

U. S. Department of Energy



Consolidated Audit Program Treatment, Storage and Disposal Facilities

Checklist 6 Industrial and Chemical Safety

Revision 1.3
October, 2010

Audit ID:

Date:

Audit ID: _____ TSDF: _____ Auditor: _____

Prepared by: Todd Hardt

Approved by:  DOECAP Manager

Areas of Review During Audit

Occupational Safety

- _____ Housekeeping
- _____ Floor and Wall Openings
- _____ Means of Egress
- _____ Medical and First Aid
- _____ Fire Protection Program
- _____ Facility Occupational Safety Program
- _____ Accident Prevention Signs and Tags
- _____ Machine Guarding
- _____ Material Handling and Storage
- _____ Hoisting and Lifting
- _____ Compressed Gases
- _____ Lockout/Tagout Systems
- _____ Confined Space Entry

Industrial Hygiene

- _____ Formalized Plan
- _____ Hazard Communication Program
- _____ Formalized Plan
- _____ Exposure Monitoring Program
- _____ PPE Selection, Use and Training
- _____ Respiratory Protection Program
- _____ Hearing Conservation Program

Other

- _____ Chemical Hygiene Plan
- _____ Safety Training Program
- _____ Injury/Illness Management and Recordkeeping
- _____ Beryllium Management Program

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NA = Not Applicable

F = Finding

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Referenced regulations are accessible at the following URLs:

- <https://doecap.oro.doe.gov>
- <http://www.access.gpo.gov/nara/CFR/CFR-table-search.html#page1>

NOTE:

- When audit findings are written against *site-specific documents* (i.e., SOPs, QA Plans, licenses, permits, etc.),

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a copy of the pertinent requirement text from that document must be attached to this checklist for retention in DOECAP files.

Item Number	Lines of Inquiry	Status	Response/Comments
1.0	Occupational Safety		
	Facility has a documented Health & Safety program with necessary plans and SOPS in place and current See Section 1.6 below		
1.1	Housekeeping		
1.1.1	<ul style="list-style-type: none"> • Work areas are clean and orderly • Floors are clean and dry and spills are mopped up • Slip, trip and fall hazards are not present • Aisles and passageways kept clean of obstructions and in good repair. • Temporary/permanent floor loading signs are affixed and in good repair for all OSHA-recognized hazards. 29 CFR 1910.22		
1.2	Floor and Wall Openings		
1.2.1	Are all wall openings with a drop of more than four-feet and stairways with more than four risers guarded with standard railing? 29 CFR 1910.23(b)(3)		

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1.2.2	Are stairways adequately illuminated and have stair treads that are slip resistant? Are any of the treads wearing down? <i>20 CFR 1910.24(f)</i>		
1.3	<i>Means of Egress</i>		
1.3.1	Are all existing exit routes clearly marked and equipped with emergency lighting? <i>29 CFR 1910.37(b)(1)(2)</i>		
1.3.2	Are any exits obstructed and are all exits unlocked when employees are in the building? <i>29 CFR 1910.37(a)(3)</i>		
1.4	<i>Medical and First Aid</i>		
1.4.1	Are approved first-aid supplies readily available and replenished as they are used? <i>29 CFR 1910.151(b)</i>		
1.4.2	Are there employees who are trained in first aid? <i>29 CFR 1910.151(b)</i>		

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1.5	<i>Fire Protection</i>		
1.5.1	Fire extinguishers are conspicuously marked, properly mounted and accessible. <i>29 CFR 1910.157(c)(1)</i>		
1.5.2	Fire extinguishers are inspected monthly, are fully charged and operable. <i>29 CFR 1910.157(e)(2) and Compressed Gas Association Pamphlet P-1, Rev 2000.</i>		
1.5.3	All areas where flammable gases or liquids are stored or used are posted to identify the flammability hazard and to prohibit smoking. <i>29 CFR 1910.101</i>		

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Item Number	Lines of Inquiry	Status	Response/Comments
1.6	<i>Facility Health and Safety Program</i>		
1.6.1	The facility has an occupational health and safety plan that addresses the following OSHA requirements: <ul style="list-style-type: none"> • Floor and Wall Openings (29 CFR 1910.23) • Means of Egress (29 CFR 1910.37) • Signage (29 CFR 1910.36) • Equipment Guarding (29 CFR 1910.212) • Electrical (29 CFR 1910.332) • Hand Tools and Portable Power tools (29 CFR 1910.242) • Ladder Safety (29 CFR 1910.26) • Fixed Ladder Safety (29 CFR 1910.27) • Hoisting and Lifting (29 CFR 1910.179) • Compressed Gases (29 CFR 1910.101) • Powered Industrial Truck (29 CFR 1910.178) • Lockout/Tagout (29 CFR 1910.147(c)(1)) • Confined Space (29 CFR 1910.146(c)) • Hazwoper (29 CFR 1910.120(p)) Other (list)		

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1.7	<i>Accident Prevention Signs and Tags</i>		
1.7.1	Are danger signs posted to warn of specific dangers and are caution signs posted to warn against potential hazards or to caution against unsafe practice? <i>29 CFR 1910.145(a)(1)</i>		
1.7.2	Are general safety instruction signs posted relative to safety measures? <i>29 CFR 1910.145(c)(3)</i>		
1.7.3	Are temporary accident signs adequate? <i>29 CFR 1910.145</i>		
1.8	<i>Machine Guarding</i>		
1.8.1	Are all machines guarded to protect operators from hazards? <i>29 CFR 1910.212(a)(2)</i>		
1.8.2	Are point-of-operation guards in place on all operating equipment and are spinning parts guarded? <i>29 CFR 1910.212(a)(3)(ii)</i>		
1.8.3	Are belts and pulleys less than 7 feet from the floor guarded? <i>29 CFR 1910.212(a)(5)</i>		

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1.9	<i>Material Handling and Storage</i>		
1.9.1	Is adequate clearance allowed in aisles where material must be moved? <i>29 CFR 1910.176(a)</i>		
1.9.2	Are tiered materials stacked, interlocked, locked and limited in height to maintain stability? <i>29 CFR 1910.176(b)</i>		
1.10	<i>Hoisting and Lifting</i>		
1.10.1	Is equipment identified with load capacity and is legible from the ground or floor? <i>29 CFR 1910.179(b)(5)</i>		
1.10.2	Are limit stops working? <i>29 CFR 1910.179(e)(1)(i)</i>		
1.11	<i>Compressed Gases</i>		
1.11.1	Are gases segregated, away from heat sources, stored upright and chained to prevent the container from falling? <i>29 CFR 1910.101 and Compressed Gas Association Pamphlet P-1, Rev 2000.</i>		

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Item Number	Lines of Inquiry	Status	Response/Comments
1.11.2	Are regulators removed and caps in place when gases are not in use? <i>29 CFR 1910.101</i>		
1.12	<i>Lockout/Tagout Systems</i>		
1.12.1	Are only authorized personnel allowed to perform lockout/tagout? <i>29 CFR 1910.147(b)</i>		
1.12.2	Are positive lockout systems provided for all power equipment? <i>29 CFR 1910.147(c)(4)</i>		
1.12.3	Are tags prominently located indicating the use of the lockout system? <i>29 CFR 1910.147(b)</i>		
1.12.4	Does the lockout system reduce power to zero energy? <i>29 CFR 1910.147</i>		
1.13	<i>Confined Space Entry</i>		
1.13.1	Are confined spaces (both permit and non-permit) clearly identified by posting and inventoried? <i>29 CFR 1910.146(c)(2)</i>		

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2.0	Industrial Hygiene		
2.1	<i>Hazard Communication</i>		
2.1.1	There is evidence of effective implementation of a Hazard Communication Program: <ul style="list-style-type: none"> • Written hazard communication program, (e) • Hazard Determination, (d) • Container labeling and other forms of warning program, (f) • Accessible MSDS file and (g) • Hazardous material listing. (e)(i) • Training (h) 29 CFR 1910.1200		
2.2	<i>Exposure Monitoring</i>		
2.2.1	The facility has a monitoring program to determine employee exposure to chemicals. Monitoring is performed for those chemicals that have a potential for exceedance of an OSHA Permissible exposure level? 29 CFR 1910.1000		

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2.2.2	Employees are notified of exposure monitoring results in accordance with OSHA requirements. <i>29 CFR 1910.1000</i>		
2.3	<i>Personal Protective Equipment</i>		
2.3.1	Appropriate required equipment is identified, readily available, maintained, and used properly? <i>29 CFR 1910.132</i>		
2.3.2	All equipment meets specific requirements and is reliable? <i>29 CFR 1910.132(a)</i>		
2.3.3	SOPs governing the selection and use of respirators are in place and current? <i>29 CFR 1910.132(d) and (f), 29 CFR 1910.134(a) and (c)</i>		
2.3.4	Personnel are required to wear personal protective equipment and have been medically evaluated and trained in the use. PPE is appropriate for tasks being performed. <i>29 CFR 1910.132</i>		
2.3.5	PPE requirements are specified in procedures, and observations indicate that these requirements are being met? <i>29 CFR 1910.335</i>		

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2.3.6	Hazard Assessment has been prepared for tasks requiring PPE. <i>29 CFR 1910.132</i>		
2.4	<i>Respiratory Protection</i>		
2.4.1	A written program is in place to administer all aspects of the program. <i>29 CFR 1910.134(c)</i>		
2.4.2	Personnel required to wear respirators have been trained, had a medical evaluation and have been fit tested? <i>29 CFR 1910.134(c)(1)</i>		
2.5	<i>Hearing Conservation</i>		
2.5.1	Noise monitoring is conducted and hearing protection is available in noise areas? <i>29 CFR 1910.95(d)</i>		
2.5.2	Personnel required to work in noise areas are in a hearing conservation program? <i>29 CFR 1910.95(c)(1)</i>		

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Item Number	Lines of Inquiry	Status	Response/Comments
3.0	Chemical Hygiene Program		
3.1	<i>Laboratory Chemical Hygiene Plan</i>		
3.1.1	<p>Note: Laboratory meets the following definition: “Laboratory” means a facility where the “laboratory use of hazardous chemicals” occurs. It is a workplace where relatively small quantities of hazardous chemicals are used on a non-production basis. “Laboratory scale” means work with substances in which the containers used for reactions, transfers, and other handling of substances is designed to be easily and safely manipulated by one person. “Laboratory scale” excludes those workplaces whose function is to produce commercial quantities of materials.</p> <p><i>29 CFR 1910.1450</i></p>		
3.1.2	<p>A chemical hygiene plan is in place to cover laboratory safety and is readily available to employees?</p> <p><i>29 CFR 1910.1450 (e)(f)</i></p>		
3.1.3	<p>The chemical hygiene plan designates the required laboratory PPE and observations indicate that this type of PPE is being used when required. Laboratory personnel wear appropriate PPE when handling samples and chemicals?</p> <p><i>29 CFR 1910.1450 (e)(3)(ii)</i></p>		

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3.1.4	Chemical container labeling is adequate to convey hazard information. <i>29 CFR 1910.122(f)</i>		
3.1.5	Material Safety Data Sheets (MSDS) are complete and readily available. <i>29 CFR 1910.1450 (f)(3)(v)</i>		
3.1.6	Chemical storage is adequate to prevent releases or spills and co-located chemicals are of suitable compatibility. <i>29 CFR 1910.1450</i>		
3.1.7	Engineering/administrative controls are adequate to minimize exposure to chemicals that exhibit a potential for exceedance of a permissible exposure limit: <i>29 CFR 1910.1450 (e)(3)(ii) and (iii)</i>		
3.1.8	PPE is used to minimize exposures to chemicals and the use and type of this equipment is based on a thorough evaluation of the risks that may be present in accordance with the written plan. <i>29 CFR 1910.1450 (e)</i>		
3.1.9	Adequate eyewashes are readily available to employees and are regularly inspected. <i>29 CFR 1910.151(c)</i>		

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3.1.10	All hazardous or toxic chemicals are appropriately labeled. <i>29 CFR 1910.1200 (f)</i>		

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Item Number	Lines of Inquiry	Status	Response/Comments
4.0	Injury/Illness Management & Recordkeeping		
4.1	Record the Facility's OSHA recordable and Loss time Rates and summarize trends or significant incidents that have occurred in the past year.		
4.2	Accident recording is conducted as required by OSHA? <i>29 CFR 1904.4 (a)</i>		
4.3	Procedures are in place for accident reporting? <i>29 CFR 1904.39</i>		

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5.0	Emergency Management		
5.1	An approved emergency action plan has been issued and is current? <i>29 CFR 1910.38</i>		
5.2	Emergency action plan training is adequate. <i>29 CFR 1910.38 (e)</i>		

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6.0	Safety Training		
6.1	Appropriate training provided in a timely manner for hazardous waste operations and emergency response? <i>29 CFR 1910.120 (p) (2)</i>		
6.2	A training program is in place which ensures that employees are training on hazardous chemicals in their work area at the time of their initial assignment and whenever a new physical or health hazard the employees have not been previously training about is introduced into their work areas? <i>29 CFR 1910.120 (p) (7)</i>		

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Item Number	Lines of Inquiry	Status	Response/Comments
6.3	<p>Other required OSHA training has been provided and is current:</p> <ul style="list-style-type: none"> • Hazard Communication Training (29 CFR 1910.1200(h)) • Annual PPE Training (29 CFR 1910.132(f)) • Annual Hearing Conservation Training (29 CFR 1910.95(k)(2)) • Fire Extinguisher Training (29 CFR 1910.157(g)) • Forklift Operator Training (1910.178(1)(i)) • Confined Space Training (29 CFR 1910.146(g)) • Chemical Hygiene Plan (29 CFR 1910.1450(e)(1)) • First Aid and CPR Training, Job specific as outlined by the facility (29 CFR 1910.151) • Respiratory Protection Training (29 CFR 1910.134(k)) • Hoisting and Lifting Training (29 CFR 1910.179) • Lockout/Tagout training (29 CFR 1910.147 (c) (7) (iv)) 		

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7.0	Beryllium		
7.1	Has the facility identified those locations where beryllium waste management activities have/will take place? <i>10 CFR 850.20</i>		
7.2	The facility Be program includes the following elements: <ul style="list-style-type: none"> • Defined permissible exposure limits, action levels, set specific exposure reduction and minimization goals (10 CFR 850.11) • Formal plans and measures for maintaining exposures to beryllium at or below the PEL (10 CFR 850.22) • Formal plans and measures for minimizing the number of employees exposed or potentially exposed, to beryllium (10 CFR 850.11) • Adequate employee exposure-monitoring sampling program (10 CFR 850.24) <ol style="list-style-type: none"> 1. Managed by a qualified individual (e.g. CIH). 2. Initial (baseline) personnel. 3. Periodic Monitoring. 4. Additional exposure monitoring. 5. Accuracy of monitoring. 6. Analysis by an AIHA credited laboratory. 7. Notification of monitoring results. 		

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Item Number	Lines of Inquiry	Status	Response/Comments
7.2 Cont.	<ul style="list-style-type: none"> • Selection and use of PPE (10 CFR 850.29) • Housekeeping practices (10 CFR 850.30) • Requirements for emergency response in the event of a spill or release (e.g., Contingency Plan 29 CFR 1910.120) (10 CFR 850.33) • Waste management elements (10 CFR 850.32) Beryllium training (10 CFR 850.37)		
7.3	Describe the facility's program for tracking beryllium waste while onsite.		
7.4	Facility has an adequate labeling and packing program for beryllium contaminated waste. <i>10 CFR 850.32 and 10 CFR 850.38</i>		

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