



Worker Package

Title	Machine Tool Operation		
Document No.	49814.0	Status	Approved as of 03/28/2017
Complexity Determination	Simple	Consequence Determination	Minimal
Planned Start Date	03/20/2017	Planned End Date	03/20/2020
Scope Summary	Machine tools utilized throughout the APS facilities machining non-hazardous materials		
Type	Task-based Hazard Analyses	Rigor Level	Low
Approving Division	PSC	Approving Department	<i>Not Applicable</i>
NEPA Number	A1 - Routine actions necessary to support the normal conduct of agency business, such as administrative, financial, and personnel actions.	Person in Charge	Rossi, Paul

Task Summary	
Task #	Task
1	Operate Machine Tools

Attachments		
File Name	Date	Attached By

Permits Summary	
Code	

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Task 1 Operate Machine Tools			
Task Description	Operate APS Machine Tools within APS facilities		
Planned Start Date	03/20/0017	Planned End Date	03/20/0020
Scope Limits	Machining of non-hazardous materials.		
Task Attachments	File Name	Date	Attacher
Lessons Learned	https://docs.anl.gov/safety/lessons_learned/shop_safety/index.html		
External Training	Machine tool operation certification program		
On the Job Training	Machine tool certification per LMS-PROC-78		
Response to Unplanned Events	Stop work immediately and contact the supervisor. In case of emergency dial 911.		
Worker Proficiencies	Machine tool certification per LMS-PROC-78		
Work Instructions	Perform machining operations on non-hazardous materials.		

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Hazard Detail	Controls	Training
/Physical safety hazards/Eye or vision hazard Particles, projectiles (e.g., dust, concrete, metal, wood) Task Hazard Relationship Machining operations	safety glasses with sideshields (ANSI Z87.1)	
/Physical safety hazards/Hand tool hazards/Non-powered hand tool GENERIC (use for all hand tools - select this in addition to those below, if appropriate) Task Hazard Relationship Machining operations	do not carry hand tools in pockets - carry in hands, tool pouches, bags, or boxes do not place tools where they can cut, fall on, or trip someone do not use "cheater bars" to increase leverage, torque, or extend handle of tool follow LMS-PROC-153 inspect tools before each use - never use broken or damaged tools only use tools you have been trained to use verify handles are tight and free of grease or oil safety glasses with sideshields (ANSI Z87.1) shoes that cover the entire foot sturdy work gloves when handling rough or sharp material	
/Physical safety hazards/Hand tool hazards/Non-powered hand tool Hand drills Task Hazard Relationship Machining Operations	inspect drill bits for damage (bent, broken tips) - do not use if damaged	

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Hazard Detail	Controls	Training
/Physical safety hazards/Hand tool hazards/Non-powered hand tool Pliers Task Hazard Relationship Machining Operations	non-sparking pliers when in presence of flammable vapors or dusts cut hardened wire only with pliers designed for that purpose	
/Physical safety hazards/Hand tool hazards/Non-powered hand tool Screwdriver Task Hazard Relationship Machining Operations	verify handle firmly attached; screwdriver tip not chipped or rounded	
/Physical safety hazards/Hand tool hazards/Non-powered hand tool Wrench (pipe, open-end, box, combination, etc.) Task Hazard Relationship Machining Operations	verify wrench points/teeth in good condition, not rounded	
/Physical safety hazards/Hand tool hazards/Non-powered hand tool Chisel, punch Task Hazard Relationship Machining Operations	make sure the material being worked is firmly secured to a work surface or is stable verify heads on chisels and punches are not mushroomed verify the point and cutting edges are sharp and not broken cut-resistant gloves	

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Hazard Detail	Controls	Training
/Physical safety hazards/Hand tool hazards/Non-powered hand tool File Task Hazard Relationship Machining Operations	use file handles/holders make sure the material being worked is firmly secured to a work surface or is stable cut-resistant gloves	
/Physical safety hazards/Hand tool hazards/Non-powered hand tool Hacksaw Task Hazard Relationship Machining Operations	use a vise to secure the piece to be cut avoid applying too much pressure to blade, especially if twisted move your body forward and back as you cut, pressing on the forward stroke and easing off on the return one verify blade is secured tightly in its frame cut-resistant gloves	
/Physical safety hazards/Hand tool hazards/Non-powered hand tool Hammer (framing, ball peen) Task Hazard Relationship Machining Operations	safety-toe protective footwear (e.g., composite or steel-toe)	

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/Physical safety hazards/Hand tool hazards/Powered hand tool (e.g., electric, pneumatic, battery powered) Stationary tools (e.g., lathe, drill press, grinder) Task Hazard Relationship Machining Operations	GFCI (fixed or portable) - test at start of each shift before use verify machine guards meeting OSHA or ANSI are in place prior to use perform electrical tool inspection: check for chafing, cracking, poor cord insulation, missing/faulty grounding conductor/prong, missing/bent/damaged switch or trigger, damaged motor housing, missing cover plates, exposed live parts, signs of overheating or excessive sparking hearing protection leather work shoes safety glasses with sideshields (ANSI Z87.1) work gloves	ESH562 Machine Guarding
/Physical safety hazards Pinch or nip hazard Task Hazard Relationship Machining Operations	sturdy leather work gloves	
/Physical safety hazards/Sharps hazard - cut/puncture/abrasion (non-biological) Sharps cleanup (e.g., glassware break) Task Hazard Relationship Machining Operations	sharps container must be available; do not discard in regular trash arm gauntlets cut/puncture/abrasion-resistant gloves	

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Hazard Detail	Controls	Training
/Physical safety hazards/Sharps hazard - cut/puncture/abrasion (non-biological) Working with small hand tools (e.g., utility knives, screwdrivers, scissors, etc.) Task Hazard Relationship Machining Operations	see Physical safety hazards/Hand tool use for controls	
/Physical safety hazards/Sharps hazard - cut/puncture/abrasion (non-biological) Working with other sharp edges (e.g., sheet metal, non-glass) Task Hazard Relationship Machining Operations	cut/puncture/abrasion-resistant gloves	
/Physical safety hazards/Sharps hazard - cut/puncture/abrasion (non-biological) Working with compressed air for cleaning using air nozzles ≤ 30 psi Task Hazard Relationship Machining Operations	cut/puncture/abrasion-resistant gloves face shield hearing protection safety goggles	

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<p>/Physical safety hazards/ Material handling Manual lifting, pushing, pulling, carrying</p> <p>Task Hazard Relationship Machining Operations</p>	<p>Avoid carrying large or bulky loads that limit or obstruct your vision</p> <p>Carry only as much as you can safely handle</p> <p>Keep loads close to your body</p> <p>Test the weight by lifting one of the corners. If it is too heavy or an awkward shape, stop</p> <p>Use caution when moving loads that may be unstable</p> <p>When carrying containers w/one hand alternate hands, when appropriate use two hands to carry containers</p> <p>When moving chemicals or other hazardous material, read the SDS for the proper way to handle the material</p> <p>When planning a moved consider (1) The route of travel is clear of obstruction or hazards (2) Avoid transit stairways or step over curbs (3) The path of travel surface even or uneven (4) The final destination clear of hazards</p> <p>shoes that cover the entire foot</p> <p>sturdy work gloves when handling rough or sharp material or when pinching hazards are present</p>	

Locations

Building	Room	Location	Task
400		APS Machine Shops	Task # 1

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Reviews and Approval			
Type	Reviewer	Reviewer Comments	Completed
Draft	Rossi, Paul (#57494)(630) 252-4192		03/22/2017
Review Team Lead Signoff	Barkalow, Thomas (#44669)(630) 252-9243		03/28/2017
ESH Coordinator Review	Barkalow, Thomas (#44669)(630) 252-9243		03/28/2017
Divisional Approval	Barkalow, Thomas (#44669)(630) 252-9243		03/28/2017