

Line #	Criteria/ Lines of Inquiry	Item #	FEL Div Compliance Description	Compliant (Y/N)	Corrective Actions	Action Manager	Target Comp Date	Actual Comp Date
1	<b>Criteria:</b> Line management ensures that the contractors and subcontractors utilize systematic mechanisms to define the scope and schedule of work and identify associated risks and hazards so that the plan at each successively lower tier reflects an increasingly detailed description of the work to be performed.							
2	<b>Criteria:</b> Work control systems and procedures that address definition of work scope are developed for all types of work activities and are effectively implemented. These processes ensure that the scope of all work is clearly defined, communicated, and bounded such that activities necessary to control hazards to workers, the public, and the environment are identified.							
3	<b>Lines of Inquiry:</b>							
4	Are contractor/subcontractor managers and subject matter experts' managers actively involved in the definition of projects to ensure allocation of resources can be addressed?	4.a	AWP, Define statement of work from various sources (Navy, AF, Army, JTO, NASA, Other DOE/Federal agencies, and Universities)					
5	Do project documents, safety envelopes, and permits adequately bound the scope of work defined in work orders, procedures, and/or instructions? Does the work definition process include a screening against the safety envelope and/or permits?	5.a	FEL PAC and TAC, ESAF and LOP documents  FEList is used as a work planning and control tool, Review and analysis in toolbox meetings, OSPs, SOPs, TOSPs					
6	Is the work observed adequately bounded by approved work packages, procedures, and permits?	6.a	FEList, ES&H Manual 3210, Skill of the Craft, SOPs, Individual training and qualification					
7	Have higher-level work documents, such as project plans, been translated into discrete work packages and procedures with well-defined boundaries and interfaces?	7.a	AWP, ESAF and FEList					
8	Is work defined at the task level such that workers, supervisors, planners, and appropriate environment, safety, and health (ES&H) personnel can readily identify the hazards and risks associated with both the work activities and the environment/location in which it is performed?	8.a	FEList and ESAF					

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9	Are work activities properly prioritized to allow adequate allocation of resources and scheduling based on the importance of the work, safety impact, and risk?	9.a	FEList and daily toolbox meetings, Long ranged plan that defines major activities (6 months), Weekly, daily planning and scheduling meetings					
10	Have adequate personnel and equipment resources been identified for the performance of work, including operations, maintenance, and ES&H support?	10.a	AWP, FEList, ESAF, Toolbox meetings					
11	Do work-planning processes provide for early involvement of workers and ES&H staff to fully define the work and allow effective identification of hazards? Are specific thresholds identified for involvement of ES&H personnel in the hazard analysis process?	11.a	Due to small staff, everyone is involved at many levels (individual attention), FEList threshold for the involvement of ESH&Q					
12	Are tasks for minimizing waste generation and controlling the release of effluents to the environment adequately defined during work planning?	12.a	FEList and ESAF					
13	Are work packages sufficiently detailed, based on work activity and degree of hazard, to establish a clear understanding of the work to be performed and how safety should be integrated into that work?	13.a	FEList and ESAF					
14	Is worker input integrated into planning activities?	14.a	FEList, toolbox meetings, ESAF					

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15	<b>Criteria:</b> Work systems and procedures are developed and effectively implemented that ensure hazards for all work are identified and appropriately analyzed based on the significance of the hazards. Prior to the initiation of work, line management identifies, analyzes, and categorizes the hazards associated with the work activity so that the hazards are eliminated or appropriate administrative and engineering controls can be put in place to prevent or mitigate those hazards.							
16	<b>Lines of Inquiry:</b>							
17	Do institutional level ES&H procedures effectively address the hazard analysis process at the working level and are the procedures properly implemented?	17.a	AWP, ESAF, ES&H manual , FEList					
18	Are the responsibilities for environment, safety and health subject matter experts and reviewers for hazard analyses established and understood?	18.a	AWP, ESAF, OSP, LO SP, TOSP, FEList,					
19	Are standardized hazard assessment processes developed and appropriately graded in their approach based on the complexity of the activity/work, performance frequency, and initial or previous hazard screenings or analysis of the activity?	19.a	AWP, ESAF,OSP, TOSP, LO SP, FEList					
20	Are thresholds identified within the hazard analysis process to trigger appropriate involvement of ES&H professionals?	20.a	AWP, ESAF, ES&H manual Ch. 3210 (Hazard Identification and Characterization), FEList					
21	Do the hazard analysis processes address all types of work activities to be performed including skill of the craft or skill of the performer?	21.a	OSP, TOSP, FEList,					
22	Do formal procedures guide the development of activity-level hazard analyses and ensure the hazard analyses are tailored to the specific work being performed?	22.a	ESAF, ES&H Manual section 6700, OSP, TOSP, FEList					
23	When work scope and technical work document tasks are changed, are the hazard assessments reviewed for impact?	23.a	FEList, Toolbox Meeting					
24	Do planners, workers, environment, safety and health and waste management staff, and facility management personnel walk down work sites to identify activity-related hazards and co-located hazards based on the risk associated with the activity?	24.a	FEList, Toolbox Meeting, Safety Leadership Training, Safety Warden					
25	Are resident area hazards and potential for additive or synergistic effects properly considered for the introduction of additional hazardous, materials, or activities?	25.a	FEList, ES&H Manual 3210, Toolbox Meeting					
26	When conditions change, are new potential hazards analyzed?	26.a	FEList, Toolbox meeting, Pre job walkdown					

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27	Are accident scenarios related to hazardous work analyzed and properly considered to mitigate potential occurrence and severity?	27.a	FEList, daily Toolbox Meeting					
28	Are workers involved in the hazard analysis process?	28.a	Toolbox Meeting, FEList, Pre-job Walkdown					

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29	<b>Criteria:</b> Management systems for work control are developed and effectively implemented for work activities that ensure development of adequate hazard controls for performing the work safely and mitigating environmental impact.		Lab-level: ES&H Manual 1200 ( Purpose, Scope and Use) then to 3210,( Hazard Identification and Characterization) , FSAD and EMS program					
30	<b>Criteria:</b> Line management has established processes for identifying and tailoring controls for hazards associated with all facilities, operations, and work activities.		FEL: FEL Operation Directive Supplement, AOD, TSOPs, SOPs, OSPs, checklists, ESAF, FEList					
31	<b>Criteria:</b> Hazard controls are established based on an analysis of hazards, vulnerabilities, and risks in the work environment (e.g., radiological, chemical. industrial, physical, and natural phenomena).		ESAF, LOD, FEList process					
32	<b>Lines of Inquiry:</b>							
33	Are standardized hazard controls developed and used in an appropriately graded approach based on project/work complexity and risk, performance frequency, and hazard analysis results?	33.a	ESAF for users, ES&H Ch. 3210, 3130 ( FEL Experiment Review Process), OSP,SOP, TOSP, FEList process for others					
34	Do controls encompass each phase of work performance and all aspects of the work, including potentially abnormal or emergency situations?	34.a	ESAF for Users, OSP,SOP, TOSP, FEList					
35	Are the knowledge, skills, and abilities of the work force considered when selecting the form of controls'?	35.a	AWP, ESAF, ES&H Manual Ch. 3130, OSP, SOP, TOSP, FEList, Toolbox meetings					
36	Are the types of controls (engineering, administrative, and personal protection equipment) applied in the correct sequence and with an appropriate technical basis?	36.a	ESAF for Users and ES&H Manual 3000 (planning for Safe Operations), LOD, OSP, SOP, TOSP, FEList process for others. i.e LPSS, PSS, VVU units					
37	Are the hazard controls comprehensive and adequate for maintaining planning efficiency while ensuring acceptable hazard mitigation or elimination?	37.a	ESAF for Users and LOD, OSP, SOP, TOSP, FEList, Daily Toolbox Meeting					
38	Are corresponding training requirements incorporated into controls and hazard assessments'?	38.a	ITP, Special equipment/operation training records (Aspen)					
39	Are thresholds identified for involvement of ES&H personnel in the tailoring or implementation of hazard controls?	39.a	ESAF, LOD, OSP, SOP, FEList					
40	Are workers/supervisors stop work authorities and responsibilities clearly defined for unexpected hazards or safety concerns?	40.a	ES&H manual Ch.3330 (Stop Work Orders), SLT, STOP, Worker Training					
41	Do procedures address liaisons and interfaces between organizations to ensure conflicts and overlapping work activities are properly coordinated and resolved?	41.a	FEList, TSOP, Weekly and Daily Toolbox Meeting					

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42	Are control sets sufficiently analyzed to ensure they do not conflict or introduce additional hazards?	42.a	ESAF, LOD, OSP, SOP, TSOP, FEList					
43	Do controls sufficiently provide notification and afford protection to co-located workers who may either be present or traverse the areas potentially impacted by the activity?	43.a	OSP, SOP, FEList, FEL Operation Directive Supplement					
44	Is independent safety review of the adequacy of controls provided for higher hazard activities?	44.a	ESAF, OSP, TOSP, SOP					
45	Are workers involved in the development of controls?	45.a	FEList, Toolbox Meetings, Skill of the Craft					
46	Are parameters clearly defined and established in appropriate facility procedures? Are hazard controls sufficient to ensure that facility and other operating limits are not exceeded?	46.a	AOD, FSAD, ESAF, FEList, Engineering Controls					
47	Have facility safety requirements been clearly translated into facility, building, system, and equipment specific information that are available and usable by workers within the facility?	47.a	EH&S manual available on line, SOP					
48	Are appropriate hazard controls from hazard analyses and permits included in approved work documents and are they adequately implemented'?	48.a	ESAF, ES&H Manual CH. 3210, FEList, Pre-Job Walkthru	Y				
49	Are standardized hazard controls developed and used in an appropriately graded approach that considers work complexity, performance frequency, and magnitude of the risks'?	49.a	ES&H Manual Ch. 3210 , ES&H Ch. 3130, OSP, SOP, TOSP, FEList	Y				
50	Are work documents complete with adequate procedures, instructions, and/or drawings, and are bounding conditions and limitations clearly specified?	50.a	AOD, ESAF, OSP, LOD, LOP, LSOP, SOP, TOSP, FEList	Y				
51	Are permits appropriately tailored, specified and integrated into the work package (e.g., Lockout/Tagout, radiological work, confined space, hot work, energized electrical, elevated work, and asbestos abatement)?	51.a	ESAF, ES&H Manual Ch. 3130 (The FEL Experiment Review Process) Manual CH. 3210, FEList	Y				
52	Is the reliability of hazard controls for higher risk activities assessed and failure consequences determined and considered?	52.a	ESAF, ES&H Manual Ch. 3130 (The FEL Experiment Review Process), ES&H Ch. 3210, i.e LPSS,PSS analysis, AOD	Y				
53	When project/work scope and tasks are changed, are the hazard controls reviewed for impacts?	53.a	FEList, Toolbox meeting	Y				
54	Are training requirements for personnel needed to perform the work in accordance with established controls clearly defined, specified and implemented'?	54.a	ES&H Manual Ch. 4200 ( ES&HQ training Overview) App.4200 Appendix T1 Training Course Development , ITP, Aspen, Job Specific Training, FEList	Y				
55	Are appropriate analytical parameters and data quality objectives included in sampling and analysis programs?	55.a	???????????	n				

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56	Are the required administrative and engineering controls in place at locations where waste is generated and stored (for example, signs identifying less-than-90-day storage areas) per internal and external requirements?	56.a	ESAF, FELODS, OSP, SOP, ES&H CH. 3210	N	Rad area in Vault,	Coleman	4/18/2008	
57	Are signs and postings clear and current with regard to hazards and entry requirements?	57.a	ESAF, OSP, TOSP, FELODS, (Admin. Controls/ Engineering Controls)	N	Lab Standard for signage	ES&H	?	
58	Is there appropriate linkage between tasks, hazards, and hazard controls in work control documents?	58.a	FEList, OSP, TOSP, SOP, ESAF	Y				
59	Are workers and appropriate environment, safety, and health professionals included on planning teams and involved in hazard control development? Are minimum thresholds identified, based on the hazards and risks, which require the involvement of ES&H and waste management personnel and subject matter experts when developing work packages and during work activities?	59.a	ESAF, SOP, OSP, TOSP, FEList Toolbox Meeting, various Lab Safety Committees	Y				
60	Do environmental, waste management, radiological, health, safety, and operations personnel have an adequate understanding of each other's requirements and processes to minimize environmental impacts and meet regulatory requirements?	60.a	AOD, AWP, ESAF, ES&H manual Ch. 6700 (Environmental Protection)	Y				
61	Are the roles and responsibilities for ES&H subject matter experts, and reviewers well documented, and are development and implementation or controls established and understood?	61.a	AOD Defines roles and responsibilities, FELODS, AWP, ESAF, ES&H manual Ch. 6700	Y				

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62	<b>Criteria:</b> Line management ensures that work is safely performed and managed in accordance with requirements and safety management performance expectations. Contractors and subcontractors execute defined requirements such that employees are protected from adverse consequences.							
63	<b>Criteria:</b> Line management has established and implemented processes to confirm that a facility or work activity, as well as the work force and selected hazard controls, are in an adequate state of readiness before authorizing the performance of work.							
64	<b>Criteria:</b> Line management has the responsibility for ensuring that all operations are authorized at a level commensurate with the hazards, and has established work authorization processes for site, facility, and activity-level operations.							
65	<b>Lines of Inquiry:</b>							
66	Are work activities formally scheduled on the plan of the day, or equivalent mechanisms, to facilitate notification to affected personnel, resolution of scheduling conflicts, identification of resources and support required, prioritization with other work, and availability of required facilities and systems?	66.a	FEList, Daily Toolbox Meeting, white board, walk down activities					
67	Are pre-job briefings appropriately performed and effective in communicating work scope, prerequisites (including training), hazard control requirements, and permit requirements to all workers? Are job specific and area hazards adequately communicated to all workers before the start of work?	67.a	FEList, Daily Toolbox Meeting, white board, walk down activities, ESAF, LOP					
68	Is there an effective process that defines the interface requirements between the facility managers, operations, support organizations, and the maintenance organization to ensure that defined work does not overlap and cause conflicts?	68.a	ESAF, ES&H Manual 3130 ( FEL Experiment Review Process) Maximo (Facilities Management), ATList (Accel. Task list) FEList, Daily Toolbox Meeting, white board, walk down activities					
69	Does the work approval and authorization process define appropriate mechanisms to address significant changes in work scope or method of work completion once initial approval is obtained?	69.a	FEList, FELODS, Daily Toolbox Meeting		Safety review this item for full compliance using ATList and FEList as starting point			
70	Have work activities and projects been properly planned, reviewed, and authorized? Are methods for authorizing work and verifying the readiness to perform work formal and documented?	70.a	AWP, ESAF, SOP, LOP, TOSP, Felist, Daily Toolbox Meeting , white board.					

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71	Is proper authorization obtained to perform the work (e.g., project work or work package approval) and immediately prior to start of work (work release – facility/building conditions adequate to start work)?	71.a	Submit FEList, Daily Toolbox Meeting, white board, ,pre job briefing, skill of craft					
72	Is the work performed in a manner consistent with the defined work scope and limitations?	72.a	ESAF, ES&H manual Ch. 3000 (Planning for Safe Operations) ES&H Ch. 4000 ( Training) SOP,TOSP, skill of craft, FEList					
73	Are all precautions and prerequisites met including facility/system configurations, hazard controls, and other conditions?	73.a	ESAF (walk thru) , ES&H manual Ch. 3000, Ch. 3130, Ch. 3210, LOP, FELODS, OSP, Felist, pre job walkdown					
74	Are training requirements and pre-job briefings completed and adequate for the authorized work activity?	74.a	ESAF, FEList, Daily Toolbox Meeting, ITP, pre job walk thru					
75	Are personnel qualified and trained to perform the work in accordance with established controls?	75.a	ES&H Ch. 4000, Felist, Daily Toolbox Meeting, ITP					
76	Is there periodic and adequate supervision of activities based on the risk of the work activity'?	76.a	LOP, Working Supervisor on site, Safety Warden. Job Walkdown, Toolbox					
77	Is the supervisor's span of control adequate based on the complexity of the work, the hazards, and the number of concurrent jobs being supervised?	77.a	Due to small staff, everyone is involved at many levels (individual attention), also organized at morning Toolbox meeting, FELODS, FEList					
78	Do personnel adhere to postings, work control documents, procedures, and permits, including working within defined scopes, instructions and hazard controls, and completing required documentation?	78.a	Required site training, Rad Worker Training, ODH, Electrical Awareness, ITP, FEL Safety Awareness					
79	Are quality control/quality assurance provisions accurately and adequately followed during performance of the work?	79.a	ESAF, FELODS, Felist, SOP, TOSP,OSP					
80	Are workers knowledgeable of activity/project level instructions and are they competent so the work is performed as described in the work documents?	80.a	FEList, Toolbox meeting, ITP (i.e Rad Worker Training, ODH, Electrical Awareness, LTandT) Skill of the Craft					
81	Is equipment placed in a safe condition at the end of the work activity or work shift, and properly turned over to the next shift?	81.a	FELODS, Toolbox, Safety and post job walkdowns	N	Address housekeeping issues at Toolbox meetings			

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82	Do workers/supervisors stop activities and/or correct deficiencies when tasks cannot be performed as prescribed by work control documents or when safety concerns are encountered? Do workers understand their stop work authority and responsibility?	82.a	FEList task modifications. Advantage of a small organization along with working Supervisors. All personnel trained in Stop Work.					
83	Are mission/production pressures appropriately balanced with the requirements to work safely during the observation of work? Do these pressures have the potential to lead to unsafe practices or failure to follow required controls?	83.a	Work requirements/ production pressures are balanced daily in Toolbox meetings. Daily reinforcement of safety practices.					
84	Are ongoing surveys or other analyses conducted to ensure work hazards are not changing and work controls remain effective?	84.a	Advantage of a small organization along with working Supervisors and on site Safety Warden maximizes work controls along with work observations					
85	Do all personnel comply with established controls including procedure requirements, postings, barriers, limits, sampling and monitoring requirements, stop work limits, and personal protective equipment requirements?	85.a	All FEL personnel are trained according to skill set, facility and job requirements, e.g. Lock Tag and Try, ODH, Rad Worker, Electrical Awareness					
86	Are waste generation and storage requirements at the point of generation being performed (for example, hazardous waste containers are labeled and kept closed) within requirements?	86.a	containers supplied, ES&H monitoring, some waste labeling necessary	N				
87	Are hazard controls effective in their ability to maintain releases to the environment as low as reasonably achievable?	87.a	ESAF, FEL Experimental Review Process (ES&H CH. 3130) identifies environment hazards. ES&H and RadCon maintain involvement in hazard control					
88	Do workers properly segregate the wastes generated to facilitate the waste management requirements and enhance the pollution prevention opportunities?	88.a	containers supplied, ES&H monitoring, some waste labeling necessary	N				
89	Are the environmental impacts of operations and activities properly managed in accordance with requirements?	89.a	ESAF, FEL Experimental Review Process (ES&H CH. 3130) identifies environment hazards. ES&H and RadCon maintain involvement in hazard control, EMS training					
90	Is there an established systematic approach to authorizing work, including projects, startup of processes and facilities, and operations?	90.a	AWP, ESAF and LOP documents, FELODS FEList is used as a work planning and control tool, Review and analysis in toolbox meetings, OSPs, SOPs, TOSPs, 10CFR851					

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91	Are ES&H representatives actively involved in the observation of work activities?	91.a	Daily toolbox meetings, Weekly Planning Meeting, Job Walkdowns review of FEList items, ESAF walkthru					

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92	<b>Criteria:</b> Line management has effectively developed and implemented a feedback and improvement process at the work activity level.							
93	<b>Lines of Inquiry:</b>							
94	Are formal post-activity review processes (e.g., post-job reviews, operations reviews) established and effectively used?	94.a	FEList comments recently required when closing out tasks		Assign a Lessons Learned Coordinator and register to DOE system T. Powers, R. Walker			
95	Do subject matter experts, workers, supervisors, and line managers recognize, report, evaluate, and address accidents, incidents, near misses, injuries, illnesses, exposures and opportunities for improvement in a timely manner and in accordance with established procedures?	95.a	ES&H Chapter defining the process (EMS)		"3 Day Process" cards distributed			
96	Is feedback from workers effectively solicited and used during work planning, execution, and closeout?	96.a	FEList close out, Daily Toolbox meeting, ESAF Updates					
97	Is worker participation in safety programs (e.g., behavior based safety, safety committees) encouraged and effective?	97.a	Worker Safety Committee, Safety Wardens, Safety Observation Program, Job Walkdowns, Stop Work Program					
98	Are lessons learned identified and incorporated into the work planning and authorization process?	98.a	No, could be resolved with modifications to FEList, and Lessons Learned coordinator program, Review at Daily toolbox Meeting		Modify FEList (Effort Completed) Identified Lessons Learned Coordinator			
99	Do assessment activities by line oversight include observation of work activities by managers, supervisors, and subject matter experts?	99.a	Yes, Working Supervisors on site, Due to small staff, everyone is involved at many levels (individual attention) Safety Observation Program Lab-wide					
100	Are deficiencies and weaknesses identified during work activities appropriately documented and managed in accordance with site issues management processes? Are associated corrective actions developed and implemented as required?	100.a	CATS regularly and routinely used. Stop Work Program, Lesson Learned Program					
101	Have findings related to work planning and control from previous Independent Oversight assessments been effectively corrected?	101.a	Yes, Independent oversight has been conducted by Anteon and Rockwell Laser Industries and NASA Langley Laser head as well as peer reviewed from Brookhaven conducted by John Alois					

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102	For issues identified by the current inspection, what prevented contractor line oversight activities from identifying and correcting the problems?	102.a	FEL vulnerabilities: ESAF and User feedback		Requires close-out briefing captured with Lessons Learned Coordinator			