topical area nuclear safety assessments are selected using the systematic, risk-informed methodology specified in Appendix B.

- Site Leads develop and maintain SBNs and conduct periodic site briefings in accordance with Desktop Aid 30-01, *Guidance for Annual Appraisal Planning Process*.

- EA-31 uses the process specified in Appendix C to develop a site-specific Planned Activity List that includes planned assessments and operational awareness activities for their assigned site(s) and supports development of an integrated, resource-loaded Master Planned Activity List.

- EA-31 assessment and operational awareness activities are performed in accordance with DOE Order 227.1, *Independent Oversight Program,* and applicable EA-30 protocols; guides; and criteria review and approach documents.

- Site Leads will be qualified in accordance with the *Job-Specific* and *Program-Specific Qualification Standards for the Office of Nuclear Safety and Environmental Assessments (EA-31)*.

- Site Leads shall maintain the capability to access assigned sites and facilities by fulfilling site security and training requirements, including General Employee Radiation Training (GERT), Radiation Worker training and HAZWOPER training, as necessary.

- Where feasible, Site Leads shall obtain access to the site's internal information systems, including records pertaining to assessments and issues management.

4.0 RESPONSIBILITIES

Director, Office of Nuclear Safety and Environmental Assessments

- Designates Site Leads.
- In coordination with the Director, Office of Environment, Safety and Health Assessments, approves schedules of activities and resources for independent assessments and operational awareness activities.
- Coordinates with line managers to ensure the functionality of the Site Lead program and obtain feedback on performance.
- Maintains cognizance of the Site Lead program's effectiveness and conducts self-assessments to facilitate improvement.
- Coordinates periodic Site Lead briefings to the Office of Enterprise Assessments senior management.
- Ensures that Site Leads complete and maintain qualification in accordance with established protocols.

EA-31 Site Lead

- Maintains operational awareness of the assigned site(s), including the status of contracts, nuclear facilities safety basis, nuclear facility projects, major modifications or changes to nuclear facilities, schedules of oversight activities and assessments, significant issues, and the status of corrective actions for significant findings. This should include routine communications (conference calls) with assigned site points of contact and regular site visits. Appendix A provides a list of activities to consider.
- Based on information from operational awareness and oversight activities, establishes and maintains a SBN per Desktop Aid 31-01 that provides a basis for oversight activities for the assigned site(s).
- Coordinates with DOE Field Elements to identify independent assessments, operational awareness activities, and schedules consistent with priorities for the next fiscal year.
- Coordinates Office of Nuclear Safety and Environmental Assessments visits to assigned sites, including independent assessments and operational awareness activities.
- Schedules, as needed, follow-up activities addressing findings and other issues, including selective use of assessments to review the timeliness and adequacy of corrective actions, verify and validate effectiveness, and confirm closure.
- Maintains a list of issues requiring follow-up, monitors the status of those issues, and coordinates follow-up activities.
- Provides routine briefings to EA management and staff on key site issues, projects, changes, oversight strategy, activities, and follow-up items.
- Supports analysis of site-specific data for the identification of areas for broad targeted reviews in accordance with Appendix B, as needed.
- Completes Site Lead qualifications within 18 months from assignment and maintains currency.
- Maintains current site access credentials.

5.0 REFERENCES

- DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*
- DOE Order 227.1A, *Independent Oversight Program*
- Office of Enterprise Assessments Independent Oversight Program Appraisal Process Protocols
- Office of Environment, Safety and Health Assessments Protocol for Oversight Activities (Protocol EA-30-00)
- Office of Environment, Safety and Health Assessments Protocol for the Development and Maintenance of Criteria Review and Approach Documents (Protocol EA-30-01)
- Office of Environment, Safety and Health Assessments Protocol for High-Hazard Nuclear Facility Project Oversight (Protocol EA-31-02)
- Job-Specific Qualification Standard for the Office of Nuclear Safety and Environmental Assessments (EA-31)
- Program-Specific Qualification Standard for the Office of Nuclear Safety and Environmental Assessments (EA-31)
- Desktop Aid 30-01, *Guidance for Annual Appraisal Planning Process*

APPENDIX A
Examples of Operational Awareness Information

Status of Nuclear Facility Safety Basis and Associated Activities

Major Modifications

Facility Status - Startups/Restarts

Site Annual Assessment Schedules

Site Problem Identification and Resolution Procedures and Data

Safety issues identified by PISAs and/or USQs

Assessment Reports

Defense Nuclear Facilities Safety Board Correspondence, Recommendations, Staff Issue and Weekly Site Representative Reports

Safety-focused Government Accountability Office or Office of Inspector General Audits, Reviews, and Investigations

Occurrence Reporting and Processing System entries

Enforcement Actions

Performance Metrics/Indicators

Delegations of Safety Authority

Exemptions from Nuclear Safety Requirements

Results of Quarterly Project Reviews and Construction Project Reviews

ES&H Quarterly Reporting by Headquarters Program Offices

Safety Culture Information, including survey data (where available)

APPENDIX B
EA-31 Selection and Planning of Topical Areas for Complex Wide Targeted Nuclear Safety Assessments

1.0 PURPOSE

This appendix establishes the process for personnel in the Office of Nuclear Safety and Environmental Assessments (EA-31) to systematically collect and analyze readily accessible nuclear safety data to support risk-informed selection and planning of cross-cutting targeted topical area nuclear safety assessments across the U.S. Department of Energy (DOE) complex. The goal of this process is to facilitate EA-31's ability to identify and execute a suite of oversight activities that collectively address the most significant safety vulnerabilities faced by the Department.

2.0 APPLICABILITY

This appendix applies to topical area nuclear safety assessment selection and planning activities coordinated by EA-31 personnel.

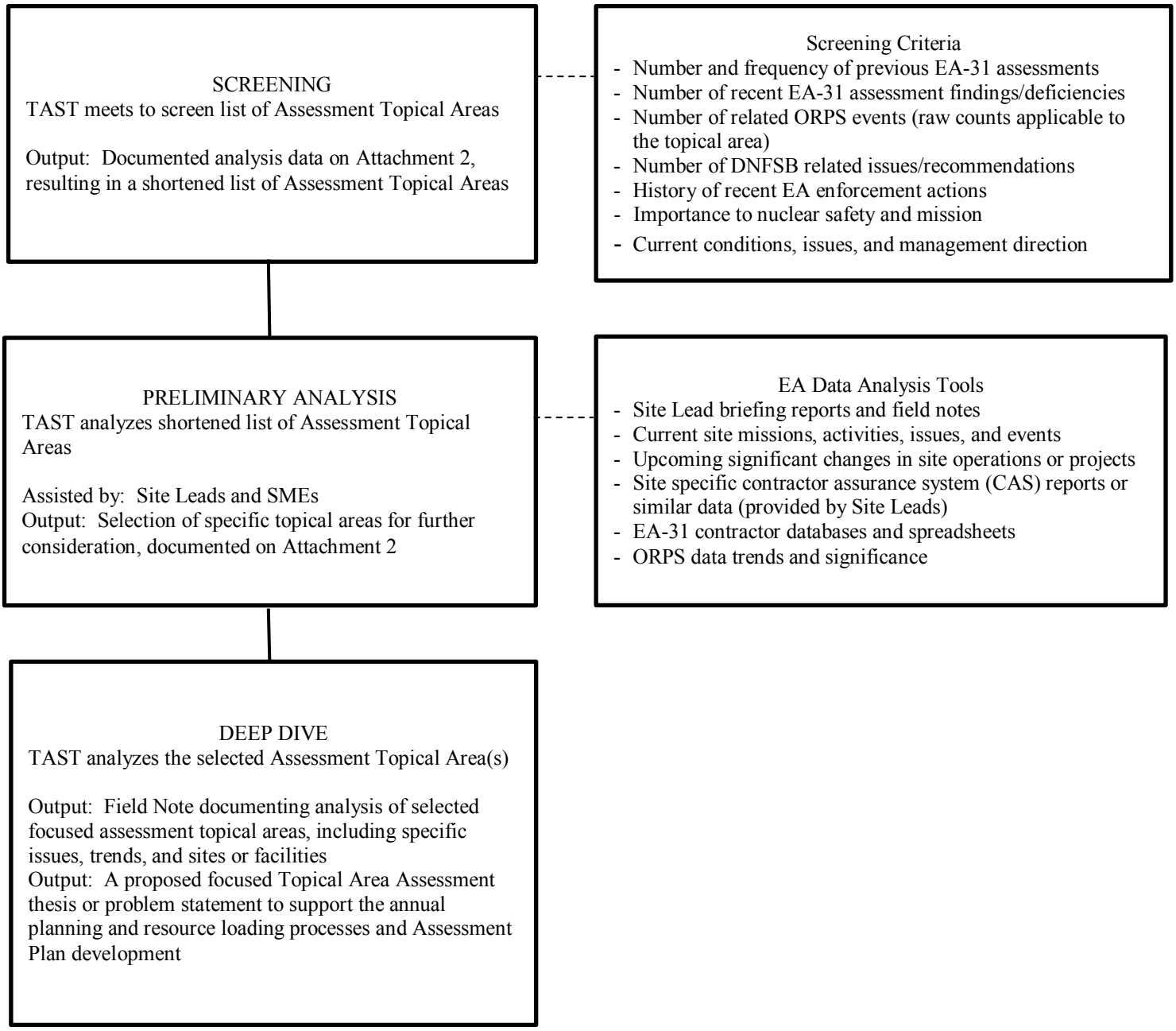
3.0 TOPICAL AREA SELECTION AND PLANNING PROCESS

3.1. General Process

The topical area selection and planning process consists of the EA-31 Topical Area Selection Team (TAST) performing (1) a "screening" of potential assessment topical areas (ATAs) based on established data collections, (2) a "preliminary analysis" of a shortened list of ATAs considering site status and current activities, and (3) a "deep dive" analysis of available data sets to focus the recommended targeted assessment. Attachment 1 of this appendix lists ATAs for consideration.

The screening process is used to qualitatively eliminate ATAs that are already being adequately addressed by the site-specific oversight activities, ongoing baseline assessments (e.g., safety basis or construction quality), or ATAs that have recently been examined and indicate relatively few or minor issues across the complex. Those ATAs that are not screened out are qualitatively analyzed by the preliminary analysis process for importance to nuclear safety and mission based on available data sources, such as previous EA assessment results, Occurrence Reporting and Processing System (ORPS) reports, Site Lead perspectives, Defense Nuclear Facilities Safety Board (DNFSB) interest, and any other sources that can provide useful information. Once one or two ATAs are selected, a deep dive analysis of performance trends and specific events (ORPS reports) is performed to identify a targeted assessment thesis or problem statement and recommend sites or facilities that should be assessed over the next 18 to 24 months. This input is provided to the EA-31 Resource Loading and Integration Team (RLIT) and EA-30 management for consideration and approval as a complex-wide targeted assessment topic. The process is illustrated below in Figure 1.

Figure 1. EA-31 Topical Area Selection and Planning Process



3.2. Screening Tools and Data Sets

Attachment 1 provides a list of candidate ATAs to be considered each planning cycle. The list is reasonably comprehensive and will form the basis for a data collection spreadsheet to be maintained as new assessment deficiencies, findings, or issues are identified. It includes ATAs associated with the baseline nuclear safety functional areas, cross-cutting issues, and other areas of concern that could impact DOE missions. Attachment 1 further identifies the basis for the initial screening process. The process will provide a table indicating the four most indicated ATAs in each screening criteria.

3.3. Preliminary Analysis

The screening analysis provides a table that indicates the four most identified topical areas for each of the screening criteria. An Augmented TAST Committee, which includes topical area SMEs and Site Leads, will review this shortened candidate topical area list. Based on current site activities, evaluation of the importance to nuclear safety and mission, and the significance of identified issues, the committee will select one or two for further evaluation. An important aspect of this evaluation should be a recognition that the reporting criteria for existing data sets may not adequately identify all issues important to nuclear safety or mission. Appropriate consideration should be given to areas that have not been recently or regularly assessed or measured, to ensure that there are no significant unidentified risks to the DOE mission.

3.4. Deep Dive Analysis

The deep dive analysis consists of a review of each of the inputs from the data sets by assigned SMEs. For example, each of the identified ORPS reports, DNFSB reports, or EA assessment findings should be reviewed to determine the significance and underlying causes for the identified issues. Specific emphasis should be placed on trends and identification of specific sites or facilities that would benefit from a targeted assessment. The analysis should inform recommendations for selecting specific issues and locations for a set of targeted topical area assessments across the DOE complex. The analysis should also form the basis for determining the important issues or lines of inquiry to be addressed by assessment plans and CRADs. The output of this deep dive analysis is a field note documenting the results, and development of a thesis or problem statement that supports recommendation of the topical assessment for a complex-wide evaluation.

3.5. Planning Cycle Schedule

The complex-wide targeted topical area assessment process typically includes multiple assessments at individual sites and facilities that are performed by a dedicated team of SMEs, and culminates in a lessons learned report. This process typically takes a year or more. The planning and evaluation cycle identified in this appendix should be conducted on an annual basis to ensure that each candidate topical area is screened and evaluated in a timely manner as conditions change. To meet the needs of the overall EA-31 assessment and resource allocation planning process, the deep dive analysis should be completed by the end of November each year.

3.6. Process Steps

Approximate Timeline	Actions
Last week in August	**EA-31 management:** Establishes/assigns the TAST
2nd week in September	**TAST:** 1. The TAST reviews the list of ATAs in Attachment 1 and documents the data set values listed in Attachment 2 using the following sources: a. EA-30's EXCEL spreadsheet "EA Assessments since 2015" b. EA-30's EXCEL spreadsheet "EA Assessment Report Findings/Deficiencies since 2015" c. EA-30's EXCEL spreadsheet "DNFSB Site Issues since 2015" d. ORPS reports data run using Attachments 3A through 3C, which identify ORPS reporting codes and key words for most assessment topical areas. 2. The TAST qualitatively reviews each ATA data results with other considerations, provides a screening analysis statement (e.g., recently assessed, Site Lead focus), and identifies whether it is screened OUT or IN. **3.** TAST briefs EA-30 management and issues a shortened list of selected ATAs to be evaluated in the PRELIMINARY ANALYSIS.
3rd week in September	**EA-31 management:** Establishes/assigns the Augmented TAST Committee, which includes SMEs and assigned Site Leads
1st week in October	**Augmented TAST:** 1. The TAST, augmented with assigned Site Leads and SMEs, conducts a PRELIMINARY ANALYSIS of selected ATAs to identify one or two areas that would benefit from a DEEP DIVE. a. The TAST evaluates the shortened list and develops a preliminary enhanced data set based on further research using "ORPS key word" searches and trends of available data sets, Site Lead input, and other EA and contractor subject matter experts (SMEs). b. The results of this analysis are presented at a meeting with all Site Leads and EA-31 management to gain further perspective. c. All results are analyzed by the TAST and one or two assessment topical areas are selected for a DEEP DIVE and discussed with EA-30 management for approval.

Approximate Timeline	Actions
2rd week of October	**EA-31 management:** Assigns SMEs and data evaluation personnel to perform the deep dive analysis for each of the recommended topical areas.
3rd week in October thru 4th week in November	**TAST:** 1. The TAST conducts a DEEP DIVE of one or two selected ATAs to identify specific issues that should be addressed, and specific sites or facilities that would benefit from the targeted assessment. 2. The TAST develops a recommended thesis or problem statement to focus the recommended targeted assessment area and support specific lines of inquiry to be added to the targeted assessment plan or CRAD. 3. The DEEP DIVE analysis, problem statement, and recommended targeted site(s) and facility(s) are documented in a field note for review and comment by EA-30 management and Site Leads. 4. The final field note is provided to the Site Leads and RLIT for integration into the EA-31 annual schedule.
1st week of December	EA-30 coordinates with EA-1 for establishment of complex-wide targeted assessment direction.

4.0 RESPONSIBILITIES

Director and Deputy Director, Office of Environment, Safety and Health Assessments (EA-30)

- Provide input and recommendations regarding management expectations, specific topical area concerns, and complex-wide issues
- Review, comment on, and approve final recommendations for complex wide targeted assessment topical areas
- Brief EA-1 and provide recommendations for establishing charge memorandums for targeted area topical assessments
- Verify adequate allocation of resources and expertise for conducting the targeted area assessments.

Director, Office of Nuclear Safety and Environmental Assessments (EA-31)

- Provides resources and personnel to maintain data collection and evaluation tools
- Assigns personnel to the TAST
- Reviews, comments on, and approves output products of the TAST
- Reviews, comments on, and approves the results of the deep dive analysis.

TAST Leader

- Coordinates activities of the TAST

- Compiles results of TAST screening and analysis
- Presents TAST's screening and analysis results to EA management, EA-31 Site Leads, and the RLIT.

TAST Members

- Utilizes data collection and evaluation tools
- Performs screening of data sets
- Provides input for the topical area screening, preliminary analysis, and deep dive analysis.

Site Leads

- Maintain awareness of site activities and conditions
- Provide input data for the preliminary analysis
- Assist with selection of topical areas for the deep dive analysis
- Assist the RLIT with planning and scheduling of selected targeted topical area assessments.

5.0 REFERENCES

- ORPS Database and Dashboard
- EA-10 Investigation Reports and Enforcement Letters (stored on EAShare)
- DNFSB website providing annual reports (https://www.dnfsb.gov/documents/reports)
- EA-30 Assessment Reports (found on the EA Assessment Documents website: (https://www.energy.gov/ea/listings/assessment-documents)
- DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*, and DOE Order 227.1A, *Independent Oversight Program*

Attachment 1: Description of Assessment Topical Areas

	Assessment Topical Area	Driver	Examples of Concerns or Sub-Topics to be Evaluated	Definition	Examples – Reports
1	**Safety Basis** - Design Basis (CSDR, PSDR, PDSA, SRL, SER) Development Processes, Hazard Analysis, Selection of Controls, and Nuclear Safety System Design Criteria	EA Oversight Required by DOE O 420.1C §5.c Appropriations Act section 304	• Inadequate safety integration in design process Weaknesses in safety design basis document development • Ineffective hazard analysis and control selection process • Inadequate accident analysis • Inadequate hierarchy of control implementation • Inadequate safety system design criteria, safety function, functional requirements and performance criteria evaluation • Insufficient federal line oversight	Oversight of all nuclear safety outputs for selected high hazard nuclear projects as required by DOE-STD-1189-2016 (e.g., CSDR, PSDR, PDSA, SRL, SER) including implementation of DOE Order 420.1C, Attachment 2 (CRD), Chapter I- Nuclear safety Design Criteria into high hazard nuclear projects.	See multiple EA-31 reports on CSDR, PSDR and PDSA reviews.
2	**Safety Basis** - Safety Basis Maintenance - DSA/TSR Annual Updates, SER, USQ processes, Implementation Verification reviews, TSR surveillances, implementation and LCOs.	10 CFR 830.202 EA Oversight Required by DOE O 420.1C §5.c. for DOE-STD-3009-2014 implementation and SER (DOE-STD-1104-2016)The first and second line of oversight is the contractors' and federal IVR for verifying safety basis controls implementation	• TSR problems identified by IVR's (LCO, SAC, SMP) • USQ program problems • Loss of safety basis configuration management • Failure to provide timely annual updates of DSA's and TSR's. • Safety basis documents not updated 10 years based on current NPH revisions. • Surveillance testing and LCO data not assigned to Topical Area 14 (Operability of Safety Systems). • Reported PISA's • TSR violations • Insufficient federal line oversight	Oversight of existing nuclear facilities safety basis: a. Periodic DSA/TSR changes, review and approval. b. Safety basis change control by USQ process c. TSR implementation verification reviews • LCOs • SACs • Safety Management Programs	• See EA-31 reports on DSA/TSR reviews • See HS-45 reports on line management TSR IVRs • No examples of EA SAC implementation reviews since 2012
3	**Safety Basis-** Natural Phenomenon Hazards Analysis and Protections and Updates (note 2)	EA Oversight Required by DOE O 420.1C §5.c.	• Inoperable seismic detection equipment • Failures to review revised NPH assessments every 10 years that are not assigned to Topical Area 1 and 2. • Inconsistences between current revised NPH assessments and safety basis documents that are not assigned TA 1 and 2. • Inadequate procedures for post-NPH response • Inadequate evaluation and response to beyond safety basis issues following the post Fukushima data call and similar lessons learned events.	Oversight of NPH Mitigation implementation as defined by DOE Order 420.1C, Attachment 2 (CRD), Chapter IV which are integrated into DSA NPH design criteria, accident analysis, 10 year NPH reverification, seismic detection and post NPH procedures.	• See EA-31 reports on CSDR, PSDR and PDSA reviews, and specific sections of conduct of engineering assessments. • No examples of EA site seismic detection and post NPH procedure specific reviews

	Assessment Topical Area	Driver	Examples of Concerns or Sub-Topics to be Evaluated	Definition	Examples – Reports
4	**Safety Basis** -Readiness Review and Restart Assessment Practices(note 2)	EA Oversight Required by DOE O 425.1D §5.b. (1)-(3). New/modified facilities presents new operational processes, hazards and controls.	• Failure to perform ORR/RA when required by DOE O 425.1D • ORR/RA failed to identify significant deficiency or did not meet Plan of Action or review plan. • Insufficient federal line oversight	Pre and post start actions identified to address ORR or RA issues are fully implemented and verified to be effective. Sufficient oversight is performed to assure completion of pre and post start corrective actions.	See EA reports on ORR for SWPF and WIPP restart.
5	**Construction Quality** Compliance with design, Procurement, QA Construction, testing and QA (note 2)	10 CFR 830.120	• Procurement and receipt inspection issues • Control of suspect/counterfeit items • Failure to construct per drawings or specifications • Failure to maintain as-built design media or maintain configuration control • Failure to adequately evaluate and control design changes or non-conformances • Inadequate quality control • Inadequate construction testing • Inadequate component checkout and system operational testing. • Demolition issues should be assigned to Topical Area 18.	Self-explanatory needs no further definition.	See EA reports for WTP and UPF
6	**Conduct of Engineering** Design criteria compliance, System design documents, Configuration Control, Design Drawing/As-built conformance, and updates and maintenance.	DOE O 430.1C, DOE STD 1073, DOE STD 1189, DOE O 420.1C, 10 CFR 830.122	• Weaknesses in cognizant engineering programs • Inadequate design margins • Failure to meet single failure design criteria • Insufficient independence, redundancy, or separation of safety related equipment • Failure to design in accordance with applicable codes and standards • Failure to establish or maintain code of record • Deficiencies in design calculations • Failure to maintain up-to-date “ass Built” drawings and other design media • Inconsistencies between safety basis documents and as-built facility design basis • Failure to adequately evaluate and control design changes or non- conformances. • Untrained or unqualified engineering personnel • Insufficient federal line oversight.	**Cross-cutting Topical Area See CRAD 31-13:** Oversight of operability of nuclear facility safety SSC implementation as required by DOE Order 420.1C, Attachment 2 (CRD), Chapter V including cognizant system engineer program, configuration management, operations and maintenance, CSE qualification. Chapter I including integration of safety with design & nuclear facility design. 10 CFR 830.122 Criterion 3 [Quality Improvement], Criterion 6 [Design Control], Criterion 7 [Procurement], DOE Order 226 [Federal oversight]	See Multiple EA reports (2016-2019)

	Assessment Topical Area	Driver	Examples of Concerns or Sub-Topics to be Evaluated	Definition	Examples – Reports
7	**Criticality Safety Program Implementation** Adequacy of Criticality Safety Evaluations, implementation of criticality safety controls – (moderation, spacing, mass, absorbents, etc.), maintenance and testing of criticality alarm systems.	EA Oversight Required by DOE O 420.1C §5.c.	• NCS program does not comply with DOE O 420.1C and ANS 8 standards • Inadequate NCS evaluations and specification of controls • Failure to establish or implement NCS control procedures • NCS control violations or infractions • Insufficient qualified staff to support fissile operations	Self-explanatory needs no further definition.	See EA reports for INL (BEA) and TA-55 Fissile Material Handling restart.
8	**Fire Protection Program Implementation -** Program procedures and Implementation, Fire Hazard Analysis integration, Inspection Testing and Maintenance of Fire Protection systems and supporting infrastructure, Base-line Needs Assessments, Pre-incident planning, Life safety provisions, combustibles controls, ignition source and hot work controls.	10 CFR 830.204(b)(5) EA Oversight Required by DOE O 420.1C §5.c. Continued EA identified concerns indicated further focus is needed.	• Inadequate fire hazard analysis • Inadequate implementation of life safety codes and assurance of means of egress. • Inadequate design and installation of fire protection systems including fire barriers, suppression systems, detection systems, and alarm systems. • Inadequate inspection, testing and maintenance of fire protection systems including supporting infrastructure. • Inadequate implementation of compensatory measures during system impairments. • Inadequate fire protection training and qualification • Inadequate fire protection procedures including maintenance of pre-incident plans • Failure to follow fire protection procedures • Ineffective control of combustibles and flammables limits, ignitions sources, and hot work. • Ineffective coordination with offsite fire departments and maintenance of Mutual Aid agreements. • Backlog or insufficient facility assessments • Downgraded fire protection systems to general service • Fire loss performance indicators	Oversight of FPP implementation as defined by DOE Order 420.1C, Attachment 2 (CRD), Chapter II which includes FPP requirements, administration, design process, protection threshold, life safety, operational implementation, emergency response, FHA, facility assessments, wildland fire management. This includes effective exercise of Authority having Jurisdiction responsibilities, Fire Protection Engineering reviews, and federal oversight.	See EA reports for FPP implementation
9	**Radiation Protection Program –** Procedures and Implementation, Dosimetry and bioassays, ALARA processes, postings and area controls, Surveys and monitoring, Instrumentation usage and calibrations, contamination	10 CFR 835 DOE O 420.1 C	• Failure to establish radiation protection (RP) procedures commensurate to risks and tailored to hazards and source terms. • Failure to follow RP protection procedures • Failure to control radioactive sources. • Failure to maintain postings and area controls • Inadequate surveys and postings • Ineffective contamination control	Oversight of occupational radiation protection as defined by 10 CFR 835 which includes administration, exposure standards, monitoring (areas & individuals), entry control, posting & labeling, records, design & control, contamination control, sealed source control, emergency exposure. Additional specific	See HSS reports on occupational radiation protection implementation

	Assessment Topical Area	Driver	Examples of Concerns or Sub-Topics to be Evaluated	Definition	Examples – Reports
	controls, RWPs and work planning and control		• Inadequate instrumentation availability, use, maintenance, calibration, and QA • Exceeding radiation exposure limits • Inadequate bioassay sampling or analysis • Insufficient ALARA program • Inadequate RP staffing, qualifications, and authority. • Inadequate integration of radiological engineering and RP into work planning and control. • Inadequate implementation of RWPs. • Adverse RP performance indicators	requirements are included in DOE O 420.1 C	
10	**Environmental Radiation Programs** -(airborne and ground water) – Exposure or storage of radioactive materials in the environment, release or clearance of materials, effluent monitoring and controls, environmental sampling, effluent reporting, area and site boundary monitoring, effluent distribution modeling and public/environmental dose calculations	10 CFR 835, 10 CFR 830.204(b)(5) EA Oversight Required by DOE O 458.1 §5.c.(2) (Chief Health Safety and Security Officer per DOE O 227.1).	• Failure to establish and implement adequate controls for release or clearance of radiological materials or previously utilized areas. • Failure to maintain control or integrity of radiological materials exposed to the environment. • Failure to control the release of radioactive materials to the environment. • Inadequate monitoring of radioactive effluents • Inadequate collection and analysis of environmental samples • Failure to properly report results of effluent or environmental monitoring results. • Failure to conform to site or facility specific emissions or release controls and monitoring established with state, local, or federal agency agreements.	Oversight of radiation protection of public & environment implementation as defined by DOE Order 458.1which includes administration, public dose limits, ALARA, compliance demonstration, airborne effluents, liquid discharges, radioactive waste & SNF dose limits, drinking & ground water protection, biota protection, property clearance & release, records & reporting	No examples of EA reports on radiation protection of public & environment
11	**Safety System Management -** Maintenance management programs including aging/degrading	EA Oversight Required by DOE O 433.1B §5.b.(5).	• Safety related equipment failures • Maintenance backlog management issues • Inadequate use of predictive, preventive, and responsive maintenance processes. • Inadequate coordination and management of system configuration, system impairments and temporary modifications. • Inadequate post maintenance testing • Inadequacies in master equipment list • Inadequate maintenance procedures • Training and qualification issues • Inadequate maintenance management program • Inadequate safety SSC aging management program • Poor maintenance QA-QC program	Oversight of nuclear maintenance management programs implementation as defined by DOE Order 433.1B which includes administration, master equipment list, maintenance process, maintenance types, procedures, training & qualification, configuration management, procurement, maintenance tool & equipment control, suspect & counterfeit items, history, aging degradation & technical obsolesce, seasonal preservation, performance	See EA report on LANL maintenance of safety SSCs and programmatic equipment.

	Assessment Topical Area	Driver	Examples of Concerns or Sub-Topics to be Evaluated	Definition	Examples – Reports
			• Missing or inadequate facility condition inspections	measures, facility condition inspection, post maintenance testing	
12	**Conduct of Operations**	10 CFR 830.204(b)(5) DOE O 420.1c(5)c Responsibilities, Director, Office of Enterprise Assessment 3 year DOE O 422.1	• Inadequate procedures, organization or administration. • Weaknesses in shift routine or operating practices including shift turnovers and staffing • Disciplined approaches and practices for control areas • Inadequate communications • Inadequacies in abnormal event or condition investigation and trending • Failure to follow procedures including unauthorized field changes or work arounds • Training and qualification issues and required reading • Improper equipment labeling or operator aids. • Equipment/system status control and tag outs • Log keeping deficiencies • Control of inter-related processes or systems	Oversight of conduct of operations implementation as defined by DOE 422.1 which includes organization/administration, shift routines/operating practices, control area activities, communications, on-shift training, abnormal events/trend investigation, notifications, equipment/system status control, lockout/tagout, independent verification, logkeeping, operations turnover, interrelated process control, required reading, timely orders, technical procedures, operator aids, component labeling	See EA reports on SWPF and WIPP
13	**Radioactive Waste Management** (radiological and mixed hazardous wastes)	10 CFR 830.204(b)(5) EA Oversight Required by DOE M 435.1-1 Chapter I, §2.C.(2)-(3)	• Improper characterization of radwaste • Improper packaging or labeling of radwaste • Improper handling or treatment of radwaste • Improper storage or disposal of radwaste • Inadequate waste management program or procedures • Failure to follow radwaste management program or procedures. • Radwaste training and qualification issues • Failure to comply with receiving facility Waste Acceptance Criteria • Failure to adequately address waste form physical stability and chemical compatibility constituents to assure long term stability and comply with the performance assessments limitations of the wastes disposal facilities. • Failure to maintain adequate monitoring of the wastes and facilities.	Oversight of HLW, LLW & TRU waste management programs implementation as required by DOE M 435.1 which includes; waste management basis, waste contingency/corrective actions, acceptance, generation, operational planning, characterization, certification, transfer, packaging & transportation, storage, treatment, disposal, monitoring, closure, site evaluation and facility design.	See Multiple EA reports (2019-2020)

	Assessment Topical Area	Driver	Examples of Concerns or Sub-Topics to be Evaluated	Definition	Examples – Reports
14	**Safety System Management -** Operability of safety systems: Vital Safety Systems (VSS) Management and Oversight, Conduct of Engineering, CSEs and SSO programs, configuration control, surveillance testing and monitoring, conduct of maintenance, impairments management, component procurement and obsolescence management, IVRs) including I&C	EA Oversight Required by DOE O 420.1C §5.c.	Data related to the operability of safety systems that have not been assigned to Topical Areas 6 (Engineering), 8 (Fire Protection), 11 (Maintenance), or 12 (Conduct of operation).	**Cross-cutting Topical Area See CRAD 31-15**: Oversight of operability of nuclear facility safety SSC implementation as required by DOE O 420.1C, Attachment 2 (CRD), Chapter V including cognizant system engineer program, configuration management, operations and maintenance, CSE qualification. 10 CFR 830.122 Criterion 3 [Quality Improvement], Criterion 6 [Design Control], Criterion 7 [Procurement], Criterion 8 [Inspection Acceptance Criteria], 10 CFR 830.203 [USQ Process], DOE O 433.1B [NMMP], DOE O 422.1 [ConOps], DOE O 426.2 [Training/Qualification], DOE O 226 [Federal oversight]	See Multiple EA reports (2016-2019)
15	**Radioactive Materials Program -** Materials inventories, controls, and transfers; sealed sources utilization and controls,; Materials at Risk limitations and controls; Nuclear Materials' Accountability	DOE O 231.1B, 10 CFR 835 .1101, 1201 and 1202, DOE O 410.2 Management of Nuclear Materials, Aspects of 10 CFR 830 Subpart B (MAR Limits) 49 CFR 171-173, and DOE O 460.2A *Department Materials Transportation and Packaging Management*	• The amount of radioactive material at risk exceeds the amount assumed for analysis of design basis events. • The amount, physical form, characterization, or containment of radioactive material in inventory differs from the amount reported to fire departments, emergency response, security or Radcon organizations • Inadequate accountability and control of sealed sources. • Inadequate monitoring to prevent unauthorized or unrecognized release or transfer of materials. • Inadequate processes to prevent unauthorized or non-compliant transportation of materials.	Various DOE directives address requirements for radioactive materials inventories, handling and controls, however Self-explanatory. Multiple incidents of incorrect inventory management, transfer, and loss of control of radioactive materials have impacted DOE missions.	Some Radwaste and Radiation control assessments have considered aspects of this topical area, however no recent EA assessment have specifically targeted materials controls.
16	**Packaging and Transportation** of hazardous and radiological materials (Does not include OSTI operations)	DOE O 460.1D DOE M 441.1-1	• Data assigned to this topical area are limited to issues regarding the packaging and transportation of radioactive materials other than radioactive waste, which are addressed in topical area 13.	Oversight of hazardous material packaging and transportation safety implementation as defined by DOE 460.1D which includes organization/administration of HMP&TS activities for on-site [Transportation Safety Document, 49 CFR 171-180], off-site [49 CFR	No examples of EA reports on HMP&TS implementation

	Assessment Topical Area	Driver	Examples of Concerns or Sub-Topics to be Evaluated	Definition	Examples – Reports
				40, 171-180, 350-399, 200-268], NNSA and DOE Certification Officials for off-site radioactive material packaging, HMP&TS quality assurance, lessons learned, training and qualification programs.	
17	**Organizational Safety Culture** - including safety culture, ECP, and DPO (cross cutting)	Recent Safety Culture report should be followed with monitoring of the complex to determine future targeted assessments. Ongoing follow-up assessments which were initiated in 2011 per DNFSB 2011-1 IP.	• Cross-cutting issues in the area of safety culture that may warrant further follow-up. • Inadequacies in safety culture have been identified as a contributing factors for many of the most significant safety system failures or events. • Line management safety culture surveys	Self-explanatory needs no further definition.	See Multiple EA reports (2011-2020)
18	**Legacy facility and aging infrastructure management** -including management of safety basis documents, surveillance and maintenance, and demolition activities.	DOE O 420.1c(5)c Responsibilities, Director, Office of Enterprise Assessment DOE O 420.1C Attachment 2 §3.c.(1)(e) [configuration management], DOE O 433.1B Attachment 2 §2.a.m, DOE O 430.1C	• Uncertainties in historical process knowledge and characterizations leading to inadequacies of facility classifications, surveillances, maintenance, and controls. • Unrecognized or uncontrolled degradation of facility structures or containment boundaries. • Problems associated with demolition of nuclear facilities. • Inoperable safety systems that are credited in safety basis documents. • Issues related to aging infrastructure systems and inter-related processes supporting facility safety systems that are not assigned to Topical Area 11.	**Cross-cutting Topical Area (See EA CRAD 31-36)**: Oversight of legacy facility and aging management implementation as required by 10 CFR 830.202.c [safety basis maintenance], 10 CFR 830.122 Criterion 6[Design Control], DOE Order 420.1C, Attachment 2 (CRD), Chapter V including configuration management, DOE Order 433.1B [safety SSC maintenance & surveillance, facility condition inspection], Chapter II [Fire Protection Program], DOE Order 226 [Federal oversight]	See EA Report on SRS shutdown facility risk management.
19	**Quality Assurance** including: - line and Federal oversight - CAS metrics and implementation - lessons learned and issues management (cross cutting). (note 3)	10 CFR 830.120, 10 CFR 830.204(b)(5) QA – EA Oversight Required by DOE O 414.1D 5.e.(3) Contractor Assurance – DOE O 226.1	• Inadequate safety oversight by DOE Headquarters line organizations and field offices, and/or contractors. • Inadequacies of contractor oversight processes including self-assessments, independent assessments, and CAS implementations • Inadequate development and application of nuclear safety related performance metrics	Self-explanatory needs no further definition.	No specific EA report that focuses on QA Program implementation.

	Assessment Topical Area	Driver	Examples of Concerns or Sub-Topics to be Evaluated	Definition	Examples – Reports
			• Inadequate programs, procedures or practices for issues management, or lessons learned including evaluations, dissemination, tracking and trending, utilization in process improvements. • Inadequacies of incident investigation and causal analysis processes • Inadequacies or ineffective implementation of corrective actions management processes		
20	**Staffing** selection, training, qualification and certification (cross cutting) (note 3)	10 CFR 830.204(b)(5) EA Oversight Required by DOE O 426.2 §5.b.(5). 3 year for Feds	Data associated with staffing selection, training, qualification and certification that have not been assigned to other Topical Areas such as 8 (Fire Protection), 11 (Maintenance). 12 (Conduct of Operations), or 13 (Waste Management).	Oversight of personnel, selection, training, qualification, or certification program implementation as defined by DOE O 426.2 which includes organization/administration, DOE-STD-1070 implementation for management, operators, technicians, maintenance, technical support personnel that can impact the safety basis.	No specific EA report that focuses on T&Q Program implementation.

Notes for Attachment 1:

Note 1: Determination of High vs Medium depends on the facility nuclear safety classification (i.e., Hazard Category 1, 2, 3, or radiological), and use of safety class or safety significant controls.

Note 2: Some of these topics will depend on site specific status of projects and restart activities. Assessment activities may be determined based on Site Lead recommendations.

Note 3: Some topics such as oversight, issues management, and training and qualifications are cross-cutting and will likely be included as part of all assessments. If specific weaknesses are identified consistently across the complex, then a topic-specific targeted assessment may be warranted.

Attachment 2: Assessment Topical Area Screening Results (to be completed each cycle)

	Assessment Topical Area	Driver	Priority Importance to Nuclear Safety	Number of EA Assessments (Last 5 years)	Number of EA Report Findings/ Def (Last 5 years)	Number of ORPS Reports (1 year)	DNFSB Site Issues (Last 5 years)	EA-10 Enforcement issues (Last 5 years)	Screening Analysis Basis	Screen Result (OUT or IN)
1	**Safety Basis** - Design Basis (CSDR, PSDR, PDSA, SRL, SER) Development Processes, Hazard Analysis, Selection of Controls, and Nuclear Safety System Design Criteria	EA Oversight Required by DOE O 420.1C §5.c Appropriations Act section 304	High/ Medium							
2	**Safety Basis** - Safety Basis Maintenance (DSA/TSR Annual Updates, SER, USQD and Implementation Verification reviews) TSR surveillances, implementation and LCOs.	10 CFR 830.202 EA Oversight Required by DOE O 420.1C §5.c. for DOE-STD-3009-2014 implementation and SER (DOE-STD-1104-2016)The first and second line of oversight is the contractors' and federal IVR for verifying safety basis controls implementation	High/ Medium							
3	**Safety Basis**- Natural Phenomenon Hazards Analysis and Protections and Updates	EA Oversight Required by DOE O 420.1C §5.c.	Low							
4	**Safety Basis** - Readiness Review and Restart Assessment Practices	EA Oversight Required by DOE O 425.1D §5.b. (1)-(3). New/modified facilities presents new operational processes, hazards and controls.	Medium							
5	**Construction Quality** Compliance with design, Procurement, QA Construction, testing and QA	10 CFR 830.120	Medium							
6	**Conduct of Engineering** Design	DOE O 430.1C, DOE STD 1073, DOE STD 1189	Medium							

	criteria compliance, System design documents, Configuration Control, Design Drawing/As-built conformance, and updates and maintenance.	DOE O 420.1C, 10 CFR 830.122								
7	**Criticality Safety Program Implementation** Adequacy of Criticality Safety Evaluations, implementation of criticality safety controls – (moderation, spacing, mass, absorbents, etc.), maintenance and testing of criticality alarm systems.	EA Oversight Required by DOE O 420.1C §5.c.	Medium							
8	**Fire Protection Program Implementation** Program procedures and Implementation, Fire Hazard Analysis integration, Inspection Testing and Maintenance of Fire Protection systems and supporting infrastructure, Base-line Needs Assessments, Pre-incident planning, Life safety provisions, combustibles controls, ignition source and hot work controls.	10 CFR 830.204(b)(5) EA Oversight Required by DOE O 420.1C §5.c. Continued EA identified concerns indicated further focus is needed.	Medium							
9	**Radiation Protection Program Implementation** Procedures and Implementation,	10 CFR 835 DOE O 420.1 C	Medium							

	Dosimetry and bioassays, ALARA processes, postings and area controls, Surveys and monitoring, Instrumentation usage and calibrations, contamination controls, RWPs and work planning and control,									
10	**Environmental Radiation Programs** (airborne and ground water) – Exposure or storage of radioactive materials in the environment, release or clearance of materials, effluent monitoring and controls, environmental sampling, effluent reporting, area and site boundary monitoring, effluent distribution modeling and public/environmental dose calculations	10 CFR 835, 10 CFR 830.204(b)(5) EA Oversight Required by DOE O 458.1 §5.c.(2) (Chief Health Safety and Security Officer per DOE O 227.1).	Low							
11	**Safety System Management** - Maintenance management programs including aging/degrading	EA Oversight Required by DOE O 433.1B §5.b.(5).	Medium						May also be covered by line 14	
12	**Conduct of Operations**	10 CFR 830.204(b)(5) DOE O 420.1c(5)c Responsibilities, Director, Office of Enterprise Assessment 3 year DOE O 422.1	Medium						May also be covered by line 14	
13	**Radioactive Waste Management** (radiological and mixed hazardous wastes)	10 CFR 830.204(b)(5) EA Oversight Required by DOE M 435.1-1 Chapter I, §2.C.(2)-(3)	Low							

14	**Safety System Management -** Operability of safety systems: Vital Safety Systems (VSS) Management and Oversight, Conduct of Engineering, CSEs and SSO programs, configuration control, surveillance testing and monitoring, conduct of maintenance, impairments management, component procurement and obsolescence management, IVRs) including I&C	EA Oversight Required by DOE O 420.1C §5.c.	High/ Medium							
15	**Radioactive Materials Program** Materials inventories, controls, and transfers, sealed sources utilization and controls, Materials at Risk limitations and controls, Nuclear Materials' Accountability	DOE O 231.1B, 10 CFR 835.1101, 1201 and 1202, DOE O 410.2 Management of Nuclear Materials, Aspects of 10 CFR 830 Subpart B (MAR Limits) 49 CFR 171-173, and DOE O 460.2A *Department Materials Transportation and Packaging Management*	Low							
16	**Packaging and Transportation** of hazardous and radiological materials (Does not include Office of Secure Transportation operations)	DOE O 460.1 D, DOE M 441.1-1	Low							
17	**Organizational Safety Culture -** including safety culture, ECP, and DPO (cross cutting)	Recent Safety Culture report should be followed with monitoring of the complex to determine future targeted assessments.	High							

		Ongoing follow-up assessments which were initiated in 2011 per DNFSB 2011-1 IP.								
18	**Legacy Facility and aging infrastructure management -** including management of safety basis documents, surveillance and maintenance, and demolition activities.	DOE O 420.1C(5)c Responsibilities, Director, Office of Enterprise Assessment DOE O 420.1C Attachment 2 §3.c.(1)(e) [configuration management], DOE O 433.1B Attachment 2 §2.a.m, DOE O 430.1C	Medium							
19	**Quality Assurance** including: - line and Federal oversight - lessons learned and issues management (cross-cutting)	10 CFR 830.120, 10 CFR 830.204(b)(5) QA – EA Oversight Required by DOE O 414.1D 5.e.(3) Contractor Assurance – DOE O 226.1	Medium						May be a part of all assessments, but could be a targeted area	
20	**Staffing** selection, training, qualification and certification (cross cutting)	10 CFR 830.204(b)(5) EA Oversight Required by DOE O 426.2 §5.b.(5). 3 year for Feds	Medium						May be a part of all assessments, but could be a targeted area	

Attachment 3A: Applicable ORPS Reporting Criteria and Key Word Codes

	Assessment Topical Areas	Applicable ORPS Reporting Criteria	Potentially Applicable ORPS Key Word Codes
1	Safety Design Basis (CSDR, PSDR, PDSA, SRL, SER) Development Processes, Hazard Analysis, and Nuclear Safety System Design Criteria	none	01C, 12A, 14F
2	Safety Basis Maintenance (DSA/TSR Annual Updates, SER, USQD and Implementation Verification reviews) TSR surveillances, implementation and LCOs.	3B(1), 3B(2), 3A(1), 3A(2), 3A(3)	01H
3	Natural Phenomenon Hazards Analysis and Protections and Updates	none	11D, 05B
4	Readiness Review and Restart Assessment Practices	none	
5	Construction Quality Compliance with design, Procurement, QA Construction, testing and QA	none	08O, 05E, 11H, 14G, 14L, 11L, 8R
6	Conduct of Engineering Design criteria compliance, System design documents, Configuration Control, Design Drawing/As-built conformance, and updates and maintenance.		
7	Criticality Safety Program Implementation	3C(1), 3C(2), 3C(3), 3C(4)	01J, 04B, 12L
8	Fire Protection Program Implementation	2B(2), 2B(3), 2B(4), 2C(1)	03A, 03B, 03C, 03E, 12F, 03G
9	Radiation Protection Program Implementation	6A(1), 6A(2), 6A(3), 6B(2), 6B(3), 6B(4), 6C(2) 6C(3) 6C(4) 6D(1) 6D(2) 6D(3),	06A, 06B, 06C,06D, 06E, 06F, 06G, 06H, 06J, 06K, 12D, 12M, 12N
10	Environmental Radiation Programs (airborne and ground water)	5B(1), 5A(1), 5B(2), 5A(2)	
11	Maintenance management programs including aging/degrading	none	01O
12	Conduct of Operations	4B(1), 4B(2), 4B(3), 4B(4), 4B(5), 1(1)	01E, 12B, 12G, 01U
13	Radioactive Waste Management (radiological and hazardous wastes)	none	11N
14	Operability of safety systems: Vital Safety Systems (VSS) Management and Oversight (Conduct of Engineering, CSEs, configuration control, surveillance testing and monitoring, maintenance, component procurement, obsolescence management, IVRs) including I&C	4B(2), 4B(3), 4B(4), 4A(1), 4A(2), 4C(1), 4C(2), 4C(3)	01B, 01D, 01I, 05C, 08I, 14H, 05D, 05G, 05H, 07A, 07B, 08H
15	Materials inventories, controls, and transfers, sealed sources utilization and controls, Materials at Risk limitations and controls, Nuclear Materials' Accountability	6A(2), 6A(3), 6A(1)	09B, 05I
16	Packaging and Transportation of hazardous and radiological materials (Does not include OSTI operations)	8(2) 8(3) 8(4) 8(5) 8(6) 8(7) 8(8) 8(9) 8(1)	10E, 12P, 12Q, 10A
17	Safety Culture including safety culture, ECP, and DPO (cross-cutting)	none	01R, 13A, 01T
18	Legacy facility and aging infrastructure management including management of safety basis documents, maintenance, surveillance and maintenance, and demolition activities.	none	05F, 03A, 12E, 08O
19	Quality Assurance including: - line and Federal oversight - lessons learned and issues management (cross-cutting)	none	14C, 14I, 14L, 14K, 14J
20	Staffing selection, training, qualification and cross-cutting)	none	14B, 01F, 01Q

Attachment 3B: ORPS Reporting Criteria Descriptions

1 – Operational Emergencies	
1(1)	An Operational Emergency, Alert, Site Area Emergency, or General Emergency as defined in DOE O 151.1D.
2 – Personnel S&H	
2A – Injuries & Exposures	
2A(1)	Any occurrence due to DOE operations resulting in a fatality or terminal injury/illness.
2A(2)	Any single occurrence, injury, or exposure requiring in-patient hospitalization of three or more personnel.
2A(3)	Any single occurrence, injury, or exposure resulting in an occupational injury that requires in-patient hospitalization for five or more days, commencing within seven days from the date the injury.
2A(4)	Any single occurrence, injury, or exposure resulting in three or more personnel having Days Away, Restricted or Transferred (DART) cases
2A(5)	Any single occurrence resulting in an occupational injury or exposure that: (a) Requires in-patient hospitalization for more than 48 hours, commencing within seven days from the date the injury or exposure was received; (b) Results in a fracture of any bone (except bone chips; simple fractures of fingers, toes, or nose; or a minor chipped tooth); (c) Causes severe hemorrhages or severe damage to nerves, muscles, tendons, or ligaments (Note: Severe damage is generally considered to have occurred if surgery is required to correct the damage.); (d) Damages any internal organ;
2A(6)	Personnel exposure to chemical, biological, or physical hazards that exceed 10 times the limits established in 10 CFR Part 851, Worker Safety and Health Program (see 10 CFR Section 851.23 Safety and Health Standards) or exceed levels deemed Immediately Dangerous to Life and Health (IDLH).
2A(7)	Personnel exposure to chemical, biological or physical hazards above limits established in 10 CFR Part 851, Worker Safety and Health Program (see 10 CFR Section 851.23, Safety and Health Standards), but below levels deemed IDLH.
2B – Fires	
2B(1)	Any fire within primary confinement/containment boundaries of a nuclear facility, except a fire that self-extinguishes in ten minutes or less.
2B(2)	Any fire that: (a) Activates a fixed automatic fire suppression system (e.g., clean agent or wet-pipe automatic sprinkler protection), (b) Takes longer than ten minutes to extinguish following the initiation of firefighting efforts by the emergency response organization, or (c) Disrupts normal operations in the facility for more than four hours.
2B(3)	Any fire in a nuclear facility.
2B(4)	Any wild land fire (e.g., forest fire, grassland fire) or other fire outside of a DOE facility that has the potential to threaten the facility.
2C-Explosions	
2C(1)	Any unplanned explosion that disrupts normal operations.
2D – Hazardous Energy	

2D(1)	Any unexpected or unintended personal contact (e.g., burn, shock, injury, etc.) with a hazardous energy source (e.g., live electrical power circuit, mechanical hazards, steam, pressurized gas, etc.).
2D(2)	Any failure to follow a prescribed hazardous energy control process that results in potential worker exposure to uncontrolled hazardous energy (e.g., live electrical power circuit, powered mechanical hazards, steam, pressurized gas, etc.); OR any discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, powered mechanical hazards, steam, pressurized gas, etc.).
3 – Nuclear Safety Basis	
3A – TSR Violations	
3A(1)	Any violation or noncompliance of a Technical Safety Requirement (or Operational Safety Requirement) Safety Limit, Hazard Category 1, 2, or 3 nuclear facility's Technical Safety Requirement (or Operational Safety Requirement) Limiting Control Setting, Limiting Condition for Operation, Specific Administrative Control, or Surveillance Requirement.
3A(2)	Any violation or noncompliance of a credited hazard control specified in a Hazard Category 1, 2, or 3 nuclear facility's DOE approved Documented Safety Analysis [issued pursuant to 10 CFR Section 830.204, Documented Safety Analysis, and including Basis for Interim Operation, etc.], or DOE issued Safety Evaluation Report that are not addressed by Criterion 3A(1).
3A(3)	An event consisting solely of a surveillance test (to include any periodic activity explicitly captured in the Documented Safety Analysis that is used to ensure operability or viability of a structure, system, or component) performed after the prescribed surveillance period, and in which the structure, system, or component was found to be capable of performing its specified safety function.
3B – DSA	
3B(1)	Identification of a radioactive material inventory that causes a nuclear facility to exceed its current approved/authorized Hazard Category.
3B(2)	Determination of a positive Unreviewed Safety Question (USQ) that reveals a currently existing inadequacy in the Documented Safety Analysis.
3C – NCS Control Violations	
3C(1)	A criticality accident occurs.
3C(2)	A condition in which no documented controls are available to prevent a criticality accident. An accident has not occurred due to other, non-documented barriers or controls.
3C(3)	A loss of one or more nuclear criticality documented controls such that an accidental criticality is possible from the loss of one additional documented control.
3C(4)	A deficiency in criticality safety analysis or degradation of a documented criticality control (or controls) such that adequate controls were not in place for a credible criticality accident scenario.
4 – Facility Status	
4A – NF SSC Degradation	
4A(1)	Performance degradation of any Safety Class (SC) or Safety Significant (SS) Structure, System, or Component (SSC), or any support system that is required for safety operation of the SC or SS SSCs, which prevents satisfactory performance of its design function when it is required to be operable.
4A(2)	Performance degradation of any SC SSC when not required to be operable.
4B – Operations	

4B(1)	A formal shutdown of an activity or operation for safety reasons, directed by the DOE Field Element Manager, Contracting Officer or senior contractor management requiring corrective actions prior to continuing operations (e.g., a Stop Work Order).
4B(2)	Actuation of a Safety Class (SC) Structure, System, or Component (SSC), or its alarms as a result of an actual unsafe condition.
4B(3)	Actuation of a Safety Significant (SS) SSC, or its alarms as a result of an actual unsafe condition.
4B(4)	A facility operational event which resulted in an adverse effect on safety, such as, but not limited to: (a) an inadvertent facility or operations shutdown (i.e., a change of operational mode or curtailment of work or processes); (b) a manual facility or operations shutdown due to alarm response procedures; (c) an inadvertent process liquid transfer; or (d) an inadvertent release of hazardous material from its engineered containment.
4B(5)	Any event or condition that would prevent immediate facility or offsite emergency response capabilities.
4C – Suspect/Counterfeit and Defective Items or Material	
4C(1)	Discovery of any suspect or counterfeit item or material found in a Safety Class (SC) or Safety Significant (SS) Structure, System, or Component (SSC).
4C(2)	Discovery of any other suspect or counterfeit item or material [i.e., not found in a SC or SS SSC] that is found in any application whose failure could result in a loss of safety function, or present a hazard to public or worker health and safety.
4C(3)	Discovery of any defective item or material, other than a suspect/counterfeit item or material, in any application whose failure could result in a loss of safety function, or present a hazard to public or worker health and safety.
5 – Environmental	
5A – Releases	
5A(1)	Any release (onsite or offsite) of a hazardous or extremely hazardous substance, including radionuclides from a DOE facility above federally permitted releases in a quantity equal to or exceeding the federal reportable quantities specified
5A(2)	Any release (onsite or offsite) of a pollutant from a DOE facility that is above levels or limits specified by outside agencies in a permit, license, or equivalent authorization, when reporting is required in a format other than routine periodic reports.
5A(3)	Any release (onsite or offsite) that exceeds 100 gallons of oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. For operations involving oil field crude or condensate, any discharge that must be reported to outside agencies in a format other than routine periodic reports is reportable under this criterion.
5A(4)	Any discrete release of sulfur hexafluoride (SF6) due to an event or DOE operation equal to or exceeding 115 pounds (1,247 metric tons of CO2e according to 40 CFR Part 98, Subpart A,
5B – Ecological and Cultural Resources	
5B(1)	Any occurrence including releases causing significant impact to ecological or cultural resource for which DOE has responsibility under applicable laws, regulations, and Executive Orders.
5B(2)	Any occurrence, including releases, resulting in extensive environmental degradation
6 – Contamination/Radiation Control	
6A – Loss of Control of Radioactive Materials	

6A(1)	Identification of radioactive material offsite due to DOE operations/activities that exceeds applicable DOE limits (pursuant to DOE O 458.1,
6A(2)	Loss or unexpected discovery of radioactive material that exceeds 100 times the values in 10 CFR Part 835, Occupational Radiation Protection, Appendix E
6A(3)	Loss or unexpected discovery of radioactive material which exceeds one times and no greater than 100 times the values in 10 CFR Part 835, Appendix E
6B – Spread of Radioactive Contamination	
6B(1)	Identification of offsite radioactive contamination due to DOE operations/activities that exceeds applicable DOE approved authorized limits
6B(2)	Identification of onsite radioactive contamination greater than 100 times the total contamination value in 10 CFR Part 835 Appendix D, exclusive of footnote 3 to Appendix D, and that is found outside of the following locations: areas routinely posted controlled, and monitored for contamination; areas controlled in accordance with 10 CFR Section 835.1102(c); and, per 10 CFR Section 835.604(a), any non-posted area that is under the continual observation and control of an individual knowledgeable of and empowered to implement required access and exposure control measures.
6B(3)	Identification of onsite radioactive contamination greater than 10 times and no greater than 100 times the total contamination values in 10 CFR Part 835, Appendix D, exclusive of footnote 3 to Appendix D, and that is found outside of the following locations: areas routinely posted, controlled, and monitored for contamination; areas controlled in accordance with 10 CFR Section 835.1102(c); and, per 10 CFR Section 835.604(a), any non-posted area that is under the continual observation and control of an individual knowledgeable of and empowered to implement required access and exposure control measures
6B(4)	Identification of onsite legacy radioactive contamination greater than 10 times the total contamination values in 10 CFR Part 835 Appendix D, exclusive of footnote 3 to Appendix D, and that is found outside of the following locations: areas routinely posted, controlled, and monitored for contamination; and areas controlled in accordance with 10 CFR Section 835.1102(c); and, per 10 CFR Section 835.604(a), any non-posted area that is under the continual observation and control of an individual empowered to implement access and exposure control measures.
6C – Radiation Exposure	
6C(1)	Determination of a dose that exceeds the limits specified in 10 CFR Part 835, "Occupational Radiation Protection," Subpart C, "Standards for Internal and External Exposure," or in DOE O 458.1
6C(2)	Failure to provide the required monitoring for an exposure estimated to exceed the values for providing personnel dosimeters and bioassays as stated in 10 CFR Section 835.402(a) or 10 CFR Section 835.402(c).
6C(3)	Determination of a single occupational dose, attributable to an identified event that exceeds an expected dose by: (1) 500 mrem Committed Effective Dose (CED), or (2) 100-mrem effective dose due to external exposure.
6C(4)	A radiological release that exceeds any limit contained in paragraphs 4.f.(2), 4.f.(5), 4.g.(4), 4.g.(5)(a), 4.g.(7), 4.g.(8)(a)4 or 4.i.(1) [and paragraphs 2.f.(2), 2.f.(5), 2.g.(4), 2.g.(5)(a), 2.g.(7), 2.g.(8)(a)(4) or 2.i.(1) of the CRD] of DOE O 458.1
6D – Personnel Contamination	
6D(1)	Any occurrence requiring offsite medical assistance for contaminated personnel, including transporting a person with personnel or clothing contamination due to DOE operations/activities that exceeds 1 times the total contamination values in 10 CFR Part 835, Appendix D
6D(2)	Identification of offsite personnel or clothing contamination due to DOE operations/activities that exceeds 1 times the total contamination values in 10 CFR Part 835, Appendix D.

6D(3)	Identification of onsite personnel or clothing contamination (excluding anti-contamination clothing provided by the site for radiological protection) that exceeds 10 times the total contamination values identified in 10 CFR Part 835, Appendix D.
8 – Packaging and Transportation	
8(1)	Any offsite transportation incident involving hazardous materials that would require immediate notice pursuant to 49 CFR Section 171.15(b).
8(2)	Any deviation that would require a written report to the Nuclear Regulatory Commission (per 10 CFR Section 71.95) or to DOE HCO/NNSA CO (per DOE O 460.1C or DOE O 461.1C),
8(3)	Any offsite "accident" (per 49 CFR Section 390.5) involving a motor vehicle carrying DOE hazardous materials operating on a highway in interstate or intrastate commerce.
8(4)	Any transportation activity for onsite transfer resulting in onsite release of radioactive materials, hazardous materials, hazardous substances, hazardous waste, or marine pollutants that is above permitted levels and exceeds the Reportable Quantities (RQ) specified in 40 CFR Part 302 or 40 CFR Part 355.
8(5)	Any offsite transportation incident involving DOE hazardous materials that requires submission of a Hazardous Materials Incident Report on DOT Form F 5800.1 pursuant to 49 CFR Section 171.16.
8(6)	Any offsite transportation of hazardous material, including radioactive material, whose quantity or nature (e.g., physical or chemical composition) is such that it is noncompliant with the receiving facilities Waste Acceptance Criteria (WAC) or other receipt requirements and the receiving organization's operations were significantly impacted or disrupted
8(7)	Violation of applicable Hazardous Materials Regulations requirements for activities listed in 49 CFR Section 171.1(b) performed during the preparation of offsite hazardous materials shipments and discovered during shipment in commerce or at the receiving site.
8(8)	Any onsite transfer of hazardous material, including radioactive material, whose quantity or nature (e.g., physical or chemical composition) is such that it is noncompliant with the receiving facilities WAC or other receipt requirements and the receiving organization's operations were significantly impacted or disrupted
8(9)	Unauthorized deviation from DOE instructions to commercial motor carriers for DOE hazardous materials shipments
10 – Management Concerns and Issues	
10(1)	An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern for that facility or other facilities or activities in the DOE complex.
10(2)	A near miss to an injury, where something physically happened that was unexpected or unintended AND where no barrier prevented an event from having a reportable consequence
10(3)	Any occurrence that may result in a significant concern by affected state, tribal, or local officials, press, or general population; that could damage the credibility of the Department; or that may result in inquiries to Headquarters

Source: DOE Order 232.2A, *Occurrence Reporting and Processing of Operations Information*

Attachment 3C. Applicable ORPS Key Word Codes and Corresponding Key Words

ORPS Key Word Code	ORPS Key Words
01A	Inadequate Conduct of Operations (Retired)
01B	Loss of Configuration Management/Control
01C	Violation of Authorization Basis Elements
01D	Missed/Late Surveillance
01E	Operations Procedure Noncompliance
01F	Training Deficiency
01G	Inadequate Procedure
01H	Inadequate Safety Analysis/USQ/TSR
01I	Safety System Actuation/Evacuation
01J	Criticality Procedure Noncompliance
01K	Lockout/Tagout Noncompliance (Electrical)
01L	Lockout/Tagout Noncompliance (Other)
01M	Inadequate Job Planning (Electrical)
01N	Inadequate Job Planning (Other)
01O	Inadequate Maintenance
01P	Inadequate Oral Communication
01Q	Personnel Error
01R	Management Issues
01S	Incorrect/Inadequate Installation
01T	Willful Violation
01U	Unplanned Interruption of Operations
02A	Radioactive Release
02B	Underground Storage Tank Release
02C	Compliance Notification (from regulator with a violation)
02D	Compliance Notification (from or to regulator without a violation)
02E	Hazardous Material Release
02F	Potable Water Release
03A	Fire Protection Equip Degradation
03B	Fire Suppression Actuation
03C	Facility Fire
03D	Explosives Safety Issue

ORPS Key Word Code	ORPS Key Words
08G	Industrial Equipment
08H	Safety Noncompliance
08I	Safety Equipment Failure
08J	Near Miss (Electrical)
08K	Near Miss (Other)
08L	Notice of Violation or Noncompliance from local, state or Federal agency
08M	Chemical Safety
08N	Laser Safety
08O	Construction/Demolition Safety
08P	Hoisting/Rigging Incident
08Q	Forklift/Hand Truck Incident
08R	Excavations/Penetrations
08S	Landscaping/Mowing
08T	Beryllium Incident
09A	Fitness for Duty Issue
09B	Material Accountability Issue
09C	Miscellaneous Security Issue
09D	Theft/Sabotage
10A	Shipping Regulation Noncompliance
10B	Vehicle Accident
10C	Industrial Equipment Movement Incident
10D	Notice of Violation or Noncompliance from local, state or federal agency
10E	Shipping Incidents / Accidents
11A	Chemical Reaction/Pressurized Drum
11B	Emergency Management System Failure
11C	Nuclear Weapons Safety Issue
11D	Natural Phenomena
11E	Suspect/Counterfeit Items
11F	Inadequate Design
11G	Subcontractor
11H	Procurement Deficiency/Defective Items

ORPS Key Word Code	ORPS Key Words
03E	National Fire Protection Association (NFPA) Code/Fire Protection Issue
03F	Explosion
03G	Wildland Fire
04A	I & C Equipment
04B	Criticality Equipment
04C	Monitor/Analyzer
04D	Computer Software
04E	Computer Hardware
05B	Seismic Qualification Deficiency
05C	Ventilation System/Fan
05D	Mechanical Equipment Failure/Damage
05E	Structural Deficiency/Failure
05F	Corrosion/Material Degradation/EOL
05G	Glovebox Failure
05H	HEPA Filter
05I	Container/Package Failure
06A	Clothing Contamination
06B	Facility/Equip/Site Contamination
06C	Skin Contamination
06D	Airborne Radiological Release
06E	Radiological Control Procedure Noncompliance
06F	External Exposure
06G	Intake
06H	Inadequate Radiological Control Job Planning
06J	Inadequate Radiological Control Procedure
06K	Offsite Spread of Contamination
07A	Emergency or Backup Generator Failure
07B	Electrical Distribution
07C	Power Outage
07D	Electrical Wiring
07E	Electrical Equipment Failure

ORPS Key Word Code	ORPS Key Words
11I	Visiting Scientist/Researcher or Student Employee
11K	Excessed Equipment/Material
11L	Supplier
11M	Outside Agency or Organization/Site Visitor
11N	Nuclear Waste Handling Operations
12A	Authorization Basis
12B	Conduct of Operations
12C	Electrical Safety
12D	Environmental Releases/Compliance
12E	Equipment Degradation/Failure
12F	Fire Protection
12G	Industrial Operations
12H	Injuries Requiring Medical Treatment Other Than First Aid
12I	Lockout/Tagout (Electrical or Mechanical)
12J	OS/IH
12K	Near Miss (Could have been a serious injury or fatality)
12L	Nuclear Criticality Safety Concern
12M	Radiological Control (Other)
12N	Radiological Skin Contaminations/Uptakes/Overexposures
12O	Safeguards and Security
12P	Shipping QA
12Q	Vehicle Accident
12R	Suspect/Counterfeit Items - Defective Items
12Z	Other than above
13A	HQ Significant (High-lighted for Management attention)
14A	Program Deficiency
14B	Training and Qualification Deficiency
14C	Quality Improvement Deficiency
14D	Documents and Records Deficiency
14E	Work Process Deficiency
14F	Design Deficiency

ORPS Key Word Code	ORPS Key Words
07F	Arc Flash
08A	Electrical Shock
08C	Industrial Hygiene Exposure
08D	Injury
08E	Fatality
08F	Industrial Operations Issues (Retired)

ORPS Key Word Code	ORPS Key Words
14G	Procurement Deficiency
14H	Inspection and Acceptance Testing Deficiency
14I	Management Assessment Deficiency
14J	Independent Assessment Deficiency
14K	Safety Software QA Deficiency
14L	No QA Deficiency

APPENDIX C
EA-31 Independent Oversight Planning and Resource Loading Process

1.0 PURPOSE

This appendix establishes the process for Site Leads in the Office of Nuclear Safety and Environmental Assessments (EA-31) to develop a site-specific Planned Activity List (SPAL) (SBN, Attachment D*, EA-30 Approved Assessment Activities)* that includes planned assessments and operational awareness activities for their assigned site(s) and supports development of an integrated, resource-loaded Master Planned Activity List (MPAL). Once approved, the SPALs are used to support the semi-annual site coordination calls with the Office of Environment, Safety and Health Assessments (EA-30) Director and Deputy Director, the EA-30 office directors, Site Leads, and U.S. Department of Energy (DOE) site management. The goal of this process is to facilitate the identification, planning, and execution of a suite of oversight activities that will evaluate the most significant nuclear safety vulnerabilities faced by the Department and support development and implementation of the EA Operational Plan.

2.0 APPLICABILITY

This appendix applies to EA-31 nuclear safety assessment selection and planning activities in coordination with other EA-30 personnel.

3.0 REQUIREMENTS

3.1 General

- EA-31 prioritizes independent oversight activities on areas of greatest potential nuclear safety risks. Higher priority and greater emphasis are placed on conducting oversight of high consequence activities, such as high hazard nuclear operations and major nuclear project design, construction, and commissioning. The process is illustrated below in Figure 1.

- EA-31's oversight activities focus primarily on:

  - Evaluating nuclear safety performance at DOE nuclear facilities, including documented safety analysis and technical safety requirement implementation, the functionality of vital safety systems, and adequacy of other nuclear safety programs.
  - Conducting assessments of design and construction of new high hazard projects or significant modification of existing nuclear facilities.
  - Conducting targeted topical area, multi-site nuclear safety assessments.
  - Conducting assessments of site nuclear safety programs where adverse performance may present significant nuclear safety risk (e.g., less than expected safety performance and/or serious or recurring incidents or violations of requirements).
  - Evaluating line management feedback and improvement processes.

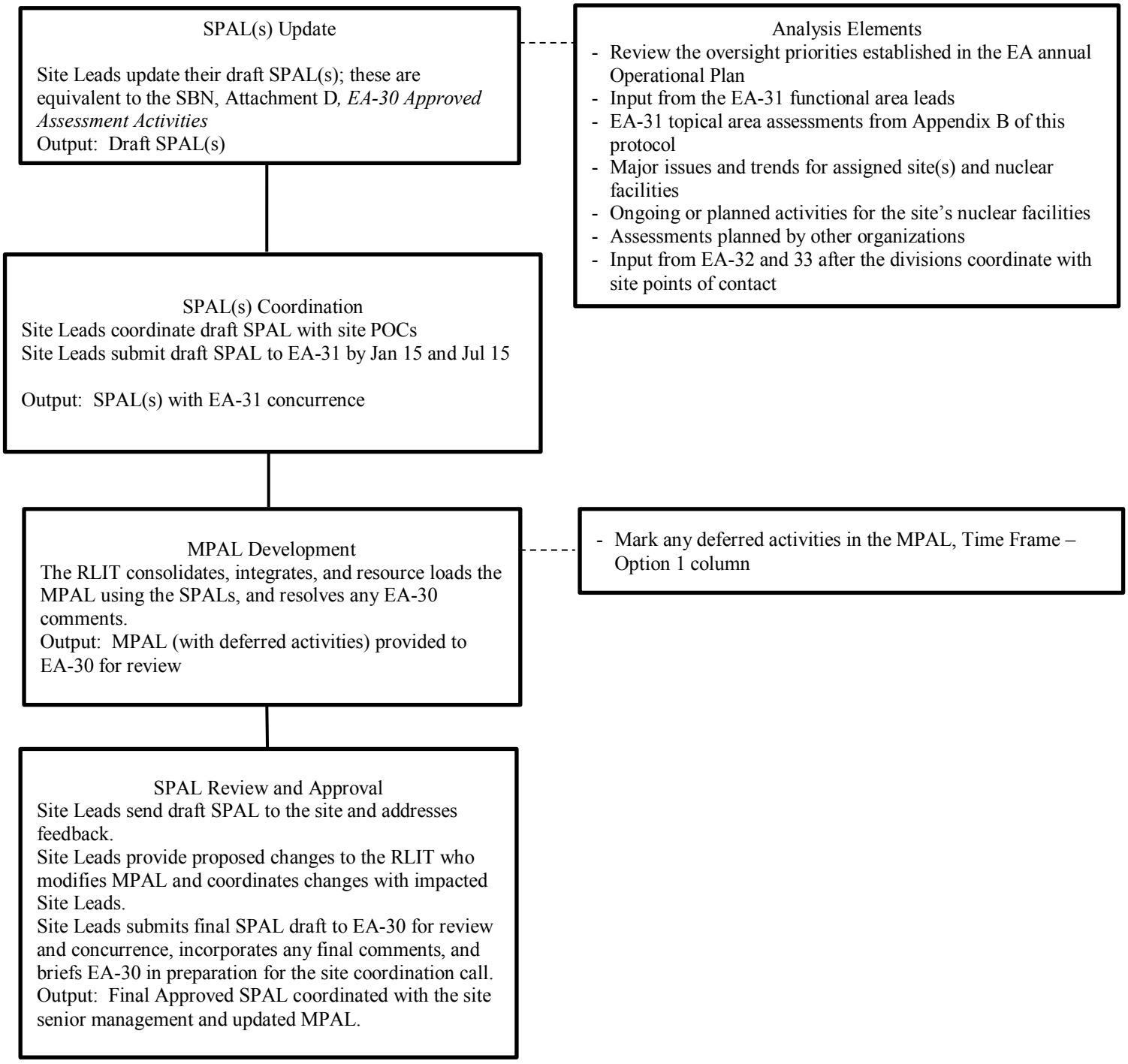
- The EA-31 independent oversight planning and resource loading process is conducted on a semi-annual cycle, and identifies planned oversight activities for the upcoming 18-month period (or longer). This supports the EA-30 Director's semi-annual site coordination calls with each DOE nuclear site that has

an assigned EA-31 Site Lead. This process is scheduled such that approved resource-loaded, SPALs are available to support the site coordination calls.

- The results of this planning and resource loading process are also integrated into the Site Briefing Notes and the EA-30 Onsite Calendar.

- Each Site Lead will update their draft SPAL and submit it to the EA-31 Director by January 15 and July 15 of each year to support the integrating and resource loading process described in Section 3.3 below.

Figure 1. EA-31 Master Planned Activity List Development and Update Process



3.2 Updating Site-Specific Planned Activity Lists

Approximate Timeline	Actions
December 1 and June 1	**EA-31 Director (or delegate):** Direct Site Leads to update their SPAL(s) and coordinate with site points of contact by early January and July. Provide a Site Lead-specific filtered planned activity list from the MPAL to each of the Site Leads. (See Attachment 1, Section 1 for instructions.)
December and June	**Site Leads:** Update a SPAL(s) by performing the following: 1. Review the oversight priorities established in the EA annual Operational Plan to ensure that the SPAL aligns with EA priorities. 2. Obtain input from the EA-31 functional area leads (e.g., fire protection, safety basis, criticality safety) on assessments that they are planning or recommending for the Site Leads' site(s). 3. Include any EA-31 topical area assessments from Appendix E of this Desktop Aid as applicable (expected to be available by December 1). 4. Review EA-31 assessments performed in the previous five years for individual nuclear facilities and activities at the site. Identify potential functional areas (discussed in Appendix E of this Desktop Aid) and a general assessment scope to be considered for inclusion in the SPAL. 5. Review safety basis documentation for the site's nuclear facilities to understand the relative importance of credited controls and safety management programs (SMPs) in the hazard control strategy (e.g., SMPs relied on for high consequence events in the hazard or accident analysis; key elements embedded in SMPs; technical safety requirement specific administrative controls associated with an SMP). Factor this into the identification of potential functional areas and general assessment scope to be considered for inclusion in the SPAL. 6. Using the Site Briefing Notes, analyze major issues and trends for assigned site(s) and nuclear facilities. Consider the need to follow-up on past EA-30 findings and deficiencies. Factor this into the identification of potential functional areas and general assessment scope to be considered for inclusion in the SPAL. 7. Analyze the types of ongoing or planned activities for the site's nuclear facilities that may validate the importance of certain credited controls and SMPs. 8. Consider assessments planned or recently completed by other organizations (e.g., Headquarters program offices, field/site offices, contractors, Defense Nuclear Facilities Safety Board (DNFSB) technical staff, and Office of Inspector General (OIG)) to identify opportunities for concurrent EA oversight activities or, conversely, to avoid duplication. 9. Using professional judgment, select proposed oversight activities (e.g., assessments, studies, and operational awareness activities) and the facilities for the proposed oversight activities. For facility selection, consider the Site Briefing Notes relative risk ranking of the site's nuclear facilities, placing emphasis on the higher risk facilities. This doesn't preclude the potential need to perform baseline

Approximate Timeline	Actions
	assessments in nuclear facilities with lower risk. Major high hazard projects and programs or ongoing or planned activities for a facility may warrant additional oversight. Evaluate the applicability of the major issues analyzed above to the site's nuclear facilities. 10. For each proposed oversight activity, using the priority definitions from Desktop Aid 30-01, Section 5.0 e., assign a priority to each activity. *(Exception: operational awareness activities may be assigned a priority level higher than 4 (e.g., 1 or 2) if no other assessment activities are planned at that site or if the operational awareness is determined to be of sufficient importance and appropriately justified by the Site Lead.)* 11. Obtain input from the Office of Worker Safety and Health Assessments **(**EA-32) and the Office of Emergency Management Assessments (EA-33) on their oversight activities planned for the next 18 months. (EA-32 and EA-33 independently coordinate with their site points of contact.) 12. Update the Site Lead-specific filtered activity list from the MPAL (See Attachment 1, Section 1) with the following information for each planned oversight activity (See Attachment 1, Section 2 for instructions): • EA office performing the activity (EA-31, -32, or -33) • A brief title • Functional area • Assigned priority • Site • Site (contractor) organization • Facility or facilities • EA-31 facility risk ranking • Site Lead • Proposed and alternate dates (i.e., specific weeks, months, and years) for each proposed flexible activity anticipated within the next 12 months. For activities that are not flexible, enter "Site Dependent" with approximate dates, if available, or quarter. For longer range planned activities, list the quarter and year. Consult with other EA-31 Site Leads to identify proposed dates for their activities, as applicable. For completed activities, enter "Completed". • Federal travel cost estimate ($2000/week/federal employee) • A brief description, justification why the activity is being proposed, and an explanation of the assigned priority (entered in the "Discussion" column) • The name of the team leader, and the types and number of subject matter experts (SME) needed (specific SMEs are not assigned at this time).
First and second week in January / First and second week in July	**Site Leads:** 1. Using the updated Site Lead-specific filtered list from the MPAL, run the macro to generate a draft SPAL (WORD version). (See Attachment 1, Section 3 for instructions.) 2. Share the draft SPAL with site points of contact to solicit feedback on the selection of assessment topics, nuclear facilities, and proposed schedule.

Approximate Timeline	Actions
	3. By January 15 and July 15 of each year, to support the oversight planning and resource loading process described below, submit the draft SPAL to the EA-31 Director. 4. Provide identified weeks not available for travel (one year look ahead) to the EA-31 Director.

3.3 Resource Loading and Integrating Site-Specific Planned Activity Lists

Approximate Timeline	Actions
December	**EA-31 Director:** In consultation with the EA-30 Deputy Director, establish the Resource Loading and Integration Team (RLIT) for the upcoming year. Note: *The RLIT should include the EA-31 Director, additional Federal staff as determined by the EA-30 Deputy Director, and at least one member from the EA-30 Support Contractor.*
Third week in January / Third week in July	**RLIT:** 1. Combine each draft SPAL from the Site Leads into an integrated draft schedule, known as the draft MPAL, for all of EA-30. (See Attachment 1, Section 4 for instructions.) 2. Review the draft MPAL and adjust as needed to: • De-conflict overlapping activities that may compete for similar SMEs • Select the number and locations of proposed activities across the complex, according to priority level and budget constraints • Identify specific proposed schedule dates, if not already provided, for Priority 1 Activities 3. Assign SMEs for Priority 1 Activities. 4. After all Priority 1 Activities have been assigned resources and scheduled, review Priority 2 Activities and assign SMEs and schedule dates. 5. Continue with Priority 3 and 4 Activities if sufficient Federal travel and SME resources remain. If SME resources are insufficient within EA-30, then the activities will either be deferred or will require team augmentation by the Site Lead. (See Protocol EA-30-00, Appendix C for guidance on team augmentation.) 6. Mark any deferred activities in the draft MPAL, Time Frame – Option 1 column. *Notes:* *1. The RLIT or the EA-31 Director should confirm that the appropriate priority numbers are assigned.* *2. The RLIT should hold back 10-15% of the Federal travel budget for contingency during initial planning.*

Approximate Timeline	Actions
Fourth week in January / Fourth week in July	**RLIT:** Provide the draft MPAL and the list of lower priority, deferred activities to the EA-30 Director and Deputy Director for review. Note: *It is suggested that the RLIT brief the EA-30 Director and Deputy Director to allow discussion of any issues that may require further explanation.*
Fourth week in January / Fourth week in July	**EA-30 Director and Deputy Director:** Review the draft MPAL and provide comments, if any, to the RLIT.
First week in February / First week in August	**RLIT:** 1. Resolve EA-30 Director and Deputy Director comments, if any, in consultation with the Site Leads and other Site Leads, as needed. 2. Distribute the draft MPAL and proposed schedule (calendar) to EA-31 Site Leads and the Administrative team.

3.4 Review and Approval Process

Site Leads use the draft MPAL to generate their draft SPALs. The final review and approval process focuses on the SPALs.

Approximate Timeline	Actions
Second week in February / Second week in August	**Site Leads:** 1. Using the MPAL macro, generate an updated draft SPAL for review and send to site management and points of contact. (See Attachment 1, Section 3 for instructions.) 2. Address (and incorporate as appropriate) feedback from the site. 3. Discuss and resolve comments and concerns that impact the schedule of planned activities with the EA-31 Director.
Second week in February / Second week in August	**RLIT:** 1. Resolve issues and concerns identified by the Site Leads and reviewers that impact the schedule of planned activities. 2. Update the draft MPAL as necessary. 3. Inform affected Site Leads of the changes that impact their SPALs.

Approximate Timeline	Actions
Second week in February / Second week in August	**Site Leads:** 1. Using the MPAL macro, generate an updated draft SPAL . (See Attachment 1, Section 3 for instructions). Submit this list to the EA-30 office directors for review and concurrence in preparation for the site coordination call. 2. Incorporate any comments and submit the updated draft SPAL to the EA-30 Director and Deputy Director. 3. Brief the EA-30 Director and Deputy Director on the updated draft SPAL in preparation for the site coordination call.
February 15 / August 15	**EA-30 Director:** 1. Approve the SPAL and conduct the site coordination calls.

3.5 Site Coordination Calls

The approved SPAL are used to discuss the upcoming EA-30 planned activities during the site coordination calls. Following the site coordination call, the Site Lead distributes the approved SPAL to interested parties (e.g., site points of contact, Site Leads and team members). EA-30 may distribute the approved SPAL to additional interested parties (e.g., Headquarters program offices, Departmental Representative to the DNFSB).

3.6 Change Process

Changes to the approved SPALs are managed by the EA-31 Director with the support of the RLIT and Site Leads as needed.

As needed	**Site Leads:** 1. Identify any requested or required changes to the SPAL and submit them to the EA-31 Director.
As needed	**EA-31 Director:** 1. Analyze the impacts of requested or required changes to the SPAL with the support of Site Leads and RLIT as needed. 2. Update the MPAL as necessary. 3. Request that the EA-30 Onsite Calendar be updated to reflect the changes.
As needed	**Site Leads:** 1. Update the affected SPAL 2. Notify affected parties, including Site Leads, team members, and the site.

4.0 RESPONSIBILITIES

Director, Office of Environment, Safety and Health Assessments

- Prioritizes resources for assessments, operational awareness activities, and other mission support activities as the technical monitor (per the EA Business Policy – Support Services Contract Management)
- Reviews and approves the SPALs
- Leads the EA-30 site coordination calls.

Deputy Director, Office of Environment, Safety and Health Assessments

- Assists the EA-31 Director in establishing the RLIT
- Conducts a review of the draft MPAL and provides comments to the RLIT.

Director, Office of Nuclear Safety and Environmental Assessments

- Leads the RLIT and the preparation of the MPAL
- Assigns appropriate technical staff to perform oversight and operational awareness activities
- In coordination with the Director, Office of Environment, Safety and Health Assessments approves schedules of activities and resources for EA-31 independent assessments and operational awareness activities.

Site Leads

- Based on information from oversight activities, establish and maintain a SPAL that provides a basis for planned oversight activities for the assigned site(s)
- Obtain input from EA-32 and 33 and integrate oversight activities into the SPAL.
- Coordinate with line managers during semi-annual planning to identify independent assessments and operational awareness activities and schedules consistent with priorities for the next fiscal year
- Submit by January 15 and July 15 of each year the draft SPAL, which includes the proposed schedule of activities and associated resource needs, to the EA-31 Director for review
- Participate in the site coordination calls for assigned site(s).

Resource Loading and Integration Team

- Integrates and resource loads the SPALs
- Maintains the MPAL
- Resolves issues and integrates necessary changes to the MPAL and the SPALs

5.0 REFERENCES

- DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*, 4/25/2011
- DOE Order 227.1A, *Independent Oversight Program*, 12/21/2015
- *Independent Oversight Program Appraisal Process Protocols*, December 2015
- Protocol – EA-30-00 *Office of Environment, Safety and Health Assessments Protocol for Oversight Activities*, April 2020, Revision 3

- Protocol – EA-31-02, *Office of Environment, Safety and Health Assessments Protocol for High-Hazard Nuclear Facility Project Oversight Activities*, November 2016, Revision 2

Attachment 1: Master Planned Activity List (MPAL) User Instructions

Section 1: The administrative team on behalf of the EA-31 Director provides a Site Lead-specific filtered activity list generated from the MPAL to each Site Lead.

1. Open the current MPAL in Excel from O: drive. O:\EA-31\Master Planned Activity List (MPAL)\MPAL.
2. Click on "Enable Content" if this warning shows up. If it does not show up, click "File➥ Info ➥ Enable All Content➥Yes."
3. Unprotect the MPAL file (Home Tab➥Format➥Unprotect Sheet…) and enter the password provided by the RLIT.
4. For each EA-31Site Lead:
   4.1. Filter Column I for the Site Lead "last name" and "Blanks"
   4.2. "Protect" the worksheet (Home Tab➥Format➥Protect Sheet). Make sure the following boxes are checked:
   - ☑ Select Locked Cells
   - ☑ Select Unlocked Cells
   - ☑ Insert Rows
   - ☑ Sort
   - ☑ Use Autofilter

   4.3. DO NOT enter a password, just check "OK."
5. Save file in the same folder with the file name "MPAL- Lastname" where the last name starts with a capital letter followed by lower case letters as an Excel Macro-Enabled Workbook. Continue to generate each "MPAL-Lastname" file for the remaining EA-31 Site Leads.
6. After all Site Lead-specific MPALs are saved, protect the MPAL file with the RLIT PASSWORD and resave the file in the MPAL folder before closing.

Section 2: Site Leads update the Site Lead-specific filtered list of the MPAL.

1. Open the Site Lead's copy of the MPAL in Excel from O: drive MPAL folder with the file name "MPAL- Lastname."
   (Tip: Any time the spreadsheet seems to lock up or not scroll, it is due to the use of "Freeze Panes" to keep the header at the top. The only solution is to "Unfreeze Panes" to allow scrolling up and down the worksheet: View ➥ Freeze Panes ➥ Unfreeze Panes)
2. If not already enabled (i.e., if warning shows up), "Enable Content", click File ➥ Info ➥ Enable Content➥Enable All Content➥Yes.
   Note row 3 has filters to enable filtering any column.
   Note row 3 blue colored cells contain tips for use.
3. Sheet1 contains the integrated data from Site Leads. All uncolored rows and the first blue-colored row are LOCKED. All data entry occurs in the blue colored rows after the first blue colored row. This provides the ability for the RLIT to identify new or revised data and any changes made above the first blue line will not be recognized by the RLIT.
4. Some of the Sheet1 columns contain drop down lists: EA Org, Functional Area, Priority, Site, Org, Facility(s), and Site Lead. This helps ensure consistency in the data.
5. Sheet2 contains the data that supports all the drop-down lists. This sheet is LOCKED to ensure integrity of the drop-down data.
6. To correct or update data in the LOCKED rows, copy the entire row by clicking on the row number then (ctrl+c) and paste it into any blue colored row below the first blue-colored row by clicking on the row number and pasting (ctrl+v); then correct the information in any cell, as needed. Pasting below the first blue colored row helps the RLIT identify MPAL data that needs updating. For completed

oversight activities, copy the entire row and paste it into any blue colored row below the first blue-colored row then put "Completed" in the "Time Frame: Option 1" column.

7. Add any new oversight activities in the subsequent blue colored rows as needed. Insert additional rows as needed. (Select the row number for insertion➥Home Tab➥Insert (click as many as necessary))
8. If a cell needs to contain information that is not in the drop-down list or needs multiple drop-down entries, first UNPROTECT the sheet if it is protected. (Home Tab➥Format➥Unprotect Sheet…➥OK). Then copy a cell that does not have a drop-down list (like an uncolored cell from column B) by clicking on the cell and copying (ctrl+c) then clicking on the destination cell and pasting (ctrl+v). Then type in what is needed in the cell. By using an uncolored cell, the RLIT can quickly identify unique situations.
9. Turn "Protect" back on. DO NOT enter a password, just click on "OK." (Home Tab➥ Format➥ Protect Sheet…➥OK)
10. When finished, save the file on the O: drive in the MPAL folder. Save another copy on your own computer as a backup and close the file.
11. Completing each of these Site Lead-specific MPAL files provides the input to the RLIT for integration, scheduling, and personnel assignments.

Section 3: The RLIT combines each draft SPAL from the Site Leads into an integrated draft schedule.

- The RLIT combines all site-lead specific MPALs into the MPAL master spreadsheet.
- Site Lead entries in the blue colored rows are reviewed to ensure quality; issues are resolved with the Site Leads
- The integrated MPAL is used by the RLIT to identify personnel resources and schedules.
- The MPAL is password protected and under change control by the RLIT.

Section 4: Site Lead generates a Site-Specific Planned Activity List (SPAL) (WORD version) from a filtered MPAL.

1. Open the current MPAL in Excel from O: drive. O:\EA-31\Master Planned Activity List (MPAL)\MPAL.
   (Tip: May need to "unfreeze panes" to allow scrolling up and down on worksheet: View ➥ Freeze Panes ➥ Unfreeze Panes)
2. If not already enabled (i.e., if warning shows up), "Enable Content": File ➥ Info ➥ Enable Content➥Enable All Content➥Yes.
3. Be sure all filters in row 3 are turned off.
4. Filter the spreadsheet using your name in the Site Lead Column I. Information from all rows that are visible will be included in the WORD version, so filter out any other information not needed. For example, if you have two sites and you only wanted to produce a SPAL for one of the sites, just filter column E for the site of interest. Also, filter out all completed oversight activities if you do not want these to appear in your SPAL.
5. Click on the macro button to generate the Site-Lead Specific WORD version of the MPAL.
6. When prompted, enter your last name. Note it is case sensitive and must match the text in the Site Lead Column.
7. Wait a few seconds then your WORD file should open; you may have to look on your task bar at the bottom of your screen. You can now use the table and save it like any other WORD file.
8. Close the MPAL, but "Don't Save" the file to the O: drive MPAL folder; this is the RLIT's Master file that is protected from any change.