

**U.S. DEPARTMENT OF ENERGY  
NATIONAL NUCLEAR SECURITY ADMINISTRATION  
NEVADA SITE OFFICE**

**ORDER**

**NSO O 412.X3C**

**Approved: 08-13-08  
Review Date: 08-13-12**

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**ACTIVITY LEVEL WORK CONTROL**

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**INITIATED BY:  
Office of the Assistant Manager  
for Safety and Operations**



## ACTIVITY LEVEL WORK CONTROL

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1. OBJECTIVE. To establish requirements for documentation of contractor/user work activities and to facilitate the execution of safety coordination responsibility by Real Estate/Operations Permit (REOP) holders. This Order covers activities that involve activity level work.
2. CANCELLATION. NSO O 412.X3B, *WORK CONTROL*, dated 10-31-06.
3. APPLICABILITY.
  - a. This Order applies to National Nuclear Security Administration (NNSA) Nevada Site Office (NNSA/NSO) organizational elements and other Department of Energy (DOE) NNSA employees supporting NNSA/NSO.
  - b. Contractors, National Laboratories, other federal agencies, and other user organizations requirements are contained in the Contractor Requirements Document (CRD), Attachment 1. Compliance with the CRD is required to the extent set forth in an NNSA/NSO contract or other agreements.
4. EXCLUSION. Work performed under a grant from the DOE or NNSA are exempted from the requirements of the CRD, except for that work conducted on real estate owned or under the control of NNSA/NSO.
5. REFERENCES.
  - a. DOE G 433.1-1, *Nuclear Facility Maintenance Management Program Guide for Use with DOE O 433.1*, dated 9-5-01.
  - b. NSO M 412.X-1D, *Real Estate/Operations Permit*, dated 5-23-06.
  - c. NSO M 450.4-X, *Integrated Safety Management*, dated 5-30-08
  - d. Title 10 Code of Federal Regulations (CFR), Part 830, *Nuclear Safety Requirements*, dated 1-1-06.
  - e. DOE-STD-1029-92, Chg 1, *Writer's Guide for Technical Procedures*.
  - f. DOE/NV RADCON Manual.
  - g. *Activity Level Work Planning and Control Processes, NNSA 2006* (available at <http://nvhome/amso/default.aspx> under "Work Control Guidance Memo," or <http://www.hss.energy.gov/HealthSafety/ism/control.html> under "NNSA Best

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Practices and Guidance Document for Effective Incorporation of Integrated Safety Management and Quality Assurance at the Activity Level”).

- h. DOE G 440.1-2, *Construction Safety Management Guide for use with DOE O 440.1, dated 6-26-97.*
  - i. DOE O 440.1B, *Worker Protection Program for DOE (Including National Nuclear Security Administration) Federal Employees, dated 5-17-07.*
6. REQUIREMENT. NNSA/NSO will ensure contractor/user organizations implement the CRD (see Attachment 1).
  7. RESPONSIBILITIES. Assistant Managers (AM) ensure requirements of this Order are implemented through oversight activities, including periodic/routine management observation of work activities and interaction with workers in the field/on the floor that focuses on effective implementation of Integrated Safety Management (ISM) core functions and guiding principles in accordance with Attachment 3.
  8. DEVIATIONS. AMs may approve deviations from the requirements of this directive, as appropriate, for activities involving special circumstances (i.e., special security concerns, etc.). However, any primary or secondary REOP holder whose established authorization basis may be impacted because of such activities must be advised of the potential impacts by the cognizant AM, and the deviation must be concurred by AM for Safety and Operations (AMSO) and approved by the NNSA/NSO Manager.
  9. DEFINITIONS.
    - a. Acceptance Criteria. The pre-established criteria to be used upon work completion that verifies the work accomplished meets requirements.
    - b. Activity Level Work. NNSA/NSO activity level work is any job, task, or sub-task (e.g., any activity, step, or action that is part of an instruction, procedure, process, sequence of steps, or evolution) performed in the field or on the floor where hazards are present that are either associated with the work or the work environment (regardless of who is performing the work or the organization with which they are affiliated). The hazards involved could potentially adversely affect worker health or safety (e.g., result in worker injury or sickness) if the worker is exposed to them, and include radiological, chemical, industrial, biological, and other types of hazards. (Reference: *NNSA Activity Level Work*

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*Planning and Control Processes Attributes, Best Practices, and Guidance for Effective Incorporation of Integrated Safety Management and Quality Assurance, January 2006)*

**NOTE:** This definition does not include hazards associated with activities that are routinely encountered and accepted by the general public (refer to general employee safety definition).

- c. Activity Level Work Document (ALWD). A procedurally required document or collection of documents used by personnel to perform activities such as operations, maintenance, inspections, testing, or other activity level work. They may include work packages (WP) and/or technical procedures and/or project level construction documents. A hazard analysis (HA) is required for all activity level work. The purpose of these documents is the implementation of ISM at the activity level by ensuring that a hazards assessment and analysis is performed, and mitigations implemented and communicated to workers for all work activities.
- d. Activity Screening/Binning. The process used as a screening/binning tool (Attachment 7) to aid in determining the document controls utilized when performing work. This screening includes identifying a scope of work's complexity, assessing the consequences of improper performance, and determining frequency of performance. This screening suggests a document type to use, but human judgment and experience must be applied during and after the Activity Screening/Binning Tool is used. For example, the tool may recommend the use of a Type 3 WP, but recent experience or identification of additional hazards during the HA dictates that more rigorous controls be applied. The work planner could decide to use a Type 2 WP instead of the Type 3 WP recommended by the activity screening/binning tool.
- e. Assigned Personnel. Individuals acquired by primary/secondary REOP holders and product/services providers from another corporate organization within the NNSA/NSO complex. (Reference NSO M 450.4-X.)
- f. Authorization Period. Span of time activity level work is permitted by the REOP holder. (Normally linked in the ALWD Coversheet.)
- g. Configuration Control. Documents the system configuration prior to the commencement of work and the configuration to which the system must be returned after work is completed and before acceptance criteria can be met.

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- h. Design Documentation. Records or documents that illustrate how the work was developed to conform with design requirements.
- i. Equipment Certification/Skills Qualification. Identifies any formal equipment and/or worker certification/qualification requirements.
- j. General Employee Safety. Hazards associated with activities that are routinely encountered and accepted by the general public. Examples include performing work in an office environment and commuting to/from the work place.
- k. High-Hazard Consequences. Potential results of uncontrolled hazards that may result in severe injury or death, or have a major adverse impact on the environment, property, programmatic funding, or public relations.
- l. Lead Organization. Organization designated as lead by the REOP holder when multiple organizations work together in a facility. This organization is responsible to deconflict all work activities and lead the Plan-of-the-Day. The REOP holder must ensure formal appointment of a lead organization has occurred before authorization of work.
- m. Material Specifications. Identifies any material requirements necessary to meet quality and/or safety requirements.
- n. Plan of the Day. Method(s) of documenting, authorizing, and deconflicting activities, and communicating hazards of activities on a periodic basis.
- o. Project Level Construction. Construction of a new structure or facility, or a project designated greenfield construction has three distinct but related aspects to consider from a work control standpoint. They are: quality of design, project level construction quality assurance (QA), and performing construction safely. WPs are not required for greenfield construction projects if other more appropriate mechanisms are used to ensure worker safety, such as design documents, plans, QA hold-points, safety inspections, etc. As stated in DOE G 440.1-2, "the intent of these construction-specific requirements is to compel the proactive management of construction safety and health, both in terms of project personnel and management methodologies, with the management of other primary elements of construction project performance: quality, cost, and schedule". However, the contractor may choose to use WPs based on best professional judgment. Smaller construction projects may use WPs to meet the requirements of the DOE orders and the activity level process, if it is more

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appropriate from a cost and schedule perspective. The minimum documentation for greenfield projects are contained in Attachment #2.

- p. Real Estate/Operations Permit. Defined in NSO M 412.X-1D (as a form NSO-123) and completed by the organization to perform work within NNSA/NSO purview that documents and references the data and information necessary for NNSA/NSO to authorize the work.
- q. Safety Structures, Systems, and Components (SSC). Reference 10 CFR 830.3. Means both safety class SSCs and safety significant SSCs are structures, systems, or components, including portions of process systems, whose preventive or mitigate function is necessary to limit radioactive hazardous material exposure to the public, as determined from safety analyses.
- r. Skill of the Worker (SOTW). Per DOE G 433.1-1 "Skill of the Craft" is defined as; a defined level of technical proficiency for a worker performing a particular job that is verifiable through some form of qualification or supervisory knowledge. For the purpose of this definition, it is being applied to SOTW and can be applied to any job classification such as engineers, operators, security police officers, administrative personnel, craft, technicians, etc. It is used as an administrative hazard control, which may affect the detail of work instructions provided in individual work control documents.
- s. Technical Procedure. A technical procedure is a detailed set of work instructions that prescribe precisely how to accomplish the technical work associated with the operations, maintenance, and support of a facility or mission. Technical procedures can be used for any routine activity level work, such as preventative maintenance, laboratory operations, nuclear operations, radiological, industrial hygiene, research and development, and engineering. Technical procedures shall be developed in accordance with DOE-STD-1029-92. The minimum contents for technical procedures are contained in Attachment 2. There are three distinct categories of technical procedures.
  - (1) Category I Technical Procedure (In-Hand Use). For activity that is very or extremely difficult, which could have serious, severe, or extremely severe consequences for improper performance, and which is performed less often than occasionally.
  - (2) Category II Technical Procedure (General Use). For activity that ranges from moderately difficult to extremely difficult, have consequences for

improper performance ranging from extremely severe to negligible, and a frequency of performance ranging from rarely to frequently.

- (3) Category III Technical Procedure (Reference Use). For activity that ranges from very easy to extremely difficult, consequences for improper performance ranging from negligible to extremely severe, and frequency of performance ranging from rarely performed to very often.

**NOTE:** See the Activity Screening/Binning Tool Guidance in Attachment 7 for guidance on technical procedure category assignment.

- t. Technical Safety Requirements. This term is defined in 10 CFR 830.3, as the limits, controls, and related actions that establish the specific parameters and requisite actions for the safe operation of a nuclear facility and include, as appropriate for the work and the hazards identified in the documented safety analysis for the facility: Safety limits, operating limits, surveillance requirements, administrative and management controls, use and application provisions, and design features, as well as a bases appendix.
- u. Work Control. Provides a structured and systemic process for planning of activity level work and the preparing of work documents to perform work safely.
- v. Work Package. A set of documents that contain the necessary instructions, permits, and other authorizations to perform activity level work. The minimum content is contained in Attachment 2. The authorization period of a WP must be identified clearly to ensure execution within safe boundaries. Because of the varied nature of work performed, there are four types of WPs used:
- (1) Type 1. A compilation of documents, including written directions for the safe performance of work. A Type 1 WP is used for the highest complexity and infrequently performed work, with moderate to high consequence of improper performance. The WP will undergo a revision if any changes in scope and/or hazards are noted within the authorization period.
- Type 2. A compilation of documents, including written directions for the safe performance of work. Work covered under a Type 2 WP is activity level work that is considered non-repetitive, or that requires greater rigor because of work site hazards, the possibility of contamination, longer work duration, higher complexity, higher consequences, and/or the need

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for detailed planning. The WP will undergo a revision if any changes in scope and/or hazards are noted within the authorization period.

Type 3. A compilation of documents pertaining to routine, low-hazard work activity by the performing organization requiring minimal work scope guidance. The WP will undergo a revision if any changes in scope and/or hazards are noted within the authorization period.

Type 4. Minor work evolutions that involve the lowest risk, such as low complexity, low consequence, and frequently performed work. Even if a Type 4 WP is identified in the activity screening process, it must be documented appropriately.

10 CONTACT. Any questions should be addressed to AMSO at (702) 295-3424.

*Stephen A. Mellington*



Stephen A. Mellington  
Acting Manager



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Attachment 1  
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### CONTRACTOR REQUIREMENTS DOCUMENT (CRD)

Contractors, National Laboratories, other federal agencies, and other user organizations performing work under the purview of the National Nuclear Security Administration (NNSA) Nevada Site Office (NNSA/NSO) must comply with the requirements of this CRD and flow down CRD requirements to subcontractors at any tier.

1. Users are not required to prepare activity level work control documents for work characterized by general employee safety (GES) (i.e. risks accepted by the general population in daily life, see definition of GES).
2. Develop work control documents for work activities that meet the minimum requirements defined in Attachment 2.
3. Where multiple organizations are involved together in work activity, the appropriate Real Estate/Operations Permit (REOP) holder must designate a lead organization. In such cases, the lead organization must coordinate or deconflict execution of the Activity Level Work Documents (ALWD).
4. ALWDs must comply with this Order.
5. Implement periodic/routine management observation of work activities and interaction with workers in the field/on the floor that focuses on effective implementation of Integrated Safety Management core functions and guiding principles in accordance with Attachment 3.
6. User organizations must ensure workers are appropriately involved in work planning and adequately trained in the work control process.
7. Ensure planned work activities are consistent with the authorization basis documents where the work is to be performed and consider any facility and co-located activity hazards.
8. Work is authorized as follows:
  - a. All activity level work must be authorized by the REOP holder or designee.

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- b. Primary REOP holders must implement Plan of the Day (POD), Plan of the Week, or other mechanisms to communicate potential hazards among all organizations performing work. In cases where a lead organization has been designated by the REOP Holder the lead organization may conduct the POD.
- c. A POD is required and all work must be authorized via the POD when work activity is performed that meets any of the following criteria:
  - (1) Affects, or could affect, safety-class or safety-significant structures, systems, and components.
  - (2) Meets the trigger level for an As Low As Reasonably Achievable Committee review as specified in the *DOE/NV RADCON Manual*, Article 312, Item 3.
  - (3) Involves chemicals with potential exposure to workers in excess of published Threshold Limit Values, Permissible Exposure Limits, or use of Class 3b or 4 lasers (ANSI Z136.1).
  - (4) Involves energetic materials, including explosives and munitions.
  - (5) Involves work where there is a potential to make contact with a hazardous energy source (exposed, energized electrical wiring), hot or cold surfaces, potential hydraulic energy release, etc.
- d. Work not authorized via a formal POD/Plan of the Week shall be authorized using the Activity Level Work Document Coversheet (NSO-142), attachment 4, or equivalent document.

**NOTE:** A POD covering all work activities must be performed when multiple concurrent work activities are present in a facility.

- 9. Develop and implement change control processes and thresholds to ensure changes and associated hazards are analyzed when work documents are reauthorized.
- 10. Incorporate applicable lessons learned into the appropriate activity level work control document development.

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11. Perform an annual assessment of Activity Level Work Control Processes utilizing appropriate sections of the criteria and guidelines found in, *Activity Level Work Planning and Control Processes, NNSA 2006, Appendix B*.
12. Perform an activity/hazards screening of the work to be done using a checklist similar to the sample in Attachment 5. Identify items that will require involvement from subject matter experts in the HA/assessment.
13. When personnel outside the lead organization are assigned to support work activity, ensure mutually developed agreements regarding the use of such personnel are documented and incorporated into the work control documents in accordance with the NSO M 450.4-X. NNSA/NSO facility users must include an agreement (similar to that provided in Attachment 6) in ALWDs.
14. Utilize an activity level screening tool similar to the one in Attachment 7 to identify the rigor of the work control document to be used.
15. If contractors utilize skill of the worker (SOTW) as a control for activity level work hazards, they must have a process to identify tasks considered SOTW and verify and document the skill levels of personnel performing SOTW.
16. Ensure activity level work is walked down or table topped by the appropriate subject matter experts, work planners, and affected workers prior to the work being planned. However, for high and/or medium work activities, infrequently performed work activities, or if unknowns exist or are perceived, a walk down shall be performed.
17. Develop and implement Activity Level Work Control Metrics such as but not limited to: Supervisory/Management time on the floor, in the field; Cycle Time by Work Package (WP) Type; WP Timeliness of Close-out; Number of WPs developed, by WP Type; Training and Qualification of Planners; Quality issues with Technical Procedures and WP to include: Planning and Scheduling issues; Application of Lessons Learned in WPs.



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### ACTIVITY LEVEL WORK (ALWD) DOCUMENTATION REQUIREMENTS

The following minimum requirements are applicable to all ALWD:

<b>Work Package Type</b>	<b>Minimum Documentation Requirements</b>
4	ALWD Coversheet. Defined Scope of Work. Address Technical Safety Requirements (as appropriate). Require an Initial Hazard Review (HR)/HA, or equivalent process. Requires a pre-job briefing, or equivalent process.
3	ALWD Coversheet. Defined Scope of Work. Require a HR. Hazards/Controls Identification. Detailed Work Instructions/Procedures (as appropriate). Address Technical Safety Requirements (as appropriate). Permits (as required). Lock Out Tag Out (LOTO) (as required). Requires a pre-job briefing and post-job debriefing.
2	ALWD Coversheet. Table of Contents. Defined Scope of Work. Detailed written work instructions/procedures. Address Technical Safety Requirements (as appropriate). Require verification and/or hold points (if appropriate). Require a pre-job briefing and post-job debriefing. Require a Hazard Assessment. Requires Hazards/Controls Identification. Responsible Line Management. Equipment Certification/Skills Qualifications (as required). Configuration Control (as appropriate). Permits (as required). LOTO (as required). Require a higher level of review and approval. Requires a pre-job briefing and post-job debriefing.

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<b>Work Package Type</b>	<b>Minimum Documentation Requirements</b>
1	ALWD Coversheet Defined Scope of Work Table of Contents Responsible Line Management Contain detailed step-by-step instructions with a defined sequence of performance Identification of hold points and/or verifications (as appropriate) Requires a pre-job briefing and post-job debriefing Requires a HA/Hazard Assessment Defined Acceptance Criteria (as required) Equipment Certification/Skills Qualifications Configuration Control Material Specifications Design Documentation Technical Safety Requirements (as appropriate) Permits (as required) LOTO (as required)

### **Project Level Construction, Greenfield**

The documentation requirements for Project Level Construction, greenfield projects, in lieu of a WP are determined using the activity screening/binning process and must be developed and implemented prior to performing the project level construction. The alternative documents and methods must meet the same level of rigor as those that would be required if a work package were to be developed. These alternative actions may require, but are not limited to the following:

1. Prepare a project safety and health plan.
2. Perform an As Low As Reasonably Achievable design review for construction if required by Title 10 Code of Federal Regulations (CFR) 835, "Occupational Radiation Protection."
3. Establish and document project personnel respective roles and responsibilities.
4. Perform a hazard assessment.
5. Provide training to employees, as required.
6. Perform frequent inspections and hazard abatement and document results.

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### Technical Procedure.

1. Reference the Activity Screening/Binning Tool Guidance in Attachment 7 for guidance on technical procedure category assignment.
2. Technical procedures shall be developed in accordance with DOE-STD1029-92, *Writer's Guide for Technical Procedures*, and contain the appropriate level of detail as defined within the DOE standard.
3. All technical procedures require the completion of the same applicable documents (e.g., Activity/Hazard Inventory Checklist (AHIC), permits) similar to a WP, directly into the body of the procedure.



**INTEGRATED SAFETY MANAGEMENT (ISM)—MANAGEMENT ON THE FLOOR  
INTERACTION WITH WORKERS**

The process that implements this action should include the following attributes:

1. Participation of all levels of management in organizations that support the integration of safety into work activities.
2. Managers have a sound understanding of the site's implementing work planning and execution processes as described in its ISM system description.
3. Documentation of the process and its implementation, including the establishment of clear expectations and performance measures by senior management.
4. Interaction with workers in a coaching relationship to encourage positive behaviors and to discern opportunities for improvement.
5. Observes all phases of work (e.g., requests, planning, execution, and/or critique) and verifies appropriate worker involvement.
6. Results are documented and input into the contractor's assurance system or equivalent database.
7. Metrics are developed, implemented, and used to measure ISM process effectiveness.







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**SAMPLE ACTIVITY/HAZARD INVENTORY CHECKLIST**

<b>Question #</b>	<b>Complete a worksheet like this prior to package selection</b>	<b>Hazard applies to work scope</b>
100	Safety- General	
102	Sampling work - by Subject Matter Experts (SME), Environmental, Rad, etc.	
104	Possible Pinch Points	
105	Falling Objects- overhead work	
106	Performing work in occupied areas	
107	Work with mechanical lifting device- dolly, lift table, jack, or other material moving device	
108	Lifting carrying (material or equipment over 50 lbs.)	
109	Working around rotating or hazardous mechanical equipment	
110	Work with gas cylinders	
111	Working around pressurized systems	
112	Working with Hand Tools	
113	Working with Power Tools	
115	Handling items with sharp edges	
116	Vibrating Tools or other equipment	
119	Work in higher level Personal Protective Equipment (PPE), Protective Clothing, Respiratory protection, etc.	
120	Work on uneven surfaces	
121	Slip/Trip Hazards	
130	Safety- Electrical- working with < 50 volts	
133	Shock Flash Hazards	
134	Arc Flash Hazards Category PPE and boundary	
135	Lockout/Tagout- Permitted	
138	Energized Electrical Work	
140	Elevated work- over 4 feet general, over 6 feet construction	

**NOTE:**

- This is a sample only and not an all-encompassing listing of hazards and activities.
- Use of a form similar to this example shall identify initial hazards, and drive the planner to the use of SME in the development of the work package

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141	Excavation work- greater than 5 feet	
142	Working from aerial/elevated platforms	
143	Work from ladders or scaffolds	
144	Work near or above protruding objects, such as rebar, lightning rods, etc. (implement hazards)	
145	Blind Penetrations of Walls, Floors, Ceilings, Roofs, or other surfaces	
146	Trenching Activities	
150	Working on or operating equipment, such as: loaders, fork trucks, tractors, etc.	
151	Operating cranes	
153	Securing loads for transport; Loading and Unloading delivery vehicles	
154	Heavy Equipment Mobilization\Demobilization	
155	Hoisting and rigging activities	
156	Demolition Work	
160	Hot work--Welding, grinding, cutting, and Brazing	
161	Hot Work--Other: any possible burn to clothing or personnel	
162	Portable Heating Equipment	
163	Work with cryogenic materials/gases	
164	Work around flammable material	
165	Handling pyrophoric material	
170	Work with explosive material	
171	Work in an Unexploded Ordinance Area	
172	Work with munitions	
190	Any Work with Unknown or Potentially Unknown Hazards	
200	Industrial Hygiene	
201	Dust-producing activities; silica, lead, beryllium, etc.	
202	Work with asbestos or asbestos containing materials	
203	Biological hazards; mold, plants, animals, etc	
204	Confined spaces	
206	Chemical use>household quantities	

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208	Noise hazard areas	
209	Thermal Stress	
210	Polychlorinated Biphenyl(PCB) or PCB-contaminated materials	
211	Lead or lead-containing materials/equipment	
212	Low-light conditions	
213	Non-ionizing radiation - lasers above class 3b, microwaves	
300	RadCon	
302	Work involving handling or moving of Radioactive Material	
303	Work in a Controlled Area	
304	Work in a Radioactive Material Area	
307	Work in a Contamination Area	
308	Work in a Radiation Area	
312	Work in a High Contamination Area	
313	Work in a High Radiation Area	
315	Work with Special Nuclear Material	
316	Work in an Airborne Radioactivity Area	
319	Radiological work in a Glovebox	
320	Work with Fissile Materiel	
323	Gaining access to potentially internally contaminated materials or systems	
324	Using High-Efficiency Particulate Air (HEPA) ventilation for Radiological Work	
325	Using HEPA vacuums for Radiological work	
830	Other	
833	Open Burning	
834	Ground Surface Disturbance or Off-Road Driving (fugitive dust generations)	
835	Chemical or Biological Releases	
836	Explosive Detonation	
837	Fuel/Volatile Organic Compound Storage	
838	Processes Involving radionuclides	
839	Refrigeration work involving Ozone Depleting Substances (air conditioners, chillers, etc.)	

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841	Purchase or Use or storage of Large Quantities of Chemical	
851	Construction or modification of a drinking waste system	
853	Need for drinking water at the construction site	
854	Installation or testing of backflow prevention device	
862	Discharge of waste water onto the ground	
871	Drilling of borehole or refurbishing of an existing borehole	
872	Pumping groundwater (except from water supply wells for domestic use)	
872	Work takes place near borehole or other conduit to groundwater	
891	Waste generation	
892	Lead/PCB Paint	
893	Scrap Metal	

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Attachment 6  
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EXAMPLE

AGREEMENTS SECTION

*(To be completed when personnel from different contractor/laboratory organizations are working together using the same Activity Level Work Documents (ALWD)).*

1. MANAGEMENT AUTHORIZATION.

Representing my organizational line management, I authorize the personnel in my organization listed in the following tables to perform the tasks described in the Activity Level Work Documents (ALWD). Authorization is based upon the person’s training, knowledge, skills, abilities, and understanding of the hazards and hazard mitigation required by this ALWD.

The safety of all personnel included in this ALWD is under the direct line management of:

*(Insert the name of the lead organization line manager supervising this ALWD – should be the same name as listed on the ALWD cover sheet) –*

See the ALWD line management safety chain diagram below.

_____	_____	_____	_____
(printed name)	(printed organization and title)	(signature)	(date)
_____	_____	_____	_____
(printed name)	(printed organization and title)	(signature)	(date)
_____	_____	_____	_____
(printed name)	(printed organization and title)	(signature)	(date)
_____	_____	_____	_____
(printed name)	(printed organization and title)	(signature)	(date)

Management authorization is valid only if relevant training, certifications, permits, and licenses are current. It is the assigned employee's organization’s responsibility to ensure these are current at the time of the assignment and the receiving organization’s responsibility to ensure that these are maintained current while the employee works to this activity level work package. The employee is responsible for notifying the receiving organization if his or her training status is changing.

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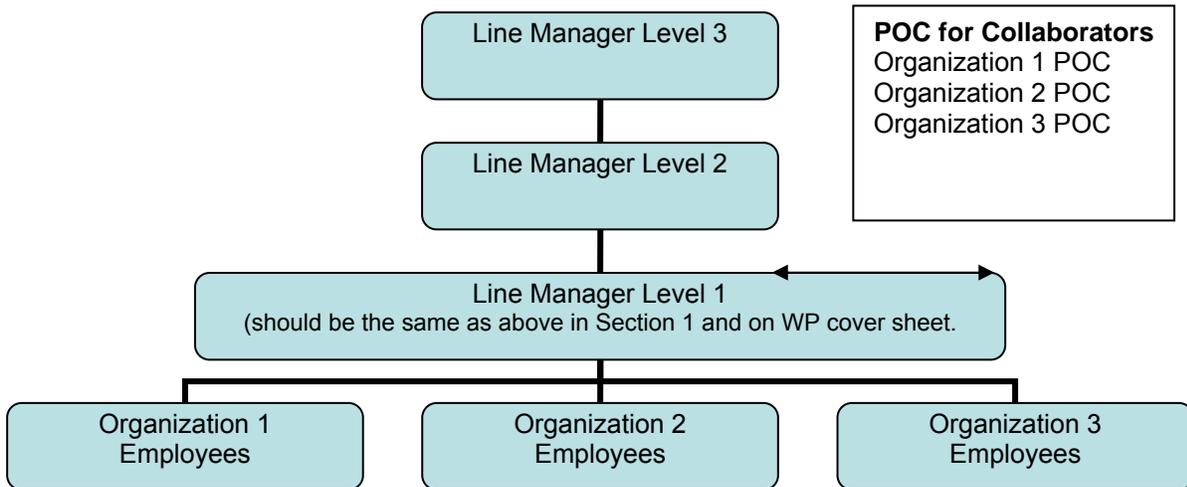
2. AUTHORIZED WORKERS. I certify by my signature below, that I have the required training and that all relative certifications, permits, and licenses are current.

\_\_\_\_\_ (printed name)      \_\_\_\_\_ (printed organization and title)      \_\_\_\_\_ (signature)      \_\_\_\_\_ (date)

\_\_\_\_\_ (printed name)      \_\_\_\_\_ (printed organization and title)      \_\_\_\_\_ (signature)      \_\_\_\_\_ (date)

\_\_\_\_\_ (printed name)      \_\_\_\_\_ (printed organization and title)      \_\_\_\_\_ (signature)      \_\_\_\_\_ (date)

3. LINE MANAGEMENT SAFETY CHAIN

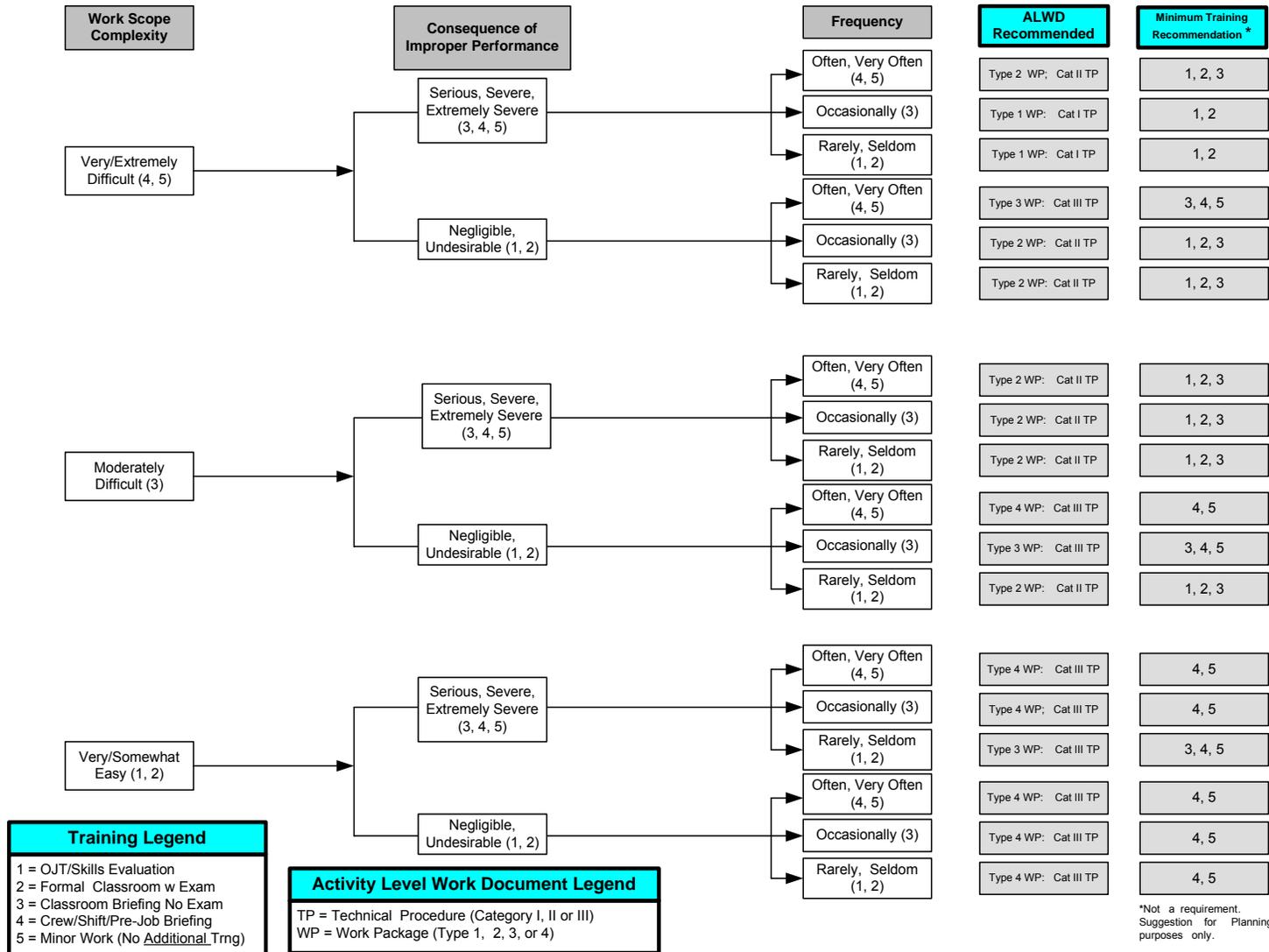


# ACTIVITY LEVEL WORK CONTROL

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## Activity Screening/Binning Tool



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### Activity Screening/Binning Tool Guidance

Each of the three sections is ranked from 1-5. The ranking number is assigned based upon an assessment of the **entire scope of work** being performed, the consequences of improper performance, and the frequency of work performance. Each section ranking number has a brief description of what the work planner should be thinking about when determining where a job fits. If in doubt, confer with another planner, the subject matter experts (SME), and affected disciplines (IH, RadCon, Safety, Engineering, etc.).

How <b>COMPLEX</b> is the <b>Scope of Work</b> to be performed? (i.e., this includes Work location factors such as types of Rad Areas, confined spaces, etc.)		What are the <b>CONSEQUENCES</b> of improper performance for this scope of work? (i.e., what specific undesired things can happen)		At what <b>FREQUENCY</b> is this <b>Scope of Work</b> performed? (Not how often any one individual performs the scope of work – that is “proficiency”)	
1	<b>Very Easy</b> - Very easy to perform: Mental activity required is low; degree of work complexity is low.	1	<b>Negligible</b> – Consequences of improper performance are <u>negligible</u> . Improper performance would make no difference to the health and safety of the worker or to the operation of a system or process.	1	<b>Rarely</b> – Less than once per year.
2	<b>Somewhat Easy</b> - Somewhat easy to perform: Mental activity required is low; degree of work complexity is medium.	2	<b>Undesirable</b> – Consequences of improper performance are <u>undesirable</u> . Improper performance may cause minor health and safety impacts, or impair the reliability of a system or a process.	2	<b>Seldom</b> – Once every 5 to 12 months.
3	<b>Moderately Difficult</b> - Moderately difficult to perform: Mental activity required is medium; degree of work complexity is medium.	3	<b>Serious</b> – Consequences of improper performance are <u>serious</u> . Improper performance may cause serious health and safety impacts, or cause serious damage to the system or process.	3	<b>Occasionally</b> - Once every 3 weeks to 4 months.
4	<b>Very Difficult</b> - Very difficult to perform: Mental activity required is medium; degree of work complexity is high.	4	<b>Severe</b> – Consequences of improper performance are <u>severe</u> . Improper performance may result in severe impact to worker health and safety, or cause severe damage to a system or process.	4	<b>Often</b> - Once every 1 to 2 weeks.
5	<b>Extremely Difficult</b> - Extremely difficult to perform: Mental activity required is high; degree of work complexity is high.	5	<b>Extremely Severe</b> – Consequences of improper performance are extremely severe. Improper performance may result in a serious injury or site emergency may result.	5	<b>Very Often</b> – More frequently than once per week.

Although not required the screening tool also provides recommended worker training levels for planning purposes. Training legend includes on-the-job training/ skills evaluation, formal classroom training with exam, classroom briefing no exam, crew/shift/pre-job briefing, and no additional training.

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### Activity Screening/Binning Tool Examples

Examples of Scope of work <b>COMPLEXITY</b>	
<b>1</b> Very Easy	<p><b>Electrical Work.</b> Removal of a panel or equipment covers for purposes of observation.</p> <p><b>Environmental.</b> Tasks which require no controls.</p> <p><b>Laser Work.</b> Operation of Class I or Class 2 lasers.</p> <p><b>Industrial.</b> Hygiene. Changing sensors in multi-gas instruments.</p> <p><b>Radiological.</b> No radiological hazards involved.</p>
<b>2</b> Somewhat Easy	<p><b>Electrical Work.</b> Electrical work with &lt; 50 Volts (arc flash Cat -1 to Cat 1.)</p> <p><b>Environmental.</b> Work requiring a National Environmental Policy Act review; Generation of solid sanitary waste; Management of used oil, lead acid batteries, universal waste; Land clearing; Surface disturbance.</p> <p><b>General Work.</b> Manual Lifting (Up to 50 pounds); General Sampling by SME.</p> <p><b>Hazardous Material Work.</b> Work with non-ionizing radiation.</p> <p><b>Laser Work.</b> Operation of Class 3A.</p> <p><b>Industrial Hygiene.</b> Non-permit required confined space entries; Taking asbestos samples by coring tool.</p> <p><b>Radiological.</b> Working with HAZ 1 &amp; 2 sources or radioactive material.</p> <p><b>Underground Work.</b> Underground or mining operations.</p>
<b>3</b> Moderate Difficulty	<p><b>Electrical.</b> Working with ≥ 50 Volts; Task performed under Single-Point, Single-Source LOTO.</p> <p><b>Environmental.</b> Work involving a Resource Conservation and Recovery Act storage area; Work affecting potential Air Quality Standards. Potential for spill of hazardous chemicals; Changes to waste water system (sewage lagoons or septic tanks); Generation of hazardous, radioactive, mixed, PCB &gt;50ppm, or asbestos waste; Changes to drinking water systems.</p> <p><b>General Work.</b> Welding, cutting, soldering, brazing, grinding, demolition, or renovation of building.</p> <p><b>Hazardous Material Work.</b> Exposure to biological hazards or biological agents.</p> <p><b>Industrial Hygiene.</b> Permit required confined space entries; Respirator fit testing.</p> <p><b>Laser Work.</b> Operation of Class 3B or Class IV lasers.</p> <p><b>Nuclear Operations.</b> Maintenance/Operation Important to Safety Structures, Systems or Components.</p> <p><b>Radiological.</b> Work in a Contamination Area. Work in a Radiation Area. Work with HAZ 3 sources.</p> <p><b>Transportation.</b> Operation of vehicle requiring Department of Transportation license.</p>

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Examples of Scope of Work <b>COMPLEXITY</b>	
<b>4</b> Very Difficult	<p><b><u>Electrical Work.</u></b> Energized electrical work; Arc Flash Cat 4; any activity within the Prohibited Approach Boundary.</p> <p><b><u>Environmental.</u></b> Work involving significant changes to site/facility hazardous material inventories; large spills of unknown hazardous waste.</p> <p><b><u>General Work.</u></b> Work in potential Unexploded Ordnance area; Excavations and Blind Penetrations; use of explosives.</p> <p><b><u>Hazardous Material Work.</u></b> BSL-2; Work with specialized PPE (Level C, B, and A protection); Respiratory Hazards Silica Asbestos Lead Beryllium Cadmium Diesel Particulate Matter or other metals or chemicals (requiring respiratory protection).</p> <p><b><u>Industrial Hygiene.</u></b> Level B suit work.</p> <p><b><u>Nuclear Operations.</u></b> Maintenance/Operation of Safety SIGNIFICANT Structures, Systems, or Components.</p> <p><b><u>Radiological.</u></b> Work in a High-Radiation Area or High-Contamination Area. Work with HAZ 4 Sources or Special Nuclear Material.</p> <p><b><u>Transportation.</u></b> Operation of vehicle transporting Radioactive or Hazardous Materials (placarding, manifesting, etc.).</p>
<b>5</b> Extremely Difficult	<p><b><u>Environmental.</u></b> Work or activities involving hazardous waste operations or emergency response operations involving unknown hazardous materials at FFA/CO sites, or Resource, Conservation and Recovery Act-regulated sites; Emergency Response (Fire, Radiological, Hazardous, etc.).</p> <p><b><u>General Work.</u></b> Remediation of unknown event circumstances associated with high hazards.</p> <p><b><u>Hazardous Material Work.</u></b> BSL-3; Work with unknown hazards; Potential immediately dangerous to life and health work.</p> <p><b><u>Industrial Hygiene.</u></b> Temperatures exceeding 100 degrees F without acclimation; Level A suit use for work or emergency response.</p> <p><b><u>Nuclear Operations.</u></b> Maintenance/Operation of Safety CLASS Structures, Systems or Components.</p> <p><b><u>Radiological.</u></b> Work in an Airborne Radioactivity Area. Work with HAZ 5 Sources. Glovebox work.</p>

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Examples of <u>CONSEQUENCES OF IMPROPER PERFORMANCE</u>	
<b>1</b> Negligible	<p><b>Electrical.</b> None.</p> <p><b>Industrial Hygiene.</b> Broken instrument.</p> <p><b>Legal.</b> No legal impact.</p> <p><b>Mission/Financial/Equipment.</b> No mission, financial or equipment impact.</p> <p><b>Radiological.</b> No radiological hazards involved.</p>
<b>2</b> Undesirable	<p><b>Electrical.</b> Mild shock, near miss.</p> <p><b>Legal.</b> Minor legal impact.</p> <p><b>Mission/Financial/Equipment.</b> Minor mission, financial or equipment impact.</p> <p><b>Industrial Hygiene.</b> Loss of sample data, Invalid monitoring results.</p> <p><b>Radiological.</b> Loss of control of radioactive material such that the material is outside a posted area controlled for radiological purposes.</p>
<b>3</b> Serious	<p><b>Electrical.</b> Shock, arc flash resulting in no burns, hazardous energy not controlled by authorized LOTO.</p> <p><b>Legal.</b> Serious legal impact such that company legal becomes involved.</p> <p><b>Mission/Financial/Equipment.</b> Serious impact to mission, financial, or equipment.</p> <p><b>Industrial Hygiene.</b> Exceed the action level for a hazard.</p> <p><b>Radiological.</b> Personnel contamination. Equipment contamination.</p>
<b>4</b> Severe	<p><b>Electrical.</b> Shock resulting in hospitalization, severe burns to skin or eyes.</p> <p><b>Legal.</b> Serious legal impact such that parent company legal becomes involved.</p> <p><b>Mission/Financial/Equipment.</b> Severe impact to mission, financial, or equipment. Jeopardizes the contract.</p> <p><b>Industrial Hygiene.</b> Exceed a published Occupational Exposure Limit for a hazard.</p> <p><b>Radiological.</b> Skin contamination. Exposure over administrative limits. Potential uptake of radioactive material.</p>
<b>5</b> Extremely Severe	<p><b>Electrical Work.</b> Death by electrocution; Arc Flash burns.</p> <p><b>Legal.</b> Public or governmental lawsuit.</p> <p><b>Mission/Financial/Equipment.</b> Highest level of impact to mission, financial or equipment. Loss of Management and Operating Contract.</p> <p><b>Industrial Hygiene.</b> Loss of consciousness, hospitalization due to an acute exposure to a hazardous substance.</p> <p><b>Radiological.</b> Off-site release, medical removal required, contaminated wound. Personnel exposure over federal limit. Confirmed uptake of radioactive material. Environmental release above regulatory level. Nuclear Criticality.</p>