

**From:** [Pierce, David](#)  
**To:** [Linton, Ron](#)  
**Cc:** [Bingham, Brad](#); [Randy Whicker](#)  
**Subject:** [External\_Sender] RCM Unfiltered Appendices  
**Date:** Thursday, June 6, 2019 3:28:01 PM  
**Attachments:** [image001.png](#)  
[Appendix A\\_unfiltered report.pdf](#)  
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[Appendix C\\_unfiltered report.pdf](#)

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Ron,

Per your email request of 23May19, please find attached the “unfiltered” Appendices (A,B &C) for the Regulatory Compliance Matrix (RCM) in the suggested format. This is was originally submitted to the NRC within ADAMS Accession No. ML18248A260.

If you have any questions or need further discussion, please do not hesitate to contact me.

Thank you.

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Appendix A - Unfiltered  
Crosswalk of Confirmatory Order Condition Status

Confirmatory Order (28 March 2017) Requirements				Compliance Open Items			
Confirmatory Order Condition	Requirement	Status of Condition?	Comments	Corrective Action Items	Due Date	Status	Responsible
1-a	HMC will submit its root cause protocol to an independent third party consultant with expertise in root cause analysis and provide a copy of the independent third party reviewed protocol to the NRC within 120 days of issuance of this Confirmatory Order. The root cause protocol will also be available for review during future inspections.	Satisfied	Per NRC Inspection Report 040-08903/2017-002; "The requirement under Condition 1 of the Order to submit the RCP is considered to be satisfied."				
1-b	The root cause protocol submitted to the NRC will identify any changes made by the independent third party reviewer and include a qualification statement for the independent third party reviewer. This protocol will be used to complete Conditions 2, 3, and 4 of this section.	Satisfied	Per NRC Inspection Report 040-08903/2017-002; "The requirement under Condition 1 of the Order to submit the RCP is considered to be satisfied."				
2-a	Within 30 days of submitting to NRC the root cause protocol in Condition 1 of this section, HMC will use the root cause protocol to analyze the reasons for the apparent violations documented in the NRC's October 4, 2016 letter.	Not Complete	Per NRC Inspection Report 040-08903/2017-002; submitted RCA via letter dated September 15, 2017 (ADAMS Accession No. ML17263A125). Licensee action of Condition 2-a complete	Per NRC Inspection Report 040-08903/2017-002; submitted RCA via letter dated September 15, 2017 (ADAMS Accession No. ML17263A125). Licensee action of Condition 2-a complete	Pending	Licensee action of Condition 2-a complete. Item will remain open until NRC completes the review of 2-b.  NRC PM has this for his review and currently requires no further documents from HMC.	HMC
2-b	HMC will submit any proposed corrective actions to the NRC for review and approval within 60 days of completing the root cause analyses	Not Complete	Per NRC Inspection Report 040-08903/2017-002; Licensee submitted the corrective action plan for the five apparent violations by letter dated November 14, 2017, (ADAMS Accession Package No. ML17320A118). Condition 2 of the Order will remain open until the NRC has reviewed and approved the licensee's proposed corrective actions.	Per NRC Inspection Report 040-08903/2017-002; Licensee submitted the corrective action plan for the five apparent violations by letter dated November 14, 2017, (ADAMS Accession Package No. ML17320A118). Condition 2 of the Order will remain open until the NRC has reviewed and approved the licensee's proposed corrective actions.	Pending	HMC submitted the corrective action plan for the five apparent violations by letter dated November 14, 2017, (ADAMS Accession Package No. ML17320A118). Condition 2 of the Order will remain open until the NRC has reviewed and approved the licensee's proposed corrective actions.  RC PM has this for his review and currently requires no further documents from HMC.	HMC
3	HMC will complete an assessment of all HMC activities to determine whether all activities are authorized and are being conducted in compliance with NRC requirements. The assessment will identify areas where clarity could be added to the license. The assessment will include a written report that identifies all areas assessed, the scope of the assessment, the method used to perform the assessment, the results of each assessment and any corrective actions deemed appropriate. This report will identify any proposed changes to the license and procedures. This assessment will include a review of the licensee's Safety Culture, to identify any actions that may be necessary to improve upon or enhance the Safety Culture.	Not Complete	In a letter dated December 26, 2017, NRC approved extension request to September 3, 2018.	Complete Self-Assessment	Due to NRC by 9/3/2018	ENERCON has performed self-assessment of HMC activities	ENERCON
4	HMC will engage an independent third party consultant to review and evaluate HMC's assessments described in Condition 3 of this section. That review will include a written report that identifies all areas assessed, the scope of the assessment, the method used to perform the assessment, the results of each assessment, and any proposed corrective actions. The evaluation will include the effectiveness of any actions proposed by HMC.	Not Complete	In a letter dated December 26, 2017, NRC approved extension request to September 3, 2018.	Submit 3rd party review and report on Self-Assessment	Due to NRC by 9/3/2018	Foxfire Scientific (Matt Arno) has conducted.	Foxfire Scientific
4a	HMC will submit the name and qualifications of the consultant for NRC approval within 30 days of issuance of this Confirmatory Order.	Satisfied	Per NRC Inspection Report 040-08903/2017-002; NRC approved the consultants in correspondence dated April 19 and May 3, 2017, (ADAM Accession Nos. ML17114A106 and ML17138A303).				
4b	HMC will submit a copy of the assessment described in Condition 3 of this section to the independent third party consultant within 120 days of NRC approval of the independent third party consultant.	Not Complete		Submit SA to 3rd party for review/comment.	see 3	The licensee has requested an extension of the due date for the self-assessment to September 3, 2018, (see Condition 3 above). Conditions 4b and 4c remain open and cannot be completed until the self-assessment has been completed.	HMC
4c	HMC will provide a copy of the HMC assessment, the consultant's review report, and any modifications by HMC as a result of the third party consultant's report to the NRC within 120 days of submission of the HMC assessment to the independent third party consultant.	Not Complete		Submit Self Assessment, 3rd party review report of the Self Assessment and any modification by HMC to the NRC.	see 3	The licensee has requested an extension of the due date for the self-assessment to September 3, 2018, (see Condition 3 above). Conditions 4b and 4c remain open and cannot be completed until the self-assessment has been completed.	HMC
4d	NRC will perform an audit of the assessment and the independent third party report and provide NRC audit results in writing, including any recommended changes. HMC will incorporate NRC audit results in the actions described in Condition 5 of this section.	Not Complete		NRC review of the Self Assessment reports.	Pending	NRC audit of SA report	HMC
4e	HMC will maintain copies of all reports at the site for NRC inspection.	Not Complete		Maintain copies of all Self Assessment related reports at the site for NRC review.	Ongoing Action	Ongoing action; won't close until the CO is closed out.	HMC
5-a	Unless otherwise specified, for any changes or additions to the license or procedures resulting from this Confirmatory Order, HMC will either (1) submit to the NRC a license amendment request(s), for NRC approval, or (2) update the appropriate HMC procedure(s) after notification of the NRC. All license amendment requests resulting from this Confirmatory Order will be submitted to the NRC within 60 days of receiving the results of NRC's audit(s).	Not Complete	Per NRC Inspection Report 040-08903/2017-002; "The licensee has not submitted any license amendment requests or notified the NRC of any proposed updates to the procedures beyond the updated procedures directly required by the Order."	Submit any license amendment request(s) for NRC approval, or (2) update the appropriate HMC procedure(s) after notification of the NRC	Ongoing Action	During the 2018-01 inspection, HMC stated that an extension to the due date of the Condition might be necessary	HMC
5-b	All notifications of updates to procedures resulting from this Confirmatory Order will be made to the NRC by the end of calendar year 2018.	Not Complete		Update all procedures as a result of the Self Assessment and from the Confirmatory Order.	Ongoing Action	Will need to extend due date when we extend the due date of 6.a. They aren't tied together, but a single submittal is desired.	HMC
6-a	HMC will submit a revised groundwater CAP to the NRC by the end of calendar year 2018, including amendments to the license approved by that date.	Not Complete		Final approval of groundwater CAP.	Before or at submittal of SA to NRC	HMC made the following statement in its request for extension for the self assessment: "The absence of a complete self-assessment does mean that, as a practical matter, the appropriate date for the CAP, now set at December 31, 2018, is uncertain; The need for and the length of any extension of the date for submittal of an updated CAP will depend on factors that will only be known by the parties as HMC nears completion of the self-assessment. The parties are not now in a position to modify the CO submittal date for that deliverable, but the NRC should be aware- now that HMC may later make a request for amendment of the December 31, 2018 CO update submittal deadline dependent on the results of the self-assessment"	HMC

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6-b	The NRC and HMC will work, aggressively and in good faith, toward a goal of final approval of the groundwater CAP within a year from the date of submittal.	Not Complete			Pending	On-going action by HMC and NRC	HMC
7	HMC will conduct initial and annual refresher training for all individuals (employees and vendors, commensurate with their duties) engaged in licensed activities.	Not Complete	Per NRC Inspection Report 040-08903/2017-002; Condition 7 of the Order is an on-going requirement and will continue to be evaluated during future inspections.	Development of an initial and annual refresher training program for all individuals engaged in licensed activities.	Training should be completed prior to next NRC inspection	HMC has developed an annual Regulatory Training Program. Training has been initiated and will continue. Condition 7 of the Order is an on-going requirement and will continue to be evaluated during future inspections.	HMC / Wright
7a	The initial and annual training will address awareness and understanding of regulatory and license No. SUA-1471 requirements, including but not necessarily limited to informing HMC employees of the jurisdiction of the NRC, the Environmental Protection Agency, and the New Mexico Environment Department over the Grants site. The training may be an electronic read and sign format.	Not Complete		Development of an initial and annual refresher training program for all individuals engaged in licensed activities.	see 7	see 7	HMC
7b	HMC will maintain documentation for each training session conducted. The training documentation will include a summary of the contents of the training and the individuals in attendance. The training documentation will be maintained available for NRC inspection for 5 years after each training session.	Not Complete		Document and retain training records. Develop a records retention policy and procedure.	Ongoing Action	Condition 7 of the Order is an on-going requirement and will continue to be evaluated during future inspections.	HMC
8a	HMC will use the mass balance methodology described in its revised 2012 groundwater CAP submittal, incorporating the issues raised in the Requests for Additional Information provided by NRC, and adapting the methodology for the purpose of completing an analysis of the re-injection system's impact to the time estimate for completion of the groundwater CAP. The analysis will be completed within 120 days of issuance of this Confirmatory Order.	Not Complete	Per NRC Inspection Report 040-08903/2017-002; The licensee submitted the impact analysis for the re-injection system by letter dated July 26, 2017, (ADAMS Accession Package No. ML17212A010).	Complete and submit an analysis of the re-injection system's impact to the time estimate for completion of the groundwater CAP.	Action Complete	Per NRC Inspection Report 040-08903/2017-002; The licensee submitted the impact analysis for the re-injection system by letter dated July 26, 2017, (ADAMS Accession Package No. ML17212A010).  Licensee action complete, item won't close until NRC audit per Condition 8.c is completed.	HMC/Hydro
8b	No less than 30 days prior to its finalization of the re-injection analysis, HMC will discuss with NRC the methodology, data, and analysis. HMC will provide to NRC all discussion material at least 10 days prior to the discussion.	Not Complete	Per NRC Inspection Report 040-08903/2017-002; The NRC is currently performing the audit of the licensee's submitted analysis and the NRC will provide the audit findings to the licensee once they are completed.	HMC will discuss with NRC the methodology, data, and analysis.	Action Complete	Per NRC Inspection Report 040-08903/2017-002; The licensee submitted the impact analysis for the re-injection system by letter dated July 26, 2017, (ADAMS Accession Package No. ML17212A010).  Licensee action complete, item won't close until NRC audit per Condition 8.c is completed.	HMC
8c	NRC will perform an audit of the analysis, and provide in writing NRC audit results, including any recommended changes. HMC will incorporate NRC audit results in the actions described in Condition 5 of this section.	Not Complete	Per NRC Inspection Report 040-08903/2017-002; The NRC is currently performing the audit of the licensee's submitted analysis and NRC will provide the audit findings to the licensee once they are completed. Condition 8 of the Order remains open and can be reviewed once the licensee incorporates NRC's comments into the analysis.	NRC audit of above analysis.	Pending	Per NRC Inspection Report 040-08903/2017-002; The NRC is currently performing the audit of the licensee's submitted analysis and NRC will provide the audit findings to the licensee once they are completed. Condition 8 of the Order remains open and can be reviewed once the licensee incorporates NRC's comments into the analysis.  NRC PM has this for his review and currently requires no further documents from HMC.	HMC
9a	As soon as practicable, but not to exceed 30 days from issuance of this Confirmatory Order, HMC will adjust operations to better ensure compliance with the Ground Water Protection Standards (GWPS) in license Condition 35B as required by License Condition 35C (as amended by this Confirmatory Order) and described in HMC's submittal dated January 15, 1998 and the NRC's approval dated March 5, 1998.	Satisfied	Per NRC Inspection Report 040-08903/2017-002; The requirement under Condition 9 of the Order to perform adjustments to the operations of the RO plant and evaluate the procedure required by LC 23 is considered to be satisfied.				
9b	HMC will evaluate the procedure required by license Condition 23 to ensure that the process is adequate to reduce constituent concentrations to values below the GWPS listed in License Condition 35B before discharge.	Satisfied	Per NRC Inspection Report 040-08903/2017-002; The requirement under Condition 9 of the Order to perform adjustments to the operations of the RO plant and evaluate the procedure required by LC 23 is considered to be satisfied.				
10-a	HMC will use the methodology described in NUREG-1620 to analyze the impact of exceedances documented in the NRC's October 4, 2016 letter to HMC. The analysis will be completed within 120 days of issuance of this Confirmatory Order.	Not Complete	Per NRC Inspection Report 040-08903/2017-002; The NRC acknowledged receipt of the impact analyses for the exceedances at the RO plant by letter dated August 1, 2017 (ADAMS Accession No. ML17213A29).	Submit exceedance analysis	Action Complete	Per NRC Inspection Report 040-08903/2017-002; The licensee submitted the impact analysis for the re-injection system by letter dated July 26, 2017, (ADAMS Accession Package No. ML17212A010).  Licensee action complete, item won't close until NRC audit per Condition 10.c is completed.	HMC
10-b	No less than 30 days prior to its finalization of the impact of exceedances analysis, HMC will discuss with NRC the methodology, data, and analysis. HMC will provide to NRC all discussion material at least 10 days prior to the discussion.	Not Complete	Per NRC Inspection Report 040-08903/2017-002; The licensee and the NRC discussed the methodology, data, and analysis with the NRC during a teleconference on June 26, 2017 and during a follow-on meeting on June 27, 2017. Notes summarizing the discussions during the meetings on June 26 and 27, 2017, as well as the licensee's presentation are publicly available (ADAMS Accession No. ML17352B067).	HMC will discuss with NRC the methodology, data, and analysis.	Action Complete	HMC and the NRC discussed the methodology, data, and analysis with the NRC during a teleconference on June 26, 2017 and during a follow-on meeting on June 27, 2017. Notes summarizing the discussions during the meetings on June 26 and 27, 2017, as well as the licensee's presentation are publicly available (ADAMS Accession No. ML17352B067).  Licensee action complete, item won't close until NRC audit per Condition 10.c is completed.	HMC
10-c	The NRC will perform an audit of the analysis and provide in writing, the NRC audit results, including any recommended changes. HMC will incorporate NRC audit results in the actions described in Condition 5 of this section.	Not Complete	Per NRC Inspection Report 040-08903/2017-002; The NRC is currently performing the audit of the analysis and will provide the audit results in writing once completed. Condition 10 of the Order remains open and can be reviewed once the licensee incorporates NRC's audit results into the analysis.	NRC audit of analysis.	Pending	The NRC acknowledged receipt of the impact analyses for the exceedances at the RO plant by letter dated August 1, 2017 (ADAMS Accession No. ML17213A29). The NRC is currently performing the audit of the analysis and will provide the audit results in writing once completed.  NRC PM has this for his review and currently requires no further documents from HMC.	HMC
10-d	In the event of a future non-compliance related to the GWPS, HMC will perform a similar assessment of the impacts of the non-compliance. HMC will report the incident to the NRC in accordance with License Condition 40 within 30 days of receipt of initial and confirmatory laboratory results.	Not Complete	On-going commitment	HMC to perform a similar assessment of the impacts of any future non-compliances.	Action Complete	Exceedance for U in April SP2 composite sample has triggered this on-going Condition. NMED/NRC notifications completed via letter on 5/23/2018, and impact assessment submitted to NRC/NMED per the Condition on 6/4/2018.  CO Condition will remain open until closure of the CO.	HMC/Hydro-Engineering

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Confirmatory Order (28 March 2017) Requirements				Compliance Open Items			
Confirmatory Order Condition	Requirement	Status of Condition?	Comments	Corrective Action Items	Due Date	Status	Responsible
11	Condition 35C of License No. SUA-1471 is amended by this Confirmatory Order to read as follows: "Implement the corrective action program described in the September 15, 1989 submittal, as modified by the reverse osmosis system described in the January 15, 1998 submittal, excluding all sampling and reporting requirements for Sample Point 1, with the objective of achieving the concentrations of all constituents listed in License Condition 358. Composite samples from Sample Point 2 (SP2) will be taken monthly and analyzed for the constituents listed in License Condition 358; the results of these analyses will be reported in the semi-annual and annual reports required by License Conditions 15 and 42."	Satisfied	Per NRC Inspection Report 040-08903/2017-002; Condition 11 of the Order directly modified LC 35C of the licensee's license when the Order was issued on March 28, 2017. Condition 11 of the Order is considered to be satisfied.				
12-a	HMC will develop written procedures to ensure that HMC will sample all required composite samples from Sample Point 2 (SP2) monthly and will report the results of those sample results in the semi-annual and annual reports required by License Conditions 15 and 42. The procedure will include a requirement that if sampling is not performed, a justification will be provided in the semi-annual report required by License Condition 15 for that sampling period, e.g., "inadequate volume of water collected per the appropriate sampling procedure due to the RO plant being inoperable for 25 out of 30 days during that sampling period." For clarity, this reporting requirement does not apply to additional samples taken for operational purposes.	Satisfied	Per NRC Inspection Report 040-08903/2018-001; Written procedures for monthly sampling of Sample Point 2 were submitted to the NRC by letter dated July 26, 2017 (ADAMS Accession No. ML17212A025). The inspectors reviewed the revised procedures during the inspection and determined that they were adequate and will ensure that monthly composite samples are obtained from Sample Point 2. Further, the inspectors noted that the results of the monthly samples were reported in the semi-annual report dated February 22, 2018 (ADAMS Accession No. ML18066A088). Condition 12 of the Order is considered to be satisfied.				
12-b	For any report submitted to NRC, HMC will clearly identify all values at SP2 that exceed GWPS or regulatory or license limits for the COCs identified in License Condition 35B and corrective actions taken, ii any, as a result of the exceedances. HMC will submit these procedures to NRC within 120 days of issuance of this Confirmatory Order.	Satisfied	Per NRC Inspection Report 040-08903/2018-001; Written procedures for monthly sampling of Sample Point 2 were submitted to the NRC by letter dated July 26, 2017 (ADAMS Accession No. ML17212A025). The inspectors reviewed the revised procedures during the inspection and determined that they were adequate and will ensure that monthly composite samples are obtained from Sample Point 2. Further, the inspectors noted that the results of the monthly samples were reported in the semi-annual report dated February 22, 2018 (ADAMS Accession No. ML18066A088). Condition 12 of the Order is considered to be satisfied.				
13	Condition 15 of License No. SUA-1471 is amended by this Confirmatory Order to read as follows: "The results of all effluent and environmental monitoring required by this license and regulation shall be reported semi-annually, by March 31 and September 30. All groundwater monitoring data shall be reported per the requirements in License Condition 35."	Satisfied	Per NRC Inspection Report 040-08903/2017-002; Condition 13 of the Order directly modified LC 15 of the licensee's license when the Order was issued on March 28, 2017. The modification provides clarifying language for when the semi-annual effluent and environmental monitoring reports are due. Condition 13 of the Order is considered to be satisfied.				
14-a	HMC will identify sources of supply water, soil and groundwater data, and reports, and will use those data to develop a land application assessment of any impacts due to the use of the irrigation water containing byproduct material to past, current, or foreseeable future uses of the land application areas in Township 12 North, Range 1 O West, Sections 28 (approximately 100 acres), 33 (approximately 150 acres and approximately 24 acres), and 34 (approximately 120 acres).	Not Complete	see 14-f	Submittal of Land Application Assessment to NRC	see 14-f	see 14-f	see 14-f
14-b	The land application assessment will establish background concentrations, remedial action levels (radiological dose and non-radiological risk), and current concentrations of COCs in its license at all areas used for land application.	Not Complete	see 14-f	Submittal of Land Application Assessment to NRC	see 14-f	see 14-f	see 14-f
14-c	The land application assessment will also identify and assess impacts from soil pore water data at the land application areas.	Not Complete	see 14-f	Submittal of Land Application Assessment to NRC	see 14-f	see 14-f	see 14-f
14-d	HMC's land application assessment will be consistent with the requirements of 10 CFR 20.2002 and in accordance with Appendix F1.4 of NUREG-1620 to demonstrate that the discharge of byproduct material containing both radiological and non-radiological constituents did not impact and will not impact members of the public or the environment.	Not Complete	see 14-f	Submittal of Land Application Assessment to NRC	see 14-f	see 14-f	see 14-f
14-e	In addition, HMC will take immediate action to ensure that the land application areas are not being used to produce crops for human consumption.	Not Complete	Per NRC Inspection Report 040-08903/2017-002; By memorandum dated June 16, 2017, (ADAMS Accession No. ML17328A507), the licensee provided verification that they are not using the former irrigation areas to produce crops for human consumption.	Submittal of Land Application Assessment to NRC	see 14-f	see 14-f	see 14-f
14-f	The land application assessment will be submitted for NRC review and approval within 180 days of issuance of this Confirmatory Order.	Not Complete	Per NRC Inspection Report 040-08903/2018-001; The licensee submitted the land application assessment by letter dated September 25, 2017, (ADAMS Accession No. ML17270A066). A proposed final status survey plan for release of the former land application areas was submitted by letter dated November 14, 2017, (ADAMS Accession No. ML17340A406). The data obtained for the final status survey is intended to augment the existing soil data within the Land Application Impact Assessment report submitted on September 25, 2017.  NRC is currently reviewing the September 25, 2017, land application assessment report and is awaiting the results of the additional data obtained for the final status survey report. Once the final status survey data is received, the NRC will perform a confirmatory survey at the former land application areas to support the findings in the NRC staff Safety Evaluation Report.	Submittal of Land Application Assessment to NRC	Pending	Submitted to NRC on Sept. 12th for initial feedback. Revised per NRC feedback. Final version submitted to the NRC on Sept. 25th. Need to mobilize a team for additional soil sampling. Conference call with NRC to discuss status survey plan on Oct. 24th. Tom verified no crops grown on land app areas and documentation prepared for the NRC. ERG submitted "Final Status Survey Plan" for land application areas to the NRC on Nov. 15th. Tom directed ERG to initiate Status Survey of former land application areas. Status Survey work initiated by ERG on Dec. 4th. Work half-way done on Dec. 18th, soil sampling all done, 2 pivot areas scanned, 2 flood areas to be scanned after first of year. Soil sampling and gamma scanning completed.  Final Status Surveys completed, development of FSS Report in progress. One small area of elevated gamma radiation and Ra-226 concentrations in surface soil identified on the north edge of the Section 28 Pivot land application area. Cleanup of this "hotspot" has been completed, and confirmatory gamma scanning and soil sampling was performed to verify successful cleanup and allow completion of the FSS Report. The additional sampling will require up to 6 weeks for analytical results to become available for inclusion in the report.  NRC (Evans) on site week of 8/27/2018 for NRC confirmatory surveys.	Hydro-Engineering/ERG

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15-a	If the results of HMC's analysis discussed in Condition 14 of this section indicates that radiological doses and non-radiological risks are in excess of the NRC-approved remedial action levels, HMC will propose appropriate measures to control both use and access to the impacted areas, a corrective action plan, if necessary, to achieve the NRC-approved remedial action levels, and final status survey plans to demonstrate that the radiological doses and non-radiological risks are below NRC-approved remedial action levels.	Not Complete	Per NRC Inspection Report 040-08903/2017-002; Condition 15 of the Order remains open and can be reviewed once the NRC completes the Safety Evaluation Report for the land application assessment required by Condition 14 of the Order.	Submit Corrective Action Plan for Land Application Areas, if needed	Within 60 days of NRC approval of Land App Assess	Condition will remain open until NRC approval of Land Application Assessment	HMC/Hydro-Engineering
15-b	If corrective actions are needed, HMC will submit corrective actions (that include completion timeframes), for NRC approval, within 60 days of NRC's approval of HMC's land application assessment.	Not Complete	Per NRC Inspection Report 040-08903/2017-002; Condition 15 of the Order remains open and can be reviewed once the NRC completes the Safety Evaluation Report for the land application assessment required by Condition 14 of the Order.	Develop a land application area corrective actions, if necessary.	Pending	The licensee submitted the land application assessment by letter dated September 25, 2017, (ADAMS Accession No. ML17270A066). A proposed final status survey plan for release of the former land application areas was submitted by letter dated November 14, 2017, (ADAMS Accession No. ML17340A406). The data obtained for the final status survey is intended to augment the existing soil data within the Land Application Impact Assessment report submitted on September 25, 2017.	HMC
16	HMC will provide to the NRC an integrated table that sets forth all actions taken pursuant to this Confirmatory Order. An updated integrated table will be provided to the NRC semi-annually, until all license and procedure changes under this Confirmatory Order are completed.	Not Complete	Per NRC Inspection Report 040-08903/2017-002; The licensee submitted the integrated table by letter dated September 27, 2017, (ADAMS Accession No. ML17272A137). Condition 16 of the Order will remain open until all license and procedure changes under the Order are completed.	Submit Integrated Table of Confirmatory Order Actions to the NRC.	9/27/2018	Last submittal on 3/28/2018	HMC/ENERCON

Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations											Consolidated Deficiency Groupings
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
3	10	This license authorizes only the possession of residual uranium and byproduct material in the form of uranium waste tailings and other byproduct waste generated by the licensee's past milling operations in accordance with Tables 1 and 3 and the procedures submitted by letter dated September 2, 1993, as modified by letter dated March 7, 1996.in accordance with Tables 1 and 3 and the procedures submitted by letter to NRC.	Partial	Table 3 "Homestake Occupational Monitoring Program ( 8-93)" Table 3 includes weekly alpha surveys in lunchrooms and changing areas, as well as calibration of radiation detection instruments every 6 months.	HMC is not conducting routine contamination surveys throughout the facility, i.e., lunch room, break room, change rooms, offices. These types of areas should be periodically surveyed to ensure contamination is not leaving the restricted area.  SOP 12 and the RPPM should be modified to include a table of routine survey locations that should be performed on a periodic basis. This table should provide the area to be located, the frequency, type of survey to be performed and the acceptable criteria.	Updated survey and calibration frequencies to match requirement.  Develop LAR to eliminate unneeded requirements	ERM/HMC	X				
4	11	Deleted										
5	12	Periodic embankment inspections of large and small tailings embankment shall be conducted by knowledgeable individuals who are familiar with the site and embankment design	Yes									
6	12	An annual embankment status report shall be included in the Annual Report	Yes									
7	13	Deleted										
8	14	Release of equipment or packages from the restricted area shall be in accordance with the attachment to SUA-1471 entitled "Guideline for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct or Source Materials ".	Yes	The Guideline for Decontamination is not referenced in the RPPM or SOP 12, but release limits are in agreement with the Guideline.								
9	15	The results of all effluent and environmental monitoring required by this license and regulations shall be reported semi-annually, by March 31 and September 30.	Yes	Condition 13 of the Confirmatory Order directly modified LC 15 when the CO was issued on March 28, 2017. The modification provides clarifying language for when the semi-annual effluent and environmental monitoring reports are due.								
10	15	All groundwater monitoring data shall be reported per the requirements in License Condition 35.	Yes									
11	16	Before engaging in any activity not previously assessed by the NRC, the licensee shall prepare and record an environmental evaluation of such activity.	No	NRC Inspection Report 040-08903/2017-001  Contrary to the above, as of April 24, 2017, the licensee failed to prepare and record an environmental evaluation of an activity that may have resulted in a significant adverse environmental impact that was not previously assessed or that is greater than that previously assessed. Specifically, the licensee reviewed and approved a change, via Safety and Environmental Review Panel 15-01, which expanded the onsite and offsite groundwater corrective action program and approved a new methodology for injection of groundwater. However, the licensee failed to prepare and record an environmental evaluation of this activity or obtain prior approval of the NRC in the form of a license amendment. This is a Severity Level IV violation  Additionally, the 2005 informal agreement between previous HMC staff and several local landowners to provide compliant water from the Site for irrigation purposes was never assessed via SERP or submitted to the NRC for approval.	Update SOP-10 SERP process to clearly document environmental evaluation of new activities not previously assessed by the NRC.	Response letter submitted to NRC on August 3, 2017. SOP-10 (SERP) has been revised to more rigorously follow the intent and approach of the 10 CFR 50.59 process and focuses explicitly on both Environmental and Cultural resource evaluations.  HMC prepared SOW for survey updates and sent out to compiled list of vendors. ERM selected for the work. Desktop work initiated in Dec. 2017, with on-Site work starting on Jan. 9th, 2018 and continuing into summer of 2018.  ERM will be back on-site when seasons change to complete environmental surveys (ECD late 2018).	ERM / HMC	X		X		
12	16	When the "environmental" evaluation indicates that such activity may have significant adverse environmental impact that was not previously assessed or that is greater than that previously assessed, the licensee shall provide a written evaluation of such activities and obtain prior approval of the NRC in the form of a license amendment.	No	NRC Inspection Report 040-08903/2017-001  Contrary to the above, as of April 24, 2017, the licensee failed to prepare and record an environmental evaluation of an activity that may have resulted in a significant adverse environmental impact that was not previously assessed or that is greater than that previously assessed. Specifically, the licensee reviewed and approved a change, via Safety and Environmental Review Panel 15-01, which expanded the onsite and offsite groundwater corrective action program and approved a new methodology for injection of groundwater. However, the licensee failed to prepare and record an environmental evaluation of this activity or obtain prior approval of the NRC in the form of a license amendment. This is a Severity Level IV violation.  Additionally, the 2005 informal agreement between previous HMC staff and several local landowners to provide compliant water from the Site for irrigation purposes was never assessed via SERP or submitted to the NRC for approval.	Update SOP-10 SERP process to clearly document environmental evaluation of new activities not previously assessed by the NRC.	Response letter submitted to NRC on August 3, 2017. SOP-10 (SERP) has been revised to more rigorously follow the intent and approach of the 10 CFR 50.59 process and focuses explicitly on both Environmental and Cultural resource evaluations.	HMC	X		X		
13	17	Prior to the termination of this license, the licensee shall provide for the transfer of title to byproduct and land, including any interests therein, which is used for the disposal for such byproduct material or is essential to ensure the long-term stability of such disposal site, to the United States or the State of New Mexico, at the State's option.	N/A at this time	future consideration								
14	18	Deleted										
15	19	Deleted										
16	20	Deleted										
17	21	The site Radiation Protection Administrator, who is responsible for conducting the site radiation safety program, shall possess the minimum qualifications as specified in Section 2.4.1 of Regulatory Guide 8.31 .	Yes	RSO attended 40-hour RSO refresher training for uranium recovery facilities in June 2017 to fulfill the biennial refresher training specified in NRC Regulatory Guide 8.31			HMC					
18	22	The results of sampling, analysis, surveys and monitoring, the results of calibration of equipment, reports on audits and inspections; all meeting and training courses required by this license and any subsequent reviews, investigations and corrective actions shall be documented.	YES									
19	22	Unless otherwise specified in the NRC regulations, all such documentation (as identified in above requirement) shall be maintained for a period of at least 5 years.	No	HMC has no formal centralized record retention policy/matrix HMC SOP 31 does not mention retention of records for 5 years.	SOP 31 provides an organization for electronic files but does not provide a retention period or disposition instruction for records and files. Develop a records retention program that will identify the records that are generated to meet regulatory requirements, the retention period for each and their disposition once the retention period has been mt.	HMC has drafted but not yet adopted SOP-34 (Document Control), which addresses document retention. Final scope of the new policy/matrix will be established by the gap analysis of the self-assessment. Design and development of the new policy/matrix will be assigned per the follow-on corrective action plan.  SOP-31 Electronic File Organization, which addresses where certain digital files should be stored on the Site Server has been drafted.	HMC		X			
20	23	Standard procedures shall be established for all activities involving radioactive materials that are handled, processed or stored.	Yes									
21	23	Procedures shall enumerate pertinent radiation safety practices to be followed.	Yes									
22	23	Written procedures shall be established for environmental monitoring, bioassay analysis and instrument calibrations.	Partial	NRC Inspection Report 040-08903/2017-001 (This comment does not apply to this LC)  Contrary to the above, as of April 24, 2017, the licensee failed to establish standard procedures for all activities involving radioactive materials that are handled, processed, or stored. Specifically, the licensee failed to establish standard procedures for disposal of wastes in the onsite small tailings pile, operation of the 1,200 gallon per minute zeolite system, and operation of the evaporation ponds. This is a Severity Level IV violation	HMC should establish standard procedures for disposal of waste in the onsite small tailings pile, operation of the 1,200 gallon per minute zeolite system and operation of the evaporation ponds	HMC has established SOPs for disposal of wastes in the onsite small tailings pile, operation of the evaporation ponds and operation of the 1200 gpm zeolite remediation system. These SOPs are available for NRC verification during a future inspection.	HMC	X				
23	23	An up-to-date copy of each written procedure shall be kept in the area to which it applies.	Yes									
24	24	The licensee shall be required to use a Radiation Work Permit (RWP) for all work or nonroutine maintenance jobs where the potential for significant exposure to radioactive material exists and for when no standard written procedure already exists.	Yes									
25	24	The RWP shall be approved by the RPA or his designee, qualified by way of specialized radiation protection training, and shall describe the following: a) the scope of the work to be performed, b) Any precautions necessary to reduce exposure to uranium and its daughters, c) The supplemental radiological monitoring and sampling necessary prior to and following completion of the work.	Partial	No current provision for "or designee" in SOPs or RPPM	The RPPM should be revised to allow either the RSO or his designated alternate to sign RWPs. The designated alternate needs to meet all of the qualification as specified in Regulatory Guide 8.31 (rev. 1) and should be designated in writing.		HMC	X				
26	25	Deleted										
27	26	Mill tailings, other than small samples for purposes such as research analysis, shall not be transferred from the site without specific prior approval of the NRC in the form of a license amendment.	Yes	No mill tailings are being transferred off site other than minute samples for offsite analysis.								
28	26	The licensee shall maintain a permanent record of all transfers made under the provisions of this condition (LC 26).	Yes	No mill tailings are being transferred off site other than minute samples for offsite analysis.								
29	27	Deleted										
30	28	The licensee shall maintain an NRC-approved financial surety arrangement consistent with 10 CFR 40, Appendix A, Criteria 9 and 10 , adequate to cover the estimated costs, if accomplished by a third party, for decommissioning and decontamination of the mill and mill site, reclamation of tailings or waste disposal areas, ground water restoration and the long-term surveillance fee	Yes	The NRC has approved their 2017 Surety letter.  However, I am not sure how well the NRC reviews it. HMC provides a cost for decommissioning the office buildings, RO plant and other out buildings, but there is no backup as to where they got the numbers. Also I could not find any decommissioning costs for the Zeolite plant.								



Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L	
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations								Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5	
31	28	Within 3 months of NRC approval of a revised reclamation plan and cost estimate, the licensee shall submit for NRC review and approval a proposed revision to the financially surety arrangement if estimated costs for the newly approved plan exceed the amount covered in the existing financial surety. The revised surety arrangement shall then be in effect within 30 days of written approval of the surety documents.	Yes										
32	28	Annual updates to the surety amount required by 10 CFR Part 40, Appendix A, Criterion 9, shall be submitted to the NRC at least 3 months prior to the anniversary date, which is designated as June 30 of each year.	Yes										
33	28	Along with each proposed revision to an annual update, the licensee shall submit supporting documentation showing a breakdown of costs and the basis for the cost estimate adjustments for inflation, maintenance of a minimum 15 percent contingency, and reflecting any changes in engineering plans or any other conditions affecting estimated costs for site closure. Appendix C of NUREG-1620, Rev 1, outlines the minimum considerations used by the NRC in the review of site closure cost estimates.	Yes	Basis for some of the costs in the 2016 (most recent) cost estimate is cloudy. There is no reference for the origin of some of the costs. NRC has accepted the cost estimate. Letter dated 30 January 2018 from the NRC, re: 2017 Annual Surety Update for the Homestake Mining Company of California Grants Reclamation Project, Amendment Number 51 to Source Materials License SUA-1471, Docket Number 40-8903									
34	28	The licensee's currently approved surety, a Parent Company Guarantee issued by Barrick Gold Corporation, shall be continuously maintained in an amount no less than \$62,490,490 for the purpose of complying with 10 CFR 40, Criteria 9 and 10, until a replacement is authorized by the NRC.	Yes	Value went up to \$69,976,178. Letter dated 30 January 2018 from the NRC, re: 2017 Annual Surety Update for the Homestake Mining Company of California Grants Reclamation Project, Amendment Number 51 to Source Materials License SUA-1471, Docket Number 40-8903									
35	28	The use of a parent company guarantee necessitates an evaluation of the corporate parent as part of the annual update. The annual submittal must include updated documentation of the 1) letter from the chief financial officer of the parent company, 2) auditor's special report confirmation of chief officer's letter, 3) schedule reconciling amounts in chief financial officer's letter to amounts in financial statements, and 4) parent company guarantee if any changes are appropriate.	Yes										
36	29	Deleted											
37	30	Deleted											
38	31	Deleted											
39	32	The licensee shall follow the guidance set forth in U.S. Nuclear Regulatory Commission, Regulatory Guides 8.22 and 8.31, or NRC approved equivalent.	n/a	See "INC by reference" sheet for RG 8.22 and 8.31 requirements									
40	32B	Any time uranium in a worker's urine specimen exceeds 15 micrograms per liter (µg/l), the annual ALARA audit will indicate what corrective actions were considered or performed.	Yes										
41	33	Deleted											
42	34	Deleted											
43	35	The licensee shall implement a groundwater compliance monitoring program to assess the performance of the groundwater restoration program. This program is separate from the requirements in LC 15	No	GW compliance monitoring program is outdated and needs updating (will require license amendment). NRC has indicated in a previous inspection that the groundwater monitoring plan should be updated for coverage of all of the restoration areas at the site.  Also need to submit a license amendment to transition silver zeolite treatment process from pilot program to production.	A proposed amendment to recognize the two zeolite water treatment systems as the formal method of remediation should be prepared and submitted to the USNRC.	Submitted to the NRC on Dec. 12, 2017 (ADAMS Accession #ML17361A006).  Waiting on NRC response.	HMC	X			X		
44	35.1	The licensee shall implement the groundwater monitoring shown on Table 2 (8-99) submitted September 29, 1999, except that under "Reversal Wells" delete Well KF and replace with Well DZ, and except that well CW2 will remain in the sampling program monitoring annually for G list of parameters, and Cr is to be deleted from the D and F list of parameters. Well DD and one additional monitoring well to the middle of the southeast side of EP3 (to be named later) is to be added to the Table list and will be monitored semi-annually for the 2B and F list of parameters. The additional well is to be installed and monitored quarterly for at least two quarters prior to EP3 becoming operational to determine background water quality for the well.	No	SOP 17 is outdated and needs revision to match LC 35. It still refers to Reversal Well KF (not well DZ), CW2 is not in Table 2, Cr has not been deleted from list of D and F parameters, and well DD as well as the well to be named later (DD27) are not listed in Table 2 of the SOP.	SOP-17 should reflect current sampling practices as required by LC35 and DP-200.  Proposed amendment to groundwater compliance monitoring program will change these again when approved by NRC, but SOP-17 needs to be updated now.	Revise SOP-17  GW monitoring plan changes submitted to the NRC on Nov 20, 2017 (ADAMS Accession #ML18018A102). Waiting on NRC response.	HMC	X					
45	35.1B	The following table (see license) ground water standards are established for each designated aquifer/zone as described in Ground-Water Hydrology for Support of Background Concentration at the Grants Reclamation Site (Hydro-Engineering, December 2001) and Background Water Quality Evaluation of the Chinle Aquifers (Homestake Mining Company and Hydro-Engineering, October 2003).	Yes										
46	35B	The constituents listed in the Table provided in LC35B for the alluvial aquifer must not exceed the specified concentration limit compliance monitoring wells (former point of compliance wells) D1, X and 54	Yes				HMC						
47	35B	The licensee shall propose compliance monitoring wells for the Chinle Mixing Zone and the Upper, Middle and Lower Chinle Non-Mixing Zones in a revised Corrective Action Plan to be submitted to the NRC no later than December 31, 2006.	Yes	New compliance monitoring wells for the Chinle Mixing Zone and the Upper, Middle and Lower Chinle Non-Mixing Zones were included in the revised CAP submitted to NRC. However, this CAP was never approved. Licensee action complete	Ensure new compliance monitoring wells for the Chinle Mixing Zone and the Upper, Middle and Lower Chinle Non-Mixing Zones are included in the next revised CAP submitted to NRC per CO Condition 6.a								
48	35C	Implement the corrective action program described in the September 15, 1989 submittal, as modified by the reverse osmosis system described in the January 15, 1998 submittal, excluding all sampling and reporting requirements for Sample Point 1, with the objective of achieving the concentrations of all constituents listed in LC 35B.	Yes										
49	35C	Composite samples from Sample Point 2 (SP2) will be taken monthly and analyzed for the constituents listed in LC 35B; the results of these analysis will be reported in the semi-annual and annual reports required by LC 15 and 42.	Yes	Condition 11 of the Confirmatory Order directly modified LC 35C when the CO was issued on March 28, 2017.									
50	35D	Operate evaporation ponds EP1, EP2 and EP3, and enhanced evaporation system located in each pond as described in the June 8 and 28, 1990; July 26, August 16, August 19, September 2 and 15, 1994; October 25,2006, February 7, 2007, July 18, 2007 and March 17, 2008 submittals.	No	High volume on pumping rates of leak detection systems on Evaporation Pond Nos. 2 and 3. NRC action level of 775 gallons per acre of liner per day established in cited letters has been exceeded on several previous occasions.  NRC Inspection 2018-01 identified that "Contrary to the above, during short periods of time in 2016 and 2017, the licensee failed to take the immediate actions specified in the July 18, 2007, letter. The licensee's failure to take the required actions in response to exceedances of the action leakage rate in 2016 and parts of 2017 was identified as a violation of License Condition 35.D (NCV 040-08903/1801-01)."	Evaluate if the USNRC action levels should be adjusted similar to the adjustments that were made with the DP-200 renewal.	Four or 5 sumps have been compromised. Issue finding 2-inch ID pumps to fit down compromised sumps. So, trying to locate pumps with a drop-pipe down into sumps. Pulled pumps from sumps at Pond No. 2, and found a couple of sumps with compromised 6-inch piping that apparently was non-spec (thinner walled), same as Pond No. 3.	HMC	X			X		
51	35D	Monitoring and mitigation measures for EP3 contained in the HMC Environmental Report dated January 30, 2007 are incorporated into this LC by reference.	Yes	NRC License conditions are incorporated into SOP-23 and 32.									
52	35E	Submit by March 31 of each year, a performance review of the corrective action program that details the progress towards attaining groundwater protection standards.	Yes										
53	36	The licensee shall complete the site reclamation in accordance with an approved reclamation plan.	Yes - reclamation not yet completed	Reclamation plan should be conducted as described in the Grants Reclamation Project "Manual of Standard Practices". In practice this implements LC number 36.									
54	36	The ground-water corrective action plan shall be conducted as authorized by LC35.	Yes	SOP-15 Table 1 details GW Protection Standards and SOP-17 Table 1 lists constituents and concentrations of concern									
55	36A	To ensure timely compliance with target completion dates established in the Memorandum of Understanding with the Environmental Protection Agency (56FR 55432, October 25, 1991), the licensee shall complete reclamation to control radon emissions as expeditiously as practicable, considering technological feasibility, in accordance with the following schedule:	Yes	This is covered in section below concerning LC 36. Radon Barrier Set in place: For the Large Impoundment which has no evaporation ponds - December 31, 2012 although a final radon barrier to be placed upon completion of flushing of tailings in the LTP. For the Small Impoundment, tailings pile surface areas are essentially covered by evaporation ponds constructed as part of the ground-water corrective action program. Prior to December 31, 2013, the areas not covered by the evaporation ponds shall have final radon barrier in place. Final radon barrier placement over the entire pile shall be completed within 2 years of completion of ground-water corrective actions.									
56	36A.1	Windblown tailings retrieval and placement on the pile for the Large Impoundment - December 31, 1996; and for the Small Impoundment - May 31, 1997.	Yes	Have not seen documented date of excavation and placement however, these dates exist in License SUA-1471 Condition 36 A.1, in amendment 51 which is 20 years later									
57	36A.2	Placement of the interim cover to decrease the potential for tailings dispersal and erosion for the Large Impoundment which has no evaporation ponds - December, 2012; for the Small Impoundment not covered by evaporation ponds shall have the interim cover in place by December 31, 2013.	Yes	Preliminary radon barrier in place: For the Large Impoundment which has no evaporation ponds - December 31, 2012 although a final radon barrier to be placed upon completion of flushing of tailings in the LTP.									
58	36A.2	Final radon barrier placement over the entire Small Impoundment pile shall be completed within 2 years of completion of the ground-water corrective action.	Yes - reclamation not yet completed	Not yet to that point									
59	36B	Reclamation, to ensure required longevity of the covered tailings and ground-water protection, shall be completed as expeditiously as is reasonably achievable, in accordance with the following target dates for completion:	n/a	this is an introductory statement - assessments of individual actionable statements in subsections below									
60	36B.1	Placement of erosion protection as part of reclamation to comply with Criterion 6 of Appendix A of 10 CFR Part 40 : for the Large Impoundment - September 2013; and 2) for Small Impoundment - December 31, 2013.	Yes										
61	36B.2	Projected completion of ground-water corrective actions to meet performance objectives specified in the ground-water corrective plan - December 2013.	Partial	LC number 35 states: "The licensee shall implement a groundwater compliance monitoring program to assess the performance of the groundwater restoration program." SOP -17 has previously provided the basic program, however, SOP-17 does not reference LC 36 as a potentially applicable regulatory basis. SOP-17 is being revised to only be a sampling procedure, so a comprehensive Compliance Monitoring Program is needed.	Modify SOP 17 to indicate LC 36 is applicable as a regulatory basis. Upon completion of the groundwater monitoring program, provide a final report that describes the final actions taken and final results of the program.		HMC	X					
62	36C	Any license amendment request to revise the completion dates specified in Section (36)A must demonstrate that compliance was not technically feasible (including inclement weather, litigation which compels delay to reclamation, or other factors beyond the control of the licensee).	N/A at this time	future consideration									

Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L	
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations							Consolidated Deficiency Groupings					
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5	
63	36D	Any license amendment request to change the target dates specified in Section (36)B must address added risk to the public health and safety and the environment, with due consideration to the economic costs involved and other factors justifying the request such as delays caused by inclement weather, regulatory delays, litigation, or other factors beyond the control of the licensee.	Yes	Consideration added to latest revision of SOP-10									
	36E	As detailed in the licensee's <i>October 28, 2003 submittal</i> , the licensee is to verify compliance with the radon flux standard of 20 pCi/m <sup>3</sup> by performing a radon flux survey for the large and small tailings piles on an annual basis during the milestone extension period specified above (36A and 36B).	No	NRC Inspection Report 040-08903/2016-001. NRC identified a single violation of NRC requirements with three components, viz., that in August 2015, HMC failed to verify through appropriate testing and analysis that radon releases did not exceed 20 pCi/m2s; failed to ensure that a single set of radon flux measurements were made; and failed to have the required 100 measurements from each mill tailings pile. The NRC determined that this constituted a Severity Level IV violation.	Proposal for a variance from regulatory requirements contained in HMC letter dated September 13, 2017 did not meet the intent of 10 CFR 40.14(a) for specific exemptions; thus, HMC was advised to resubmit request for a variance with sufficient detail so the NRC could conduct a technical review of the request. Submit request for variance from regulatory requirements.  NRC directed in its review of HMC's response that "Procedure for monitoring radon flux presented in HMC's September 13, 2017 letter should be implemented on an interim basis, until NRC agrees on longer-term solutions to the radon flux exceedances." Revise appropriate SOPs to reflect any changes.  Development of request for exemption of the radon flux standard on top of the LTP is pending additional radon and radon progeny monitoring to corroborate MILDOS modeling results for public dose with analytical measurement data. At the recent NRC inspection, 1-2 months of additional monitoring data was discussed as an appropriate amount to support the modeling and exemption request. Develop request for exemption	Proposal for a variance from regulatory requirements contained in HMC letter dated September 13, 2017 did not meet the intent of 10 CFR 40.14(a) for specific exemptions; thus, HMC was advised to resubmit request for a variance with sufficient detail so the NRC could conduct a technical review of the request.  NRC directed in its review of HMC's response that "Procedure for monitoring radon flux presented in HMC's September 13, 2017 letter should be implemented on an interim basis, until NRC agrees on longer-term solutions to the radon flux exceedances."  Development of request for exemption of the radon flux standard on top of the LTP is pending additional radon and radon progeny monitoring to corroborate MILDOS modeling results for public dose with analytical measurement data. At the recent NRC inspection, 1-2 months of additional monitoring data was discussed as an appropriate amount to support the modeling and exemption request.	HMC / ERG	X		X	X		
64													
65	36E	An annual report detailing results of this survey shall be submitted with the annual groundwater CAP report as specified in condition 35E not later than March 31 each year.	Yes										
66	37	The licensee shall reclaim the large and small tailings impoundments as stated in the <i>October 29, 1993 submittal</i> .	Yes	Program is implemented and in-progress									
67	37A	The radon barrier for the large tailings pile shall be done in accordance with material types, thicknesses and placement criteria described in <i>Homestake Mining Company's Final Radon Barrier Design for the Large Tailings Pile, submitted June 16, 1995</i> .	Yes - reclamation not yet completed	Preliminary radon barrier in place: For the Large Impoundment which has no evaporation ponds - December 31, 2012 although a final radon barrier to be placed upon completion of flushing of tailings in the LTP.	Perform a final radon survey after final barrier is completed and prepare a final report for submittal.								
68	37B	The final reclamation of the area that includes the small tailings pile and the three evaporation ponds will include the disposal of the contaminated groundwater restoration materials and precipitated solids from the evaporation ponds. The small tailings pile and evaporation ponds will be reconstructed and covered with barrier material. The barrier for the small tailings pile shall be done in accordance with material types, thicknesses and placement criteria described in <i>Homestake Mining Company's Final Radon Barrier Design for the Small Tailings Pile, transmitted to the NRC in August 1996</i> .	Yes - reclamation not yet completed	For the Small Impoundment, tailings pile surface areas are essentially covered by evaporation ponds constructed as part of the ground-water corrective action program. Prior to December 31, 2013, the areas not covered by the evaporation ponds shall have final radon barrier in place. Final radon barrier placement over the entire pile shall be completed within 2 years of completion of ground-water corrective actions.	Perform a final radon survey after final barrier is completed and prepare a final report for submittal.								
69	37C	The licensee shall submit a construction quality control program for NRC review and approval prior to placing any portion of the radon barrier that will ensure that the specification which limits the activity of the radon barrier material to 5 pCi/g above background, is not exceeded.	Yes - reclamation not yet completed	Design of interim barrier did include a construction quality control program with detailed technical specifications. This design was submitted for NRC review and approval prior to placement of the interim cover.  Final cover design will need to include a new construction quality control program to meet this LC.	Review current quality control program and revise or prepare a construction quality control program with detailed specifications for the final design of the final barrier.								
	37D	The construction quality assurance program shall be as defined in the <i>Staff Technical Position on Testing and Inspection (NRC, 1989)</i> . The acceptable correlation between ASTM D 2922 and ASTM D 1556 shall be as defined in the <i>licensee's April 30, 1992 submittal</i> .	Yes - reclamation not yet completed	Design of interim barrier did include a construction quality control program with detailed technical specifications which appropriately included both ASTM standards cited in the LC. This design was submitted for NRC review and approval prior to placement of the interim cover.  Final cover design will need to include a new construction quality control program to meet this LC.	Review current quality control program and revise or prepare a construction quality control program with detailed specifications for the final design of the final barrier.								
70													
71	37E	Omitted											
72	37F	The radon barrier shall not be placed on the top surface of the large tailings impoundment until the settlement has been demonstrated to be at least 90 percent of the expected settlement and the results of this determination have been reviewed and accepted by the NRC.	Yes - reclamation not yet completed	Not yet required, will need to be addressed in updated DRP	Review the final barrier construction plan and ensure all requirements are brings met and incorporated into the final schedule.								
73	37F	The radon barrier may be placed on the large impoundment side slopes following final grading of the impoundment. Care shall be taken to preclude the possibility of ponding.	Yes - reclamation not yet completed	Not yet required, will need to be addressed in updated DRP	Review the final barrier construction plan and ensure all requirements are brings met and incorporated into the final schedule.								
74	37F	Before the erosion protection is placed, it shall be verified that the radon barrier material meets the specifications.	Yes - reclamation not yet completed	Not yet required, will need to be addressed in updated DRP	Review the final barrier construction plan and ensure all requirements are brings met and incorporated into the final schedule.								
75	37G	The adequacy of the erosion protection proposed for the side slopes of both the large and small impoundments shall be evaluated considering any increase in impoundment heights due to the revised radon attenuation cover design.	Yes - reclamation not yet completed	Not yet required, will need to be addressed in updated DRP	Review the final barrier construction plan and ensure all requirements are brings met and incorporated into the final schedule.								
76	37H	Deleted											
77	37I	A complete report shall be provided within 6 months of the completion of construction. This report, including as-built drawings, shall verify the reclamation of the site has been performed according to the approved plan. The report shall also include summaries of results of the quality assurance and control testing to demonstrate that approved specifications were met.	Yes - reclamation not yet completed	Not yet required, will need to be addressed in updated DRP	Prepare a final report for the final barrier placement that shows the construction plan has been completed as required. Include a final radon survey with the report.								
78	37J	The soil cleanup program associated with the decommissioning of the groundwater restoration facilities and small tailings pile reclamation shall be done as specified in the <i>submittal of September 15, 1994, and as modified by the submittal of September, 1995</i> .	Yes - reclamation not yet completed	groundwater cleanup is still ongoing	Ensure the September 1995 date and requirements for completion of the soil cleanup program is completed at the end of the reclamation period and a final report is submitted.								
79	37K	The licensee shall implement a quality control (QC) program for the soil cleanup verification program to include sending at least 10 percent of the samples (randomly selected) to a vendor laboratory for RA-226 analysis.	Partial	Value was included as part of 2013 DRP update which is still in NRC approval cycle.	The current QAP should be reviewed and updated to support this requirement.		HMC	X					
80	37K	If the vendor laboratory (for above analysis) uses gamma spectroscopy, at least 30 percent of these QC samples shall be chemically analyzed.	Partial	Value was included as part of 2013 DRP update which is still in NRC approval cycle.	The current QAP should be reviewed and updated to support this requirement.		HMC	X					
81	38	The licensee is authorized to use water collected as part of the site ground-water corrective action program for conditioning soils during placement of the interim cover or the radon barrier on the tailings impoundments. The licensee shall also analyze samples of the collection water being used for this purpose for radium-226 and 228 content semiannually.	Yes										
82	38	If sample results (collected above) exceed 30 pCi/l combined radium, the licensee shall perform an evaluation of the potential impacts of using this water on the required design of the radon barrier and submit the evaluation for NRC review within 30 days of receipt of sample results.	Yes - reclamation not yet completed	No existing procedure that specifically mentions this LC. Will need to be included in the work plan for placement of the final radon barrier.	This requirement will be required to be included in the appropriate procedure, most likely SOP 11 and SOP 13.								
83	39	Deleted											
	40	All written notices and reports to NRC required under this license shall be addressed: ATTN: Document Control Desk, c/o Deputy Director, Division of Decommissioning, Uranium Recovery, Waste Programs (Mailstop T8-F5), Office of Nuclear Materials Safety and Safeguards, U.S. Nuclear Regulatory Commission, 11545 Rockville Pike, Two White Flint North, Rockville, MD 20852-2738.	Partial	mailing address only found in license - not SOP	Revise appropriate policy and procedures to identify the NRC address for the submittal of written reports. As an alternative, this can be included in the procedure that provides the records retention period or a new document on records and written correspondence in general.		HMC	X	X				
	40	Required telephone notification shall be made to the NRC Operations Center at (301) 816-5100, unless otherwise specified in license conditions.	Partial	phone number only found in license - not SOP	Revise appropriate policy and procedures to identify the NRC phone number for the submittal of verbal reports. As an alternative, this can be included in the procedure that provides the records retention period or a new document on records and written correspondence in general.		HMC	X	X				
	41	Until License termination, the licensee shall maintain documentation on unplanned release of source or 11e.(2) byproduct materials and process chemicals. Documentation shall include, but not be limited to: date, volume, total activity of each radionuclide released, radiological survey results, soil sample results (if taken), corrective actions, results of post remediation surveys (if taken), and a map of the spill location and the impacted areas.	Yes	no unplanned effluent in 2017 meeting reporting threshold established in the SOP									
86													
87	41	The licensee shall have procedures which will evaluate the consequences of the spill or incident/event against 10 CFR 20, Subpart "M", and 10 CFR 40.60 reporting criteria. If the criteria are met, then a report to the NRC Operations Center as required.	Yes	no unplanned effluent in 2017 meeting reporting threshold established in the SOP									
	41	If the licensee is required to report any spills, leaks or excursions of source, 11e.(2) byproduct material and process any chemicals that may have an impact on the environment, or any other incidents/events to State or Federal Agencies, a report shall be made to the NRC Region IV Nuclear Materials Licensing Branch Chief and the NRC Headquarters Project Manager (PM) by telephone or electronic mail (e-mail) within 48 hours of the event.	Yes	no unplanned effluent in 2017 meeting reporting threshold established in the SOP									
88													
89	41	This (telephonic or email) notification shall be followed, within thirty (30) days of the notification by submittal of a written report to NRC Region IV and NRC Headquarters, detailing the conditions leading to the spill or incident/event, corrective actions taken and results achieved.	Yes	no unplanned effluent in 2017 meeting reporting threshold established in the SOP									



Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations							Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
90	42	An annual report will be submitted to the NRC that includes the ALARA audit report, land use survey, monitoring data, corrective action program report, and the effluent and environmental monitoring reports.	Partial	<p>The ALARA Audit Report included in the 2017 Annual Report generally meets the NRC requirements. The annual report also includes a land use survey, an annual inspection of the tailings piles and ponds, water quality data for the tailings wells, well and aquifer water levels. It also provides aquifer monitoring data. Did not see any airborne radioactivity or radon monitoring environmental monitoring data or specific CAP report summary. NRC Inspection Report 040-08903/2017-002 - (URI 040-08903/1702-01)</p> <p>Since the licensee was not performing internal occupational dose monitoring, and had no recent data or concentrations of airborne uranium or radon progeny on top of the large tailings pile, it was unclear whether the licensee was in compliance with 10 CFR 20.1502(b)(1), which requires, in part, that a licensee must monitor employees for occupational intake of radiative material if they are likely to receive greater than 10 percent of the applicable annual limit on intakes from Table 1, columns 1 and 2, of Appendix B to 10 CFR 20. The inspectors concluded that there was not enough information to determine if the licensee was in compliance with regulatory requirements, and this issue was identified as an unresolved item (URI).</p> <p>The licensee has committed to perform a characterization of occupational exposure concentrations of all radionuclides of concern. The characterization will include data collection of internal and external exposures of workers performing routine and non-routine jobs. The inspectors will evaluate this information during a future inspection to determine if the licensee is in compliance with regulatory requirements.</p>	<p>Perform a characterization of occupational exposure concentrations of all radionuclides of concern.</p> <p>1. HMC personnel will begin sending all Field Level Risk Assessments (FLRA) that could involve significant exposures to radioactive materials to the RSO for review and evaluation of the need for a RWP or any special radiation protection measures. This will include any FLRA that involves non-routine work at the evaporation ponds, Zeolite facilities, RO unit, and any drilling activities that could come into contact with contaminated subsurface material.</p> <p>2. The RSO will conduct further training with RST's on recognition of radiological hazards as part of the FLRA procedure to determine whether RSO review of the FLRA is warranted for evaluation of a RWP or any special radiation protection measures.</p> <p>3. RST's will be required to provide detailed descriptions in the FLRA of any work that may involve exposures to radioactive materials.</p> <p>4. The RSO will ensure that he/she has a complete understanding of the scope of any work that warrants evaluation for a RWP.</p> <p>5. RST's will be required to follow all RSO instructions for any radiological protection measures specified by the RSO, and to document implementation of these measures, regardless of whether or not a RWP has been issued for the work.</p> <p>6. SOP 18 (Implementation of RWP's) will be revised as needed to include these corrective actions, as well as clarification of circumstances under which the need for a RWP are required under LC 24.</p> <p>Not numbered - "Finally, this event and the above information will be added to the self assessment under the Confirmatory Order."</p> <p>Develop a report with presentation, analysis and conclusions of all occupational exposure monitoring data prior to next NRC inspection (Sept 2018).</p>	<p>ERG submitted internal Technical Memorandum to HMC on Dec. 4, 2017. Ties in with radon flux issues. A lot in place, most is functional, cold weather-related issue with one continuous monitoring station. Getting good data overall. Heat blankets installed in monitoring stations as needed. New radon monitor station to be installed the week of Jan. 22nd. 2.</p> <p>The revised radon flux measurement procedure and license amendment request is a ways out (possibly several months) as this is contingent on getting enough radon and radon progeny data to support the MILDOS modeling results with respect to public dose (NRC will not accept a variance request on the flux standard based on modeling alone).[2/7/18 update]</p> <p>In a 9/18/2017 email from ERG (Whicker) to NRC (Gersey), the additional commitments listed in the action items column were made for corrective actions to be taken in response to the concern identified in the URI.</p> <p>Monitoring results to date presented at March 2018 NRC inspection. NRC requested that a report with presentation, analysis and conclusions of all occupational exposure monitoring data be developed by the next inspection (anticipated in September 2018).</p>	ERG/HMC	X	X	X	X	X
	43	Before engaging in any development activity not previously assessed by the NRC, the licensee shall administer a cultural resource inventory. All disturbances associated with the proposed development will be completed in compliance with the <i>National Historic Preservation Act (as amended)</i> and its implementing regulations (36 CFR 800) and <i>Archaeological Resources Protection Act (as amended)</i> and its implementing regulations (43 CFR 7) .	No	<p>NRC Inspection Report 040-08903/2017-001</p> <p>Contrary to the above, as of April 24, 2017, the licensee failed to administer a cultural resource inventory before engaging in a developmental activity which was not previously assessed by the NRC. Specifically, the licensee reviewed and approved a change, via Safety and Environmental Review Panel 15-01, which expanded the onsite and offsite groundwater corrective action program and approved a new methodology for injection of groundwater. However, the licensee failed to administer a cultural resource inventory before engaging in this developmental activity, an activity which was not previously assessed by the NRC. This is a Severity Level IV violation</p>	<p>Update SOP-10 SERP process to clearly document evaluation of the impact on cultural resources of new activities not previously assessed by the NRC.</p>	<p>Response letter submitted to NRC on August 3, 2017. HMC update SOP 10, Procedure for Conducting a Safety and Environmental Review Panel (SERP) to more clearly define when environmental reviews, which include assessment of cultural resources, must be performed.</p> <p>HMC prepared SOW for survey updates and sent out to compiled list of vendors. ERM selected for the work. Desktop work initiated in Dec. 2017, with on-Site work starting on Jan. 9th, 2018 and continuing into summer of 2018.</p> <p>ERM will be back on-site when seasons change to complete environmental surveys (ECD late 2018).</p>	Lone Mtn / HMC	X			X	X
	43	In order to ensure that no unapproved disturbance of cultural resources occurs, any work resulting in the discovery of previously unknown cultural artifacts shall cease. The artifacts shall be inventoried and evaluated in accordance with 36 CFR 800 and no disturbance of the area shall occur until the licensee has received authorization from the NRC to proceed.	Yes	Conditional requirement, only applicable if cultural artifacts are encountered.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notification to be made and documentation that is required.							
	43	In the event that bones or prehistoric or historic archaeological materials are uncovered during construction or earth disturbing activities, cease work immediately and protect the remains from further disturbance. If bones are found, immediately notify local law enforcement and the Office of the Medical Investigator pursuant to 18-6-11.2C (Cultural Properties Act NMSA 1978).	Yes	Conditional requirement, only applicable if cultural artifacts are encountered.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notification to be made and documentation that is required.							
	43	In accordance with 18-6-11.2C and/or 36 CFR 800.13(b) (Protection of Historic Properties) , Notify the State Historic Preservation Officer (SHPO) or the State Archaeological immediately.	Yes	Conditional requirement, only applicable if cultural artifacts are encountered.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notification to be made and documentation that is required.							
	43	In either case, the Agency and the SHPO, in consultation with the archaeologist who holds state unmarked human burial excavation and survey permits, will determine the necessary steps to evaluate significance, document, protect or remove material or remains, in compliance with law. Call the SHPO or State Archaeologist at (505) 827-6302.	Yes	Conditional requirement, only applicable if cultural artifacts are encountered.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notification to be made and documentation that is required.							
	44	The Licensee shall perform all activities in accordance with Confirmatory Order No. EA-16-114 dated March 28, 2017.	Yes	Submitted as scheduled per CO Condition 16.								

Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations							Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
97	Generally Applicable and Requirements Incorporated by Reference				Compliance Open Items			Consolidated Deficiency Groupings				
98	10 CFR 40											
99	40.1(a)	The regulations in this part establish procedures and criteria for the issuance of licenses to receive title to, receive, possess, use, transfer, or deliver source and byproduct materials, as defined in this part, and establish and provide for the terms and conditions upon which the Commission will issue such licenses. (Additional requirements applicable to natural and depleted uranium at enrichment facilities are set forth in § 70.22 of this chapter.) These regulations also provide for the disposal of byproduct material and for the long-term care and custody of byproduct material and residual radioactive material. The regulations in this part also establish certain requirements for the physical protection of import, export, and transient shipments of natural uranium.	Yes									
100	40.3	A person subject to the regulations in this part may not receive title to, own, receive, possess, use, transfer, provide for long-term care, deliver or dispose of byproduct material or residual radioactive material as defined in this part or any source material after removal from its place of deposit in nature, unless authorized in a specific or general license issued by the Commission under the regulations in this part.	Yes									
101	40.7(e)(1)	Each specific licensee, each applicant for a specific license, and each general licensee subject to part 19 shall prominently post the revision of NRC Form 3, "Notice to Employees", referenced in 10 CFR 19.11(c).	Yes	10 CFR 19.11 (c) is "Reserved", incorrect reference to Part 19.11(e) in Part 40								
102	40.7(e)(2)	The posting of NRC Form 3 must be at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license, and for 30 days following license termination.	Yes	No mention of NRC Form 3 in the "Manual of Standard Practices"	Include a requirement in the Manual of Standard Practices, Policy section for posting of NRC Form 3. Suggest PGD 1		HMC					
103	40.7(e)(3)	Copies of NRC Form 3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D to part 20 of this chapter, via email to Forms.Resource@nrc.gov, or by visiting the NRC's online library at http://www.nrc.gov/reading-rm/doc-collections/forms/.	Yes	No mention of NRC Form 3 in the "Manual of Standard Practices"	Include a requirement in the Manual of Standard Practices, Policy section for posting of NRC Form 3. Suggest PGD 2		HMC					
104	40.9(a)	Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.	Yes									
105	40.9(b)	Each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public health and safety or common defense and security. Notification shall be provided to the Administrator of the appropriate Regional Office within two working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.	Yes	The Radiation Protection Administrator (RPA) / Radiation Safety Officer (RSO) section of SOP 10 indicates that The RPA's/RSO's (or the RSO's designee) primary purpose on the SERP is to ensure that a proposed change, test, or experiment shall not compromise the protection of the environment, public health, and safety regarding radiological health and safety.								
106	40.41(a)	Each license issued pursuant to the regulations in this part shall be subject to all the provisions of the act, now or hereafter in effect, and to all rules, regulations and orders of the Commission.	Yes	PGD 1 identifies the RSO as responsible for regulatory and license requirements. Have received violations during NRC inspections.								
107	40.41(b)	Neither the license nor any right under the license shall be assigned or otherwise transferred in violation of the provisions of the Act.	N/A	No intent to transfer the license.								
108	40.41(c)	Each person licensed by the Commission pursuant to the regulations in this part shall confine his possession and use of source or byproduct material to the locations and purposes authorized in the license. Except as otherwise provided in the license, a license issued pursuant to the regulations in this part shall carry with it the right to receive, possess, and use source or byproduct material. Preparation for shipment and transport of source or byproduct material shall be in accordance with the provisions of part 71 of this chapter.	Yes	No material being shipped to or off of the site								
109	40.41(d)	Each license issued pursuant to the regulations in this part shall be deemed to contain the provisions set forth in sections 183b.-d., of the Act, whether or not said provisions are expressly set forth in the license.	Yes									
110	40.41(f)(1)	Each licensee shall notify the appropriate NRC Regional Administrator, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of title 11 (Bankruptcy) of the United States Code by or against: (i) The licensee; (ii) An entity (as that term is defined in 11 U.S.C. 101(14)) controlling the licensee or listing the license or licensee as property of the estate; or An affiliate (as that term is defined in 11 U.S.C. 101(2)) of the licensee.	N/A	Bankruptcy is not currently an issue.								
111	40.41(f)(2)	This notification (indicated in 40.41(f)(1)) must indicate: (i) The bankruptcy court in which the petition for bankruptcy was filed; and (ii) The date of the filing of the petition.	N/A	Bankruptcy is not currently an issue.								
112	40.46(a)	No license issued or granted pursuant to the regulations in this part shall be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person, unless the Commission shall after securing full information, find that the transfer is in accordance with the provisions of this act, and shall give its consent in writing.	N/A	License transfer is currently not an issue.								
113	40.46(b)	An application for transfer of license must include: The identity, technical and financial qualifications of the proposed transferee; and Financial assurance for decommissioning information required by § 40.36 or Appendix A to this part, as applicable.	N/A	License transfer is currently not an issue.								
114	40.51(a)	No licensee shall transfer source or byproduct material except as authorized pursuant to this section.	N/A	License transfer is currently not an issue.								
115	40.51(b)	Except as otherwise provided in his license and subject to the provisions of paragraphs (c) and (d) of this section, any licensee may transfer source or byproduct material: (1) To the Department of Energy; To the agency in any Agreement State which regulates radioactive materials pursuant to an agreement with the Commission or the Atomic Energy Commission under section 274 of the Act; (3) To any person exempt from the licensing requirements of the Act and regulations in this part, to the extent permitted under such exemption; (4) To any person in an Agreement State subject to the jurisdiction of that State who has been exempted from the licensing requirements and regulations of that State, to the extent permitted under such exemptions; (5) To any person authorized to receive such source or byproduct material under terms of a specific license or a general license or their equivalents issued by the Commission or an Agreement State; (6) To any person abroad pursuant to an export license issued under part 110 of this chapter; or (7) As otherwise authorized by the commission in writing.	Yes	Ultimately, the DOE will take over the site for post-closure care.								
116	40.51(c)	Before transferring source or byproduct material to a specific licensee of the Commission or an Agreement State or to a general licensee who is required to register with the Commission or with an Agreement State prior to receipt of the source or byproduct material, the licensee transferring the material shall verify that the transferee's license authorizes receipt of the type, form, and quantity of source or byproduct material to be transferred.	N/A	There is no intent to transfer source or byproduct material except eventually to DOE.								
117	40.51(d)	The following methods for the verification required by paragraph (c) of this section are acceptable: (1) The transferor may have in his possession, and read, a current copy of the transferee's specific license or registration certificate; (2) The transferor may have in his possession a certification by the transferee that he is authorized by license or registration certificate to receive the type, form, and quantity of source or byproduct material to be transferred, specifying the license or registration certification number, issuing agency and expiration date; (3) For emergency shipments the transferor may accept oral certification by the transferee that he is authorized by license or registration certificate to receive the type, form, and quantity of source or byproduct material to be transferred, specifying the license or registration certificate number, issuing agency and expiration date; Provided, That the oral certification is confirmed in writing within 10 days; (4) The transferor may obtain other sources of information compiled by a reporting service from official records of the Commission or the licensing agency of an Agreement State as to the identity of licensees and the scope and expiration dates of licenses and registrations; or (5) When none of the methods of verification described in paragraphs (d)(1) to (4) of this section are readily available or when a transferor desires to verify that information received by one of such methods is correct or up-to-date, the transferor may obtain and record confirmation from the Commission or the licensing agency of an Agreement State that the transferee is licensed to receive the source or byproduct material	N/A	There is no intent to transfer source or byproduct material.								
118	10 CFR 40.51(h)	An application for a license to receive, possess, and use source material for uranium or thorium milling or byproduct material, as defined in this part, at sites formerly associated with such milling shall contain proposed written specifications relating to milling operations and the disposition of the byproduct material to achieve the requirements and objectives set forth in appendix A of this part. Each application must clearly demonstrate how the requirements and objectives set forth in appendix A of this part have been addressed. Failure to clearly demonstrate how the requirements and objectives in appendix A have been addressed shall be grounds for refusing to accept an application.	N/A	There is no intent to transfer source or byproduct material.								

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	A	B	C	D	E	F	G	H	I	J	K	L	
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations								Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5	
119	10 CFR 40.61(a)	Each person who receives source or byproduct material pursuant to a license issued pursuant to the regulations in this part shall keep records showing the receipt, transfer, and disposal of this source or byproduct material as follows: (1) The licensee shall retain each record of receipt of source or byproduct material as long as the material is possessed and for three years following transfer or disposition of the source or byproduct material. (2) The licensee who transferred the material shall retain each record of transfer of source or byproduct material until the Commission terminates each license that authorizes the activity that is subject to the recordkeeping requirement. (3) The licensee shall retain each record of disposal of source or byproduct material until the Commission terminates each license that authorizes the activity that is subject to the recordkeeping requirement. (4) If source or byproduct material is combined or mixed with other licensed material and subsequently treated in a manner that makes direct correlation of a receipt record with a transfer, export, or disposition record impossible, the licensee may use evaluative techniques (such as first-in-first-out), to make the records that are required by this Part account for 100 percent of the material received.	N/A	There is no intent to transfer source or byproduct material.									
120	10 CFR 40.61(b)	The licensee shall retain each record that is required by the regulations in this part or by license condition for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified by regulation or license condition, each record must be maintained until the Commission terminates the license that authorizes the activity that is subject to the recordkeeping requirement.	No	PGD 3, SOP 2, and SOP 22 identify recordkeeping requirements. The Recordkeeping section of SOP 10 indicates that SERP reports must be maintained until license termination.  The Roles and Responsibilities section of SOP 27 indicates that the Site Safety Officer or Compliance Manager is responsible for recordkeeping requirements related to Chemical Hazard Communication. SOP 31 - No retention periods are specified SOP 32 identifies recordkeeping requirements associated with leak detection.  In summary, there is no procedure that identifies all recordkeeping requirements. This procedure should be developed.	SOP 31 provides an organization for electronic files but does not provide a retention period or disposition for records and files. Develop a records retention program that will identify the records that are generated to meet regulatory requirements, the retention period for each and their disposition once the retention period has been met.			X	X				
121	Appendix A, Criterion 5	Criteria 5A-5D and new Criterion 13 incorporate the basic groundwater protection standards imposed by the Environmental Protection Agency in 40 CFR Part 192, Subparts D and E (48 FR 45926; October 7, 1983) which apply during operations and prior to the end of closure. Groundwater monitoring to comply with these standards is required by Criterion 7A.	N/A	This is covered below in the sections for criterion for CO Condition 7A									
122	Appendix A, Criterion 5A(1)	The primary groundwater protection standard is a design standard for surface impoundments used to manage uranium and thorium byproduct material. Unless exempted under paragraph 5A(3) of this criterion, surface impoundments (except for an existing portion) must have a liner that is designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil, groundwater, or surface water at any time during the active life (including the closure period) of the impoundment. The liner may be constructed of materials that may allow wastes to migrate into the liner (but not into the adjacent subsurface soil, groundwater, or surface water) during the active life of the facility, provided that impoundment closure includes removal or decontamination of all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate. For impoundments that will be closed with the liner material left in place, the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility.	Yes	All existing surface impoundments (except portions existing prior to the rule) have had the design reviewed and approved by NRC prior to construction and use.									
123	Appendix A, Criterion 5A(2)	The liner required by paragraph 5A(1) above must be: (a) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation; (b) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and (c) Installed to cover all surrounding earth likely to be in contact with the wastes or leachate.	Yes	All existing surface impoundments (except portions existing prior to the rule) have had the design reviewed and approved by NRC prior to construction and use.									
124	Appendix A, Criterion 5A(3)	The applicant or licensee will be exempted from the requirements of paragraph 5A(1) of this criterion if the Commission finds, based on a demonstration by the applicant or licensee, that alternate design and operating practices, including the closure plan, together with site characteristics will prevent the migration of any hazardous constituents into groundwater or surface water at any future time. In deciding whether to grant an exemption, the Commission will consider: (a) The nature and quantity of the wastes; (b) The proposed alternate design and operation; (c) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the impoundment and groundwater or surface water; and (d) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to groundwater or surface water.	Partial - program is implemented	Did not find a design control and process procedure	Develop a design control and process document and incorporate into the QAP.		HMC	X					
125	Appendix A, Criterion 5A(4)	A surface impoundment must be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or abnormal operations, overfilling, wind and wave actions, rainfall, or run-on; from malfunctions of level controllers, alarms, and other equipment; and from human error.	Partial - program is implemented	Did not find a design control and process procedure - performance is through SOP and RPPM use.	Develop a design control and process document and incorporate into the QAP.		HMC	X					
126	Appendix A, Criterion 5A(5)	When dikes are used to form the surface impoundment, the dikes must be designed, constructed, and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the active life of the impoundment.	Yes										
127	Appendix A, Criterion 5B(1)	Uranium and thorium byproduct materials must be managed to conform to the following secondary groundwater protection standard: Hazardous constituents entering the groundwater from a licensed site must not exceed the specified concentration limits in the uppermost aquifer beyond the point of compliance during the compliance period. Hazardous constituents are those constituents identified by the Commission pursuant to paragraph 5B(2) of this criterion. Specified concentration limits are those limits established by the Commission as indicated in paragraph 5B(5) of this criterion. The Commission will also establish the point of compliance and compliance period on a site specific basis through license conditions and orders. The objective in selecting the point of compliance is to provide the earliest practicable warning that the impoundment is releasing hazardous constituents to the groundwater. The point of compliance must be selected to provide prompt indication of groundwater contamination on the hydraulically downgradient edge of the disposal area. The Commission shall identify hazardous constituents, establish concentration limits, set the compliance period, and may adjust the point of compliance if needed to accord with developed data and site information as to the flow of groundwater or contaminants, when the detection monitoring established under Criterion 7A indicates leakage of hazardous constituents from the disposal area.	Partial	Section 2.1.2.5 of the 2017 Annual Report identifies exceedances.  Manual of SOP's TOC SOP-15 is entitled RO Water Plant Sampling and Analysis (HP-9), which is not the correct title	Correct the Manual of Standard Practices Table of Contents to correct the title of SOP 15.		HMC	X					
128	Appendix A, Criterion 5B(2)	A constituent becomes a hazardous constituent subject to paragraph 5B(5) only when the constituent meets all three of the following tests: (a) The constituent is reasonably expected to be in or derived from the byproduct material in the disposal area; (b) The constituent has been detected in the groundwater in the uppermost aquifer; and (c) The constituent is listed in Criterion 13 of this appendix.	Yes										
129	Appendix A, Criterion 5B(3)	Even when constituents meet all three tests in paragraph 5B(2) of this criterion, the Commission may exclude a detected constituent from the set of hazardous constituents on a site specific basis if it finds that the constituent is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to exclude constituents, the Commission will consider the following: (a) Potential adverse effects on groundwater quality, considering: (i) The physical and chemical characteristics of the waste in the licensed site, including its potential for migration; (ii) The hydrogeological characteristics of the facility and surrounding land; (iii) The quantity of groundwater and the direction of groundwater flow; (iv) The proximity and withdrawal rates of groundwater users; (v) The current and future uses of groundwater in the area; (vi) The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality; (vii) The potential for health risks caused by human exposure to waste constituents; (viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; (ix) The persistence and permanence of the potential adverse effects on hydraulically-connected surface water quality, considering: (i) The volume and physical and chemical characteristics of the waste in the licensed site; (ii) The hydrogeological characteristics of the facility and surrounding land; (iii) The quantity and quality of groundwater, and the direction of groundwater flow; (iv) The patterns of rainfall in the region; (v) The proximity of the licensed site to surface waters; (vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters; (vii) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface-water quality; (viii) The potential for health risks caused by human exposure to waste constituents; (ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and (x) The persistence and permanence of the potential adverse effects.	Yes	NRC has not excluded any constituent									
130	Appendix A, Criterion 5B(4)	In making any determinations under paragraphs 5B(3) and 5B(6) of this criterion about the use of groundwater in the area around the facility, the Commission will consider any identification of underground sources of drinking water and exempted aquifers made by the Environmental Protection Agency.	Yes										
131	Appendix A, Criterion 5B(5)	At the point of compliance, the concentration of a hazardous constituent must not exceed: (a) The Commission approved background concentration of that constituent in the groundwater; (b) The respective value given in the table in paragraph 5C if the constituent is listed in the table and if the background level of the constituent is below the value listed; or (c) An alternate concentration limit established by the Commission.	Yes										

Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L	
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations								Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5	
	Appendix A, Criterion 5B(6)	Conceptually, background concentrations pose no incremental hazards and the drinking water limits in paragraph 5C state acceptable hazards but these two options may not be practically achievable at a specific site. Alternate concentration limits that present no significant hazard may be proposed by licensees for Commission consideration. Licensees must provide the basis for any proposed limits including consideration of practicable corrective actions, that limits are as low as reasonably achievable, and information on the factors the Commission must consider. The Commission will establish a site specific alternate concentration limit for a hazardous constituent as provided in paragraph 5B(5) of this criterion if it finds that the proposed limit is as low as reasonably achievable, after considering practicable corrective actions, and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. In making the present and potential hazard finding, the Commission will consider the following factors: (a) Potential adverse effects on groundwater quality, considering: (i) The physical and chemical characteristics of the waste in the licensed site including its potential for migration; (ii) The hydrogeological characteristics of the facility and surrounding land; (iii) The quantity of groundwater and the direction of groundwater flow; (iv) The proximity and withdrawal rates of groundwater users; (v) The current and future uses of groundwater in the area; (vi) The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality; (vii) The potential for health risks caused by human exposure to waste constituents; (viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; (ix) The persistence and permanence of the potential adverse effects. (b) Potential adverse effects on hydraulically-connected surface water quality, considering: (i) The volume and physical and chemical characteristics of the waste in the licensed site; (ii) The hydrogeological characteristics of the facility and surrounding land; (iii) The quantity and quality of groundwater, and the direction of groundwater flow; (iv) The patterns of rainfall in the region; (v) The proximity of the licensed site to surface waters; (vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters; (vii) The existing quality of surface water including other sources of contamination and the cumulative impact on surface water quality; (viii) The potential for health risks caused by human exposure to waste constituents; (ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and (x) The persistence and permanence of the potential adverse effects.	Yes	Only terrestrial effluents (airborne radionuclides and sources of external gamma radiation) are considered in public dose estimates as local residents obtain water for domestic use only from treated municipal water supplies (i.e. an intake pathway for impacted groundwater ingestion does not exist).									
132													
133	Appendix A, Criterion 5C	5C-Maximum Values for Groundwater Protection (see table in CFR)	Yes	Constituents and values in Table 1 for HMC site are established per the allowance of 5B(6) on a site-specific basis (license condition 35) versus those provided in 10 CFR Part 40, Appendix A, Criterion 5C.			HMC						
	Appendix A, Criterion 5D	If the groundwater protection standards established under paragraph 5B(1) of this criterion are exceeded at a licensed site, a corrective action program must be put into operation as soon as is practicable, and in no event later than eighteen (18) months after the Commission finds that the standards have been exceeded. The licensee shall submit the proposed corrective action program and supporting rationale for Commission approval prior to putting the program into operation, unless otherwise agreed to by the Commission. The objective of the program is to return hazardous constituent concentration levels in groundwater to the concentration levels set as standards. The licensee's proposed program must address removing hazardous constituents that have entered the groundwater at the point of compliance or treating them in place. The program must also address removing or treating any hazardous constituents that exceed concentration limits in groundwater between the point of compliance and the downgradient facility property boundary. The licensee shall continue corrective action measures to the extent necessary to achieve and maintain compliance with the groundwater standard. The Commission will determine when the licensee may terminate corrective action measures based on data from the groundwater monitoring program and other information that provide reasonable assurance that the groundwater protection standard will not be exceeded.	Yes - program is implemented										
134													
135	Appendix A, Criterion 5E	In developing and conducting groundwater protection programs, applicants and licensees shall also consider the following:	N/A										
	Appendix A, Criterion 5E(1)	Installation of bottom liners (Where synthetic liners are used, a leakage detection system must be installed immediately below the liner to ensure major failures are detected if they occur. This is in addition to the groundwater monitoring program conducted as provided in Criterion 7. Where clay liners are proposed or relatively thin, in-situ clay soils are to be relied upon for seepage control, tests must be conducted with representative tailings solutions and clay materials to confirm that no significant deterioration of permeability or stability properties will occur with continuous exposure of clay to tailings solutions. Tests must be run for a sufficient period of time to reveal any effects if they are going to occur (in some cases deterioration has been observed to occur rather rapidly after about nine months of exposure)).	Yes	LTP and STP design predate the Appendix A criterion. All impoundments since have used synthetic liners with leak detection capability.			HMC						
136													
	Appendix A, Criterion 5E(3)	Dewatering of tailings by process devices and/or in-situ drainage systems (At new sites, tailings must be dewatered by a drainage system installed at the bottom of the impoundment to lower the phreatic surface and reduce the driving head of seepage, unless tests show tailings are not amenable to such a system. Where in-situ dewatering is to be conducted, the impoundment bottom must be graded to assure that the drains are at a low point. The drains must be protected by suitable filter materials to assure that drains remain free running. The drainage system must also be adequately sized to assure good drainage).	Yes	Program is implemented									
137													
138	Appendix A, Criterion 5E(4)	Neutralization to promote immobilization of hazardous constituents.	YES	Lime is used as a pretreatment to the RO system as a neutralizing agent.									
	Appendix A, Criterion 5F	Where groundwater impacts are occurring at an existing site due to seepage, action must be taken to alleviate conditions that lead to excessive seepage impacts and restore groundwater quality. The specific seepage control and groundwater protection method, or combination of methods, to be used must be worked out on a site-specific basis. Technical specifications must be prepared to control installation of seepage control systems. A quality assurance, testing, and inspection program, which includes supervision by a qualified engineer or scientist, must be established to assure the specifications are met.	Yes				HMC						
139													
	Appendix A, Criterion 5G	In support of a tailings disposal system proposal, the applicant/operator shall supply information concerning the following: (1) The chemical and radioactive characteristics of the waste solutions. (2) The characteristics of the underlying soil and geologic formations particularly as they will control transport of contaminants and solutions. This includes detailed information concerning extent, thickness, uniformity, shape, and orientation of underlying strata. Hydraulic gradients and conductivities of the various formations must be determined. This information must be gathered from borings and field survey methods taken within the proposed impoundment area and in surrounding areas where contaminants might migrate to groundwater. The information gathered on boreholes must include both geologic and geophysical logs in sufficient number and degree of sophistication to allow determining significant discontinuities, fractures, and channelled deposits of high hydraulic conductivity. If field survey methods are used, they should be in addition to and calibrated with borehole logging. Hydrologic parameters such as permeability may not be determined on the basis of laboratory analysis of samples alone; a sufficient amount of field testing (e.g., pump tests) must be conducted to assure actual field properties are adequately understood. Testing must be conducted to allow estimating chemi-sorption attenuation properties of underlying soil and rock. (3) Location, extent, quality, capacity and current uses of any groundwater at and near the site.	Yes	All conditions of NRC license and Discharge Permit however, I can not find design information or procedure to support this specific condition	All conditions of NRC license and Discharge Permit however, design information or procedure to support this specific condition cannot be found. Identify this information and ensure it is included in final transfer package to DOE or the State.								
140													
141	Appendix A, Criterion 5H	Steps must be taken during stockpiling of ore to minimize penetration of radionuclides into underlying soils; suitable methods include lining and/or compaction of ore storage areas.	n/a	Provision is very specific to "stockpiling of ore" and not the tailings piles.									
	Appendix A, Criterion 6(1)	In disposing of waste byproduct material, licensees shall place an earthen cover (or approved alternative) over tailings or wastes at the end of milling operations and shall close the waste disposal area in accordance with a design 1 which provides reasonable assurance of control of radiological hazards to (i) be effective for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years, and (ii) limit releases of radon-222 from uranium byproduct materials, and radon-220 from thorium byproduct materials, to the atmosphere so as not to exceed an average2 release rate of 20 picocuries per square meter per second (pCi/m2s) to the extent practicable throughout the effective design life determined pursuant to 1(i) of this Criterion. In computing required tailings cover thicknesses, moisture in soils in excess of amounts found normally in similar soils in similar circumstances may not be considered. Direct gamma exposure from the tailings or wastes should be reduced to background levels. The effects of any thin synthetic layer may not be taken into account in determining the calculated radon exhalation level. If non-soil materials are proposed as cover materials, it must be demonstrated that these materials will not crack or degrade by differential settlement, weathering, or other mechanism, over long-term intervals.	Yes, but final barrier not yet placed		Since cover has not been placed over the tailings, this requirement cannot be completed. Once the final cover is in place, perform a survey to ensure all requirements are in place and document actions performed and final survey results in a final document.								
142													
	Appendix A, Criterion 6(2)	As soon as reasonably achievable after emplacement of the final cover to limit releases of radon-222 from uranium byproduct material and prior to placement of erosion protection barriers or other features necessary for long-term control of the tailings, the licensee shall verify through appropriate testing and analysis that the design and construction of the final radon barrier is effective in limiting releases of radon-222 to a level not exceeding 20 pCi/m2s averaged over the entire pile or impoundment using the procedures described in 40 CFR part 61, appendix B, Method 115, or another method of verification approved by the Commission as being at least as effective in demonstrating the effectiveness of the final radon barrier.	Yes, but final barrier not yet placed		Since cover has not been placed over the tailings, this requirement cannot be completed. Once the final cover is in place, perform a survey to ensure all requirements are in place and document actions performed and final survey results in a final document.								
143													
	Appendix A, Criterion 6(3)	When phased emplacement of the final radon barrier is included in the applicable reclamation plan, the verification of radon-222 release rates required in paragraph (2) of this criterion must be conducted for each portion of the pile or impoundment as the final radon barrier for that portion is emplaced.	Yes	Radon Barrier Set in place: For the Large Impoundment which has no evaporation ponds - December 31, 2012 although a final radon barrier to be placed upon completion of flushing of tailings in the LTP. For the Small Impoundment, tailings pile surface areas are essentially covered by evaporation ponds constructed as part of the ground-water corrective action program. Prior to December 31, 2013, the areas not covered by the evaporation ponds shall have final radon barrier in place. Final radon barrier placement over the entire pile shall be completed within 2 years of completion of ground-water corrective actions.									
144													

Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L	
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations								Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5	
145	Appendix A, Criterion 6(4)	Within ninety days of the completion of air testing and analysis relevant to the required verification in paragraphs (2) and (3) of this criterion, the uranium mill licensee shall report to the Commission the results detailing the actions taken to verify that levels of release of radon-222 do not exceed 20 pCi/m2s when averaged over the entire pile or impoundment. The licensee shall maintain records until termination of the license documenting the source of input parameters including the results of all measurements on which they are based, the calculations and/or analytical methods used to derive values for input parameters, and the procedure used to determine compliance. These records shall be kept in a form suitable for transfer to the custodial agency at the time of transfer of the site to DOE or a State for long-term care if requested.	Yes, but final barrier not yet placed		Upon completion of the placement of the final cover, submit a final report to the NRC showing all requirements have been met. In accordance with the new records retention and disposition program as previously identified, maintain all records until transferred to DOE or the State. Prepare a procedure for this turnover process that defines the required records and identifies all records being transferred.								
146	Appendix A, Criterion 6(5)	Near surface cover materials (i.e., within the top three meters) may not include waste or rock that contains elevated levels of radium; soils used for near surface cover must be essentially the same, as far as radioactivity is concerned, as that of surrounding surface soils. This is to ensure that surface radon exhalation is not significantly above background because of the cover material itself.	Yes, but final barrier not yet placed	the Large Tailings Pile which is LC 37A). The SOP listed dictates requirements for disposing waste into the STP									
147	Appendix A, Criterion 6(6)	The design requirements in this criterion for longevity and control of radon releases apply to any portion of a licensed and/or disposal site unless such portion contains a concentration of radium in land, averaged over areas of 100 square meters, which, as a result of byproduct material, does not exceed the background level by more than: (i) 5 picocuries per gram (pCi/g) of radium-226, or, in the case of thorium byproduct material, radium-228, averaged over the first 15 centimeters (cm) below the surface, and (ii) 15 pCi/g of radium-226, or, in the case of thorium byproduct material, radium-228, averaged over 15-cm thick layers more than 15 cm below the surface.	Yes, but final barrier not yet placed		Upon completion of the placement of the final cover, prepare a report that shows the placement of the cover and tailings material meet the subsurface radium acceptable criteria for long term radon releases.								
148	Appendix A, Criterion 6(6)	Byproduct material containing concentrations of radionuclides other than radium in soil, and surface activity on remaining structures, must not result in a total effective dose equivalent (TEDE) exceeding the dose from cleanup of radium contaminated soil to the above standard (benchmark dose), and must be at levels which are as low as is reasonably achievable. If more than one residual radionuclide is present in the same 100-square-meter area, the sum of the ratios for each radionuclide of concentration present to the concentration limit will not exceed "1" (unity). A calculation of the potential peak annual TEDE within 1000 years to the average member of the critical group that would result from applying the radium standard (not including radon) on the site must be submitted for approval. The use of decommissioning plans with benchmark doses which exceed 100 mrem/yr, before application of ALARA, requires the approval of the Commission after consideration of the recommendation of the NRC staff. This requirement for dose criteria does not apply to sites that have decommissioning plans for soil and structures approved before June 11, 1999.	Yes, but final barrier not yet placed	Section 2.3 of the ALAR A report details NRC inspection findings on radon flux measurement and calculation methodology	Review section 4.5.2 of the RPPM and ensure these requirements are met and that documentation is available to support these findings.								
149	Appendix A, Criterion 6(7)	The licensee shall also address the nonradiological hazards associated with the wastes in planning and implementing closure. The licensee shall ensure that disposal areas are closed in a manner that minimizes the need for further maintenance. To the extent necessary to prevent threats to human health and the environment, the licensee shall control, minimize, or eliminate post-closure escape of nonradiological hazardous constituents, leachate, contaminated rainwater, or waste decomposition products to the ground or surface waters or to the atmosphere.	Yes, but final barrier not yet placed		As part of the final closure report, discuss the design details that ensures the measures that have been taken to ensure that non-radiological hazards have been addressed as related to human health and the environment.								
150	Appendix A, Criterion 6A(1)	For impoundments containing uranium byproduct materials, the final radon barrier must be completed as expeditiously as practicable considering technological feasibility after the pile or impoundment ceases operation in accordance with a written, Commission-approved reclamation plan. (The term as expeditiously as practicable considering technological feasibility as specifically defined in the Introduction of this appendix includes factors beyond the control of the licensee.) Deadlines for completion of the final radon barrier and, if applicable, the following interim milestones must be established as a condition of the individual license: windblown tailings retrieval and placement on the pile and interim stabilization (including dewatering or the removal of freestanding liquids and recontouring). The placement of erosion protection barriers or other features necessary for long-term control of the tailings must also be completed in a timely manner in accordance with a written, Commission-approved reclamation plan.	Yes, but final barrier not yet placed	Radon Barrier Set in place: For the Large Impoundment which has no evaporation ponds - December 31, 2012 although a final radon barrier to be placed upon completion of flushing of tailings in the LTP. For the Small Impoundment, tailings pile surface areas are essentially covered by evaporation ponds constructed as part of the ground-water corrective action program. Prior to December 31, 2013, the areas not covered by the evaporation ponds shall have final radon barrier in place. Final radon barrier placement over the entire pile shall be completed within 2 years of completion of ground-water corrective actions.									
151	Appendix A, Criterion 6A(2)	The Commission may approve a licensee's request to extend the time for performance of milestones related to emplacement of the final radon barrier if, after providing an opportunity for public participation, the Commission finds that the licensee has adequately demonstrated in the manner required in paragraph (2) of Criterion 6 that releases of radon-222 do not exceed an average of 20 pCi/m2 s. If the delay is approved on the basis that the radon releases do not exceed 20 pCi/m2s, a verification of radon levels, as required by paragraph (2) of Criterion 6, must be made annually during the period of delay. In addition, once the Commission has established the date in the reclamation plan for the milestone for completion of the final radon barrier, the Commission may extend that date based on cost if, after providing an opportunity for public participation, the Commission finds that the licensee is making good faith efforts to emplace the final radon barrier, the delay is consistent with the definition of available technology, and the radon releases caused by the delay will not result in a significant incremental risk to the public health.	No	Not met for 2016 - section 2.6 of annual report.  From section 2.6 of 2017 Annual Report - NOV issued by NRC as area-weighted average radon flux on the LTP was 21.73 pCi.m2-s. Radon Barrier Set in place: For the Large Impoundment which has no evaporation ponds - December 31, 2012 although a final radon barrier to be placed upon completion of flushing of tailings in the LTP. For the Small Impoundment, tailings pile surface areas are essentially covered by evaporation ponds constructed as part of the ground-water corrective action program. Prior to December 31, 2013, the areas not covered by the evaporation ponds shall have final radon barrier in place. Final radon barrier placement over the entire pile shall be completed within 2 years of completion of ground-water corrective actions.	Define actions that are being taken to reduce radon flux amounts while barrier is not complete.	HMC	X				X	X	
152	Appendix A, Criterion 6A(3)	The Commission may authorize by license amendment, upon licensee request, a portion of the impoundment to accept uranium byproduct material or such materials that are similar in physical, chemical, and radiological characteristics to the uranium mill tailings and associated wastes already in the pile or impoundment, from other sources, during the closure process. No such authorization will be made if it results in a delay or impediment to emplacement of the final radon barrier over the remainder of the impoundment in a manner that will achieve levels of radon-222 releases not exceeding 20 pCi/m2s averaged over the entire impoundment. The verification required in paragraph (2) of Criterion 6 may be completed with a portion of the impoundment being used for further disposal if the Commission makes a final finding that the impoundment will continue to achieve a level of radon-222 releases not exceeding 20 pCi/m2 s averaged over the entire impoundment. In this case, after the final radon barrier is complete except for the continuing disposal area, (a) only byproduct material will be authorized for disposal, (b) the disposal will be limited to the specified existing disposal area, and (c) this authorization will only be made after providing opportunity for public participation. Reclamation of the disposal area, as appropriate, must be completed in a timely manner after disposal operations cease in accordance with paragraph (1) of Criterion 6; however, these actions are not required to be complete as part of meeting the deadline for final radon barrier construction.	No	Not met for 2016 - section 2.6 of annual report.  From section 2.6 of 2017 Annual Report - NOV issued by NRC as area-weighted average radon flux on the LTP was 21.73 pCi.m2-s. Radon Barrier Set in place: For the Large Impoundment which has no evaporation ponds - December 31, 2012 although a final radon barrier to be placed upon completion of flushing of tailings in the LTP. For the Small Impoundment, tailings pile surface areas are essentially covered by evaporation ponds constructed as part of the ground-water corrective action program. Prior to December 31, 2013, the areas not covered by the evaporation ponds shall have final radon barrier in place. Final radon barrier placement over the entire pile shall be completed within 2 years of completion of ground-water corrective actions.	Define actions that are being taken to reduce radon flux amounts while barrier is not complete.	HMC					X	X	
153	Appendix A, Criterion 7	At least one full year prior to any major site construction, a preoperational monitoring program must be conducted to provide complete baseline data on a milling site and its environs. Throughout the construction and operating phases of the mill, an operational monitoring program must be conducted to measure or evaluate compliance with applicable standards and regulations; to evaluate performance of control systems and procedures; to evaluate environmental impacts of operation; and to detect potential long-term effects.	Yes	Baseline survey was not performed prior to original placement of tailings. Process for review and monitoring currently exists									
154	Appendix A, Criterion 7A	The licensee shall establish a detection monitoring program needed for the Commission to set the site-specific groundwater protection standards in paragraph 5B(1) of this appendix. For all monitoring under this paragraph the licensee or applicant will propose for Commission approval as license conditions which constituents are to be monitored on a site specific basis. A detection monitoring program has two purposes. The initial purpose of the program is to detect leakage of hazardous constituents from the disposal area so that the need to set groundwater protection standards is monitored. If leakage is detected, the second purpose of the program is to generate data and information needed for the Commission to establish the standards under Criterion 5B. The data and information must provide a sufficient basis to identify those hazardous constituents which require concentration limit standards and to enable the Commission to set the limits for those constituents and the compliance period. They may also need to provide the basis for adjustments to the point of compliance. For licenses in effect September 30, 1983, the detection monitoring programs must have been in place by October 1, 1984. For licenses issued after September 30, 1983, the detection monitoring programs must be in place when specified by the Commission in orders or license conditions. Once groundwater protection standards have been established pursuant to paragraph 5B(1), the licensee shall establish and implement a compliance monitoring program. The purpose of the compliance monitoring program is to determine that the hazardous constituent concentrations in groundwater continue to comply with the standards set by the Commission. In conjunction with a corrective action program, the licensee shall establish and implement a corrective action monitoring program. The purpose of the corrective action monitoring program is to demonstrate the effectiveness of the corrective actions. Any monitoring program required by this paragraph may be based on existing monitoring programs to the extent the existing programs can meet the stated objective for the program.	Yes										
155	Appendix A, Criterion 8A	Daily inspections of tailings or waste retention systems must be conducted by a qualified engineer or scientist and documented. The licensee shall retain the documentation for each daily inspection as a record for three years after the documentation is made. The appropriate NRC regional office as indicated in appendix D to 10 CFR part 20 of this chapter, or the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, must be immediately notified of any failure in a tailings or waste retention system that results in a release of tailings or waste into unrestricted areas, or of any unusual conditions (conditions not contemplated in the design of the retention system) that if not corrected could indicate the potential or lead to failure of the system and result in a release of tailings or waste into unrestricted areas.	Partial	Unknown if inspector is engineer or scientist.	Ensure inspector is a qualified engineer or scientist not a technician. Provide documentation of the inspector qualifications along with the reports. Revise appropriate policy and procedures to identify the NRC address for the submittal of written reports. As an alternative, this can be included in the procedure that provides the records retention period or a new document on records and written correspondence in general.	HMC	X	X	X				
156	Appendix A, Criterion 9a	Financial surety arrangements must be established by each mill operator before the commencement of operations to assure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas	Yes										



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2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
157	Appendix A, Criterion 9a	The amount of funds to be ensured by such surety arrangements must be based on Commission-approved cost estimates in a Commission-approved plan, or a proposed revision to the plan submitted to the Commission for approval, if the proposed revision contains a higher cost estimate. for: (1) Decontamination and decommissioning of mill buildings and the milling site to levels which allow unrestricted use of these areas upon decommissioning, and (2) The reclamation of tailings and/or waste areas in accordance with technical criteria delineated in Section I of this appendix.	Yes									
158	Appendix A, Criterion 9b	Each cost estimate must contain: (1) A detailed cost estimate for decontamination, decommissioning, and reclamation, in an amount reflecting: (i) The cost of an independent contractor to perform the decontamination, decommissioning and reclamation activities; and (ii) An adequate contingency factor; (2) An estimate of the amount of radioactive contamination in onsite subsurface material; (3) Identification of and justification for using the key assumptions contained in the DCE; and (4) A description of the method of assuring funds for decontamination, decommissioning, and reclamation.	Yes									
159	Appendix A, Criterion 9c	The licensee shall submit this plan in conjunction with an environmental report that addresses the expected environmental impacts of the milling operation, decommissioning and tailings reclamation, and evaluates alternatives for mitigating these impacts. The plan must include a signed original of the financial instrument obtained to satisfy the surety arrangement requirements of this criterion (unless a previously submitted and approved financial instrument continues to cover the cost estimate for decommissioning). The surety arrangement must also cover the cost estimate and the payment of the charge for long-term surveillance and control required by Criterion 10 of this section.	Yes									
160	Appendix A, Criterion 9d	To avoid unnecessary duplication and expense, the Commission may accept financial sureties that have been consolidated with financial or surety arrangements established to meet requirements of other Federal or state agencies and/or local governing bodies for decommissioning, decontamination, reclamation, and long-term site surveillance and control, provided such arrangements are considered adequate to satisfy these requirements and that the portion of the surety which covers the decommissioning and reclamation of the mill, mill tailings site and associated areas, and the long-term funding charge is clearly identified and committed for use in accomplishing these activities.	Yes									
161	Appendix A, Criterion 9e	The licensee's surety mechanism will be reviewed annually by the Commission to assure, that sufficient funds would be available for completion of the reclamation plan if the work had to be performed by an independent contractor.	Yes									
162	Appendix A, Criterion 9f	The amount of surety liability should be adjusted to recognize any increases or decreases resulting from: (1) Inflation; (2) Changes in engineering plans; (3) Activities performed; (4) Spills, leakage or migration of radioactive material producing additional contamination in onsite subsurface material that must be remediated to meet applicable remediation criteria; (5) Waste inventory increasing above the amount previously estimated; (6) Waste disposal costs increasing above the amount previously estimated; (7) Facility modifications; (8) Changes in authorized possession limits; (9) Actual remediation costs that exceed the previous cost estimate; (10) Onsite disposal; and (11) Any other conditions affecting costs.	Yes									
163	Appendix A, Criterion 9g	Regardless of whether reclamation is phased through the life of the operation or takes place at the end of operations, an appropriate portion of surety liability must be retained until final compliance with the reclamation plan is determined.	Yes									
164	Appendix A, Criterion 9h	The appropriate portion of surety liability retained until final compliance with the reclamation plan is determined will be at least sufficient at all times to cover the costs of decommissioning and reclamation of the areas that are expected to be disturbed before the next license renewal. The term of the surety mechanism must be open ended, unless it can be demonstrated that another arrangement would provide an equivalent level of assurance. This assurance would be provided with a surety instrument which is written for a specified time (e.g., 5 years) and which must be automatically renewed unless the surety notifies the beneficiary (the Commission or the State regulatory agency) and the principal (the licensee) with reasonable time (e.g., 90 days) before the renewal date of their intention not to renew. In such a situation the surety requirement still exists and the licensee would be required to submit an acceptable replacement surety within a brief time to allow at least 60 days for the regulatory agency to collect.	Yes									
165	Appendix A, Criterion 9i	Proof of forfeiture must not be necessary to collect the surety. In the event that the licensee can not provide an acceptable replacement surety within the required time, the surety shall be automatically collected before its expiration. The surety instrument must provide for collection of the full face amount immediately on demand without reduction for any reason, except for trustee fees and expenses provided for in a trust agreement, and that the surety will not refuse to make full payment. The conditions described previously would have to be clearly stated on any surety instrument which is not open-ended, and must be agreed to by all parties. Financial surety arrangements generally acceptable to the Commission are: trust funds, Surety bonds; Irrevocable letters of credit; and Combinations of the financial surety arrangements or other types of arrangements as may be approved by the Commission. If a trust is not used, then a standby trust must be set up to receive funds in the event the Commission or State regulatory agency exercises its right to collect the surety. The surety arrangement and the surety or trustee, as applicable, must be acceptable to the Commission. Self insurance, or any arrangement which essentially constitutes self insurance (e.g., a contract with a State or Federal agency), will not satisfy the surety requirement because this provides no additional assurance other than that which already exists through license requirements.	Yes									
166	Appendix A, Criterion 10	A minimum charge of \$250,000 (1978 dollars) to cover the costs of long-term surveillance must be paid by each mill operator to the general treasury of the United States or to an appropriate State agency prior to the termination of a uranium or thorium mill license.	Yes	long-term surveillance fee of \$900,738 in 2017 annual surety update								
167	Appendix A, Criterion 10	If site surveillance or control requirements at a particular site are determined, on the basis of a site-specific evaluation, to be significantly greater than those specified in Criterion 12 (e.g., if fencing is determined to be necessary), variance in funding requirements may be specified by the Commission. In any case, the total charge to cover the costs of long-term surveillance must be such that, with an assumed 1 percent annual real interest rate, the collected funds will yield interest in an amount sufficient to cover the annual costs of site surveillance. The total charge will be adjusted annually prior to actual payment to recognize inflation. The inflation rate to be used is that indicated by the change in the Consumer Price Index published by the U.S. Department of Labor, Bureau of Labor Statistics.	Yes									
168	Appendix A, Criterion 11C	Title to the byproduct material licensed under this Part and land, including any interests therein (other than land owned by the United States or by a State) which is used for the disposal of any such byproduct material, or is essential to ensure the long term stability of such disposal site, must be transferred to the United States or the State in which such land is located, at the option of such State. In view of the fact that physical isolation must be the primary means of long-term control, and Government land ownership is a desirable supplementary measure, ownership of certain severable subsurface interests (for example, mineral rights) may be determined to be unnecessary to protect the public health and safety and the environment. In any case, however, the applicant/operator must demonstrate a serious effort to obtain such subsurface rights, and must, in the event that certain rights cannot be obtained, provide notification in local public land records of the fact that the land is being used for the disposal of radioactive material and is subject to either an NRC general or specific license prohibiting the disruption and disturbance of the tailings. In some rare cases, such as may occur with deep burial where no ongoing site surveillance will be required, surface land ownership transfer requirements may be waived. For licenses issued before November 8, 1981, the Commission may take into account the status of the ownership of such land, and interests therein, and the ability of a licensee to transfer title and custody thereof to the United States or a State.	Yes	SER of the 2017 annual surety update "upon closure, the site will be transferred to the DOE"								
169	Appendix A, Criterion 12	The final disposition of tailings, residual radioactive material, or wastes at milling sites should be such that ongoing active maintenance is not necessary to preserve isolation. As a minimum, annual site inspections must be conducted by the government agency responsible for long-term care of the disposal site to confirm its integrity and to determine the need, if any, for maintenance and/or monitoring. Results of the inspections for all the sites under the licensee's jurisdiction will be reported to the Commission annually within 90 days of the last site inspection in that calendar year.	Yes	The NRC finds that the surety portion for the minimum long-term surveillance in appropriate. In addition, staff noted that the \$7,485,688 increase in the DCE from the last approved annual surety update is due to water treatment activities to be completed by HMC as part of its long-term care and maintenance of the site.								
170	Appendix A, Criterion 12	Any site where unusual damage or disruption is discovered during the inspection, however, will require a preliminary site inspection report to be submitted within 60 days.	N/A	Not yet required to be implemented								
171	Appendix A, Criterion 12	On the basis of a site specific evaluation, the Commission may require more frequent site inspections if necessary due to the features of a particular disposal site. In this case, a preliminary inspection report is required to be submitted within 60 days following each inspection.	N/A	Not yet required to be implemented								
172	10 CFR 20											
173	20.1008(b)	The applicable section of §§ 20.1001-20.2402 must be used in lieu of requirements in the standards for protection against radiation in effect prior to January 1, 1994 that are cited in license conditions or technical specifications, except as specified in paragraphs (c), (d), and (e) of this section. If the requirements of this part are more restrictive than the existing license condition, then the licensee shall comply with this part unless exempted by paragraph (d) of this section.	Yes									
174	20.1101(a)	Each licensee shall develop, document, and implement a radiation protection program commensurate with the scope and extent of licensed activities and sufficient to ensure compliance with the provisions of this part. (See § 20.2102 for recordkeeping requirements relating to these programs.)	No	RPPM is not signed or dated	Have RPPM signed by the RSO and dated.		HMC	X				
175	20.1101(b)	The licensee shall use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (ALARA).	Yes									



Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations							Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
176	20.1101(c)	The licensee shall periodically (at least annually) review the radiation protection program content and implementation.	Yes									
177	20.1101(d)	To implement the ALARA requirements of § 20.1101 (b), and notwithstanding the requirements in § 20.1301 of this part, a constraint on air emissions of radioactive material to the environment, excluding Radon-222 and its daughters, shall be established by licensees other than those subject to § 50.34a, such that the individual member of the public likely to receive the highest dose will not be expected to receive a total effective dose equivalent in excess of 10 mrem (0.1 mSv) per year from these emissions. If a licensee subject to this requirement exceeds this dose constraint, the licensee shall report the exceedance as provided in § 20.2203 and promptly take appropriate corrective action to ensure against recurrence.	Yes									
		The licensee shall control the occupational dose to individual adults, except for planned special exposures under § 20.1206, to the following dose limits: (1) An annual limit, which is the more limiting of: (i) The total effective dose equivalent being equal to 5 rems (0.05 Sv); or (ii) The sum of the deep-dose equivalent and the committed dose equivalent to any individual organ or tissue other than the lens of the eye being equal to 50 rems (0.5 Sv). (2) The annual limits to the lens of the eye, to the skin of the whole body, and to the skin of the extremities, which are: (i) A lens dose equivalent of 15 rems (0.15 Sv), and (ii) A shallow-dose equivalent of 50 rem (0.5 Sv) to the skin of the whole body or to the skin of any extremity.	Yes									
178	20.1201(a)		Yes									
179	20.1201(e)	In addition to the annual dose limits, the licensee shall limit the soluble uranium intake by an individual to 10 milligrams in a week in consideration of chemical toxicity (see footnote 3 of appendix B to part 20).	No	No discussion of the 10 mg/wk discussed in RPPM, procedure unclear how this is enforced.	Modify RPPM to discuss the 10mg/wk limitation.		HMC	X				
180	20.1201(f)	The licensee shall reduce the dose that an individual may be allowed to receive in the current year by the amount of occupational dose received while employed by any other person (see § 20.2104(e)).	No	Not discussed in procedure	Provide in RPPM and SOP13, the process for accounting for occupational exposure received at other facilities during the current calendar year, when evaluating the occupational dose likely to be received at the Homestake facility.		HMC	X				
181	20.1202(a)	If the licensee is required to monitor under both §§ 20.1502(a) and (b), the licensee shall demonstrate compliance with the dose limits by summing external and internal doses. If the licensee is required to monitor only under § 20.1502(a) or only under § 20.1502(b), then summation is not required to demonstrate compliance with the dose limits. The licensee may demonstrate compliance with the requirements for summation of external and internal doses by meeting one of the conditions specified in paragraph (b) of this section and the conditions in paragraphs (c) and (d) of this section.	Yes									
		Licensees shall, when determining the dose from airborne radioactive material, include the contribution to the deep-dose equivalent, lens dose equivalent, and shallow-dose equivalent from external exposure to the radioactive cloud (see appendix B to part 20, footnotes 1 and 2).	Yes	Per SOP 11 it is not necessary to monitor for or calculate CEDE. See SOP 13								
182	20.1203		Yes									
183	20.1204(a)	For purposes of assessing dose used to determine compliance with occupational dose equivalent limits, the licensee shall, when required under § 20.1502, take suitable and timely measurements of: (1) Concentrations of radioactive materials in air in work areas; or (2) Quantities of radionuclides in the body; or (3) Quantities of radionuclides excreted from the body; or (4) Combinations of these measurements.	Yes									
		Unless respiratory protective equipment is used, as provided in § 20.1703, or the assessment of intake is based on bioassays, the licensee shall assume that an individual inhales radioactive material at the airborne concentration in which the individual is present.	Yes									
184	20.1204(b)		Yes									
185	20.1204(c)	When specific information on the physical and biochemical properties of the radionuclides taken into the body or the behavior or the material in an individual is known, the licensee may: (1) Use that information to calculate the committed effective dose equivalent, and, if used, the licensee shall document that information in the individual's record; and (2) Upon prior approval of the Commission, adjust the DAC or ALI values to reflect the actual physical and chemical characteristics of airborne radioactive material (e.g., aerosol size distribution or density); and (3) Separately assess the contribution of fractional intakes of Class D, W, or Y compounds of a given radionuclide (see appendix B to part 20) to the committed effective dose equivalent.	N/A	Per SOP 11 it is not necessary to monitor for or calculate CEDE.								
		If the licensee chooses to assess intakes of Class Y material using the measurements given in § 20.1204(a)(2) or (3), the licensee may delay the recording and reporting of the assessments for periods up to 7 months, unless otherwise required by §§ 20.2202 or 20.2203, in order to permit the licensee to make additional measurements basic to the assessments.	N/A	Per SOP 11 it is not necessary to monitor for or calculate CEDE.								
186	20.1204(d)		N/A									
187	20.1204(e)	If the identity and concentration of each radionuclide in a mixture are known, the fraction of the DAC applicable to the mixture for use in calculating DAC-hours must be either: (1) The sum of the ratios of the concentration to the appropriate DAC value (e.g., D, W, Y) from appendix B to part 20 for each radionuclide in the mixture; or (2) The ratio of the total concentration for all radionuclides in the mixture to the most restrictive DAC value for any radionuclide in the mixture	N/A	Per SOP 11 it is not necessary to monitor for or calculate CEDE.								
		If the identity of each radionuclide in a mixture is known, but the concentration of one or more of the radionuclides in the mixture is not known, the DAC for the mixture must be the most restrictive DAC of any radionuclide in the mixture.	N/A	Per SOP 11 it is not necessary to monitor for or calculate CEDE.								
188	20.1204(f)		N/A									
189	20.1204(g)	When a mixture of radionuclides in air exists, licensees may disregard certain radionuclides in the mixture if: (1) The licensee uses the total activity of the mixture in demonstrating compliance with the dose limits in § 20.1201 and in complying with the monitoring requirements in § 20.1502(b), and (2) The concentration of any radionuclide disregarded is less than 10 percent of its DAC, and (3) The sum of these percentages for all of the radionuclides disregarded in the mixture does not exceed 30 percent.	N/A	Per SOP 11 it is not necessary to monitor for or calculate CEDE.								
		In order to calculate the committed effective dose equivalent, the licensee may assume that the inhalation of one ALI, or an exposure of 2,000 DAC-hours, results in a committed effective dose equivalent of 5 rems (0.05 Sv) for radionuclides that have their ALIs or DACs based on the committed effective dose equivalent.	N/A	Per SOP 11 it is not necessary to monitor for or calculate CEDE.								
190	20.1204(h)(1)		N/A									
191	20.1204(h)(2)	When the ALI (and the associated DAC) is determined by the nonstochastic organ dose limit of 50 rems (0.5 Sv), the intake of radionuclides that would result in a committed effective dose equivalent of 5 rems (0.05 Sv) (the stochastic ALI) is listed in parentheses in table 1 of appendix B to part 20. In this case, the licensee may, as a simplifying assumption, use the stochastic ALIs to determine committed effective dose equivalent. However, if the licensee uses the stochastic ALIs, the licensee must also demonstrate that the limit in § 20.1201(a)(1)(ii) is met	Yes									
192	20.1206	A licensee may authorize an adult worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in § 20.1201 provided that each of the following conditions is satisfied:	N/A	No planned special exposures possible								
193	20.1206(a)	The licensee authorizes a planned special exposure only in an exceptional situation when alternatives that might avoid the dose estimated to result from the planned special exposure are unavailable or impractical.	N/A	No planned special exposures possible								
194	20.1206(b)	The licensee (and employer if the employer is not the licensee) specifically authorizes the planned special exposure, in writing, before the exposure occurs.	N/A	No planned special exposures possible								
195	20.1206(c)	Before a planned special exposure, the licensee ensures that the individuals involved are: (1) Informed of the purpose of the planned operation; (2) Informed of the estimated doses and associated potential risks and specific radiation levels or other conditions that might be involved in performing the task; and (3) Instructed in the measures to be taken to keep the dose ALARA considering other risks that may be present.	N/A	No planned special exposures possible								
		Prior to permitting an individual to participate in a planned special exposure, the licensee ascertains prior doses as required by § 20.2104(b) during the lifetime of the individual for each individual involved.	N/A	No planned special exposures possible								
196	20.1206(d)		N/A									
197	20.1206(e)	Subject to § 20.1201(b), the licensee does not authorize a planned special exposure that would cause an individual to receive a dose from all planned special exposures and all doses in excess of the limits to exceed: (1) The numerical values of any of the dose limits in § 20.1201(a) in any year; and (2) Five times the annual dose limits in § 20.1201(a) during the individual's lifetime.	N/A	No planned special exposures possible								
		The licensee maintains records of the conduct of a planned special exposure in accordance with § 20.2105 and submits a written report in accordance with § 20.2204.	N/A	No planned special exposures possible								
198	20.1206(f)		N/A									
199	20.1206(g)	The licensee records the best estimate of the dose resulting from the planned special exposure in the individual's record and informs the individual, in writing, of the dose within 30 days from the date of the planned special exposure. The dose from planned special exposures is not to be considered in controlling future occupational dose of the individual under § 20.1201(a) but is to be included in evaluations required by § 20.1206 (d) and (e).	N/A	No planned special exposures possible								
200	20.1207	The annual occupational dose limits for minors are 10 percent of the annual dose limits specified for adult workers in § 20.1201.	No	No discussion in either RPPM or SOPs	Provide a discussion in the RPPM for the restriction of occupational exposure to minors.		HMC	X				
201	20.1208(a)	The licensee shall ensure that the dose equivalent to the embryo/fetus during the entire pregnancy, due to the occupational exposure of a declared pregnant woman, does not exceed 0.5 rem (5 mSv). (For recordkeeping requirements, see § 20.2106.)	No	No discussion in either RPPM or SOPs	Provide a discussion in the RPPM for the restriction of occupational exposure to embryo/fetus during the entire pregnancy period.		HMC	X				
202	20.1208(b)	The licensee shall make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman so as to satisfy the limit in paragraph (a) of this section.	No	No discussion in either RPPM or SOPs	Provide a discussion in the RPPM for the restriction of occupational exposure to declared pregnant women..		HMC	X				

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Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations											Consolidated Deficiency Groupings
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
	20.1301(a)	Each licensee shall conduct operations so that: (1) The total effective dose equivalent to individual members of the public from the licensed operation does not exceed 0.1 rem (1 mSv) in a year, exclusive of the dose contributions from background radiation, from any administration the individual has received, from exposure to individuals administered radioactive material and released under § 35.75, from voluntary participation in medical research programs, and from the licensee's disposal of radioactive material into sanitary sewerage in accordance with § 20.2003, and (2) The dose in any unrestricted area from external sources, exclusive of the dose contributions from patients administered radioactive material and released in accordance with § 35.75, does not exceed 0.002 rem (0.02 millisievert) in any one hour.	No	There is no reference to a TEDE dose rate to the general public of .002 rem per hour in an unrestricted area. Table 1 of the RPPM defines a TEDE of 100 mrem per year for the general public depending on if restricted or unrestricted area.	Provide reference in the RPPM Table 1 for a TEDE to the general public of 0.002 rem in any hour in unrestricted areas.		HMC	X				
203												
204	20.1301(b)	If the licensee permits members of the public to have access to controlled areas, the limits for members of the public continue to apply to those individuals.	Yes	Treated as visitors								
205	20.1301(c)	Notwithstanding paragraph (a)(1) of this section, a licensee may permit visitors to an individual who cannot be released, under § 35.75, to receive a radiation dose greater than 0.1 rem (1 mSv) if: (1) The radiation dose received does not exceed 0.5 rem (5 mSv); and (2) The authorized user, as defined in 10 CFR Part 35, has determined before the visit that it is appropriate.	N/A	Visitors for patients under 35.75								
206	20.1301(d)	A licensee or license applicant may apply for prior NRC authorization to operate up to an annual dose limit for an individual member of the public of 0.5 rem (5 mSv). The licensee or license applicant shall include the following information in this application: (1) Demonstration of the need for and the expected duration of operations in excess of the limit in paragraph (a) of this section; (2) The licensee's program to assess and control dose within the 0.5 rem (5 mSv) annual limit; and (3) The procedures to be followed to maintain the dose as low as is reasonably achievable.	N/A	Visitors for patients under 35.75								
207	20.1301(e)	In addition to the requirements of this part, a licensee subject to the provisions of EPA's generally applicable environmental radiation standards in 40 CFR part 190 shall comply with those standards.	Yes									
208	20.1302(a)	The licensee shall make or cause to be made, as appropriate, surveys of radiation levels in unrestricted and controlled areas and radioactive materials in effluents released to unrestricted and controlled areas to demonstrate compliance with the dose limits for individual members of the public in § 20.1301.	Yes									
209	20.1302(b)	A licensee shall show compliance with the annual dose limit in § 20.1301 by: (1) Demonstrating by measurement or calculation that the total effective dose equivalent to the individual likely to receive the highest dose from the licensed operation does not exceed the annual dose limit; or ii) If an individual were continuously present in an unrestricted area, the dose from external sources would not exceed 0.002 rem (0.02 mSv) in an hour and 0.05 rem (0.5 mSv) in a year.	Yes									
210	20.1302(c)	Upon approval from the Commission, the licensee may adjust the effluent concentration values in appendix B to part 20, table 2, for members of the public, to take into account the actual physical and chemical characteristics of the effluents (e.g., aerosol size distribution, solubility, density, radioactive decay equilibrium, chemical form).	Yes									
211	20.1403	A site will be considered acceptable for license termination under restricted conditions if: The licensee can demonstrate that further reductions in residual radioactivity necessary to comply with the provisions of § 20.1402 would result in net public or environmental harm or were not being made because the residual levels associated with restricted conditions are ALARA. Determination of the levels which are ALARA must take into account consideration of any detriments, such as traffic accidents, expected to potentially result from decontamination and waste disposal.	N/A	Not at this time. Applies for license termination								
212	20.1403(a)	The licensee has made provisions for legally enforceable institutional controls that provide reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 25 mrem (0.25 mSv) per year.	N/A	Not at this time. Applies for license termination								
213	20.1403(b)	The licensee has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site. Acceptable financial assurance mechanisms are (1) Funds placed into a trust segregated from the licensee's assets and outside the licensee's administrative control, and in which the adequacy of the trust funds is to be assessed based on an assumed annual 1 percent real rate of return on investment; (2) A statement of intent in the case of Federal, State, or local Government licensees, as described in § 30.35(f)(4) of this chapter; or (3) When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity.	N/A	Not at this time. Applies for license termination								
214	20.1403(c)	The licensee has submitted a decommissioning plan or License Termination Plan (LTP) to the Commission indicating the licensee's intent to decommission in accordance with §§ 30.36(d), 40.42(d), 50.82 (a) and (b), 70.38(d), or 72.54 of this chapter, and specifying that the licensee intends to decommission by restricting use of the site. The licensee shall document in the LTP or decommissioning plan how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and incorporated, as appropriate, following analysis of that advice.	N/A	Not at this time. Applies for license termination								
215	20.1403(d)	Licensees proposing to decommission by restricting use of the site shall seek advice from such affected parties regarding matters concerning the proposed decommissioning.	N/A	Not at this time. Applies for license termination								
216	20.1403(d)(1)	In seeking advice on the issues identified in § 20.1403(d)(1), the licensee shall provide for: (i) Participation by representatives of a broad cross section of community interests who may be affected by the decommissioning; (ii) An opportunity for a comprehensive, collective discussion on the issues by the participants represented; and (iii) A publicly available summary of the results of all such discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues.	N/A	Not at this time. Applies for license termination								
217	20.1403(d)(2)	Residual radioactivity at the site has been reduced so that if the institutional controls were no longer in effect, there is reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group is as low as reasonably achievable and would not exceed either (1) 100 mrem (1 mSv) per year; or (2) 500 mrem (5 mSv) per year provided the licensee: (i) Demonstrates that further reductions in residual radioactivity necessary to comply with the 100 mrem/y (1 mSv/y) value of paragraph (e)(1) of this section are not technically achievable, would be prohibitively expensive, or would result in net public or environmental harm; (ii) Makes provisions for durable institutional controls; (iii) Provides sufficient financial assurance to enable a responsible government entity or independent third party, including a governmental custodian of a site, both to carry out periodic rechecks of the site no less frequently than every 5 years to assure that the institutional controls remain in place as necessary to meet the criteria of § 20.1403(b) and to assume and carry out responsibilities for any necessary control and maintenance of those controls. Acceptable financial assurance mechanisms are those in paragraph (c) of this section.	N/A	Not at this time. Applies for license termination								
218	20.1403(e)	Applicants for licenses, other than early site permits and manufacturing licenses under part 52 of this chapter and renewals, whose applications are submitted after August 20, 1997, shall describe in the application how facility design and procedures for operation will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste.	N/A	Not at this time. Applies for license termination								
219	20.1406(a)	Licensees shall, to the extent practical, conduct operations to minimize the introduction of residual radioactivity into the site, including the subsurface, in accordance with the existing radiation protection requirements in Subpart B and radiological criteria for license termination in Subpart E of this part.	N/A	Not at this time. Applies for license termination								
220	20.1406(c)	Each licensee shall make or cause to be made, surveys of areas, including the subsurface, that: (1) May be necessary for the licensee to comply with the regulations in this part; and (2) Are reasonable under the circumstances to evaluate: (i) The magnitude and extent of radiation levels; and (ii) Concentrations or quantities of residual radioactivity; and (iii) The potential radiological hazards of the radiation levels and residual radioactivity detected.	Yes									
221	20.1501(a)	Notwithstanding § 20.2103(a) of this part, records from surveys describing the location and amount of subsurface residual radioactivity identified at the site must be kept with records important for decommissioning, and such records must be retained in accordance with §§ 30.35(g), 40.36(f), 50.75(g), 70.25(g), or 72.30(d), as applicable.	Yes									
222	20.1501(b)	The licensee shall ensure that instruments and equipment used for quantitative radiation measurements (e.g., dose rate and effluent monitoring) are calibrated periodically for the radiation measured.	Yes									
223	20.1501(c)	All personnel dosimeters (except for direct and indirect reading pocket ionization chambers and those dosimeters used to measure the dose to the extremities) that require processing to determine the radiation dose and that are used by licensees to comply with § 20.1201, with other applicable provisions of this chapter, or with conditions specified in a license must be processed and evaluated by a dosimetry processor: (1) Holding current personnel dosimetry accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Standards and Technology; and (2) Approved in this accreditation process for the type of radiation or radiations included in the NVLAP program that most closely approximates the type of radiation or radiations for which the individual wearing the dosimeter is monitored.	Yes	HMC uses Landaur Services for their dosimetry needs.								
224	20.1501(d)	Each licensee shall monitor exposures to radiation and radioactive material at levels sufficient to demonstrate compliance with the occupational dose limits of this part.	Yes									
225	20.1502											

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2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5	
226	20.1502(a)	Each licensee shall monitor occupational exposure to radiation from licensed and unlicensed radiation sources under the control of the licensee and shall supply and require the use of individual monitoring devices by: Adults likely to receive, in 1 year from sources external to the body, a dose in excess of 10 percent of the limits in § 20.1201(a), Minors likely to receive, in 1 year, from radiation sources external to the body, a deep dose equivalent in excess of 0.1 rem (1 mSv), a lens dose equivalent in excess of 0.15 rem (1.5 mSv), or a shallow dose equivalent to the skin or to the extremities in excess of 0.5 rem (5 mSv); Declared pregnant women likely to receive during the entire pregnancy, from radiation sources external to the body, a deep dose equivalent in excess of 0.1 rem (1 mSv);2 and (4) Individuals entering a high or very high radiation area	Partial	No guidance for minors or pregnant women in RPPM or Manual of Standards Practices.	Include guidance on occupational exposure to minors and pregnant workers in the RPPM or/or Manual of Standard Practices.		HMC	X					
227	20.1502(b)	Each licensee shall monitor (see § 20.1204) the occupational intake of radioactive material by and assess the committed effective dose equivalent to (1) Adults likely to receive, in 1 year, an intake in excess of 10 percent of the applicable ALI(s) in table 1, Columns 1 and 2, of appendix B to §§ 20.1001-20.2402; (2) Minors likely to receive, in 1 year, a committed effective dose equivalent in excess of 0.1 rem (1 mSv); and (3) Declared pregnant women likely to receive, during the entire pregnancy, a committed effective dose equivalent in excess of 0.1 rem (1 mSv).	Yes										
228	20.1701	The licensee shall use, to the extent practical, process or other engineering controls (e.g., containment, decontamination, or ventilation) to control the concentration of radioactive material in air.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
229	20.1702(a)	When it is not practical to apply process or other engineering controls to control the concentrations of radioactive material in the air to values below those that define an airborne radioactivity area, the licensee shall, consistent with maintaining the total effective dose equivalent ALARA, increase monitoring and limit intakes by one or more of the following means (1) Control of access; (2) Limitation of exposure times; (3) Use of respiratory protection equipment; or (4) Other controls.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
230	20.1702(b)	If the licensee performs an ALARA analysis to determine whether or not respirators should be used, the licensee may consider safety factors other than radiological factors. The licensee should also consider the impact of respirator use on workers' industrial health and safety.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
231	20.1703(a)	If the licensee assigns or permits the use of respiratory protection equipment to limit the intake of radioactive material, the licensee shall use only respiratory protection equipment that is tested and certified by the National Institute for Occupational Safety and Health (NIOSH) except as otherwise noted in this part.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
232	20.1703(b)	If the licensee wishes to use equipment that has not been tested or certified by NIOSH, or for which there is no schedule for testing or certification, the licensee shall submit an application to the NRC for authorized use of this equipment except as provided in this part. The application must include evidence that the material and performance characteristics of the equipment are capable of providing the proposed degree of protection under anticipated conditions of use. This must be demonstrated either by licensee testing or on the basis of reliable test information.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
233	20.1703(c)	The licensee shall implement and maintain a respiratory protection program that includes: Air sampling sufficient to identify the potential hazard, permit proper equipment selection, and estimate doses; (2) Surveys and bioassays, as necessary, to evaluate actual intakes; (3) Testing of respirators for operability (user seal check for face sealing devices and functional check for others) immediately prior to each use; (4) Written procedures regarding: (i) Monitoring, including air sampling and bioassays; (ii) Supervision and training of respirator users; (iii) Fit testing, including training of respirator users; (iv) Fit testing; Breathing air quality; (v) Inventory and control; (vi) Storage, issuance, maintenance, repair, testing, and quality assurance of respiratory protection equipment; (viii) Recordkeeping; and (ix) Limitations on periods of respirator use and relief from respirator use; (5) Determination by a physician that the individual user is medically fit to use respiratory protection equipment: (i) Before the initial fitting of a face sealing respirator; (ii) Before the first field use of non-face sealing respirators, and (iii) Either every 12 months thereafter, or periodically at a frequency determined by a physician. (6) Fit testing, with fit factor > 10 times the APF for negative pressure devices, and a fit factor > 500 for any positive pressure, continuous flow, and pressure-demand devices, before the first field use of tight fitting, face-sealing respirators and periodically thereafter at a frequency not to exceed 1 year. Fit testing must be performed with the facepiece operating in the negative pressure mode.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
234	20.1703(d)	The licensee shall advise each respirator user that the user may leave the area at any time for relief from respirator use in the event of equipment malfunction, physical or psychological distress, procedural or communication failure, significant deterioration of operating conditions, or any other conditions that might require such relief.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
235	20.1703(e)	The licensee shall also consider limitations appropriate to the type and mode of use. When selecting respiratory devices the licensee shall provide for vision correction, adequate communication, low temperature work environments, and the concurrent use of other safety or radiological protection equipment. The licensee shall use equipment in such a way as not to interfere with the proper operation of the respirator.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
236	20.1703(f)	Standby rescue persons are required whenever one-piece atmosphere-supplying suits, or any combination of supplied air respiratory protection device and personnel protective equipment are used from which an unaided individual would have difficulty extricating himself or herself. The standby persons must be equipped with respiratory protection devices or other apparatus appropriate for the potential hazards. The standby rescue persons shall observe or otherwise maintain continuous communication with the workers (visual, voice, signal line, telephone, radio, or other suitable means), and be immediately available to assist them in case of a failure of the air supply or for any other reason that requires relief from distress. A sufficient number of standby rescue persons must be immediately available to assist all users of this type of equipment and to provide effective emergency rescue if needed.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
237	20.1703(g)	Atmosphere-supplying respirators must be supplied with respirable air of grade D quality or better as defined by the Compressed Gas Association in publication G-7.1, "Commodity Specification for Air," 1997 and included in the regulations of the Occupational Safety and Health Administration (29 CFR 1910.134)(i)(ii)(A) through (E). Grade D quality air criteria include: (1) Oxygen content (v/v) of 19.5-23.5%; (2) Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less; (3) Carbon monoxide (CO) content of 10 ppm or less; (4) Carbon dioxide content of 1,000 ppm or less; and (5) Lack of noticeable odor.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
238	20.1703(h)	The licensee shall ensure that no objects, materials or substances, such as facial hair, or any conditions that interfere with the face–facepiece seal or valve function, and that are under the control of the respirator wearer, are present between the skin of the wearer's face and the sealing surface of a tight-fitting respirator facepiece.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
239	20.1703(i)	In estimating the dose to individuals from intake of airborne radioactive materials, the concentration of radioactive material in the air that is inhaled when respirators are worn is initially assumed to be the ambient concentration in air without respiratory protection, divided by the assigned protection factor. If the dose is later found to be greater than the estimated dose, the corrected value must be used. If the dose is later found to be less than the estimated dose, the corrected value may be used.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
240	20.1705	The licensee shall obtain authorization from the Commission before using assigned protection factors in excess of those specified in Appendix A to Part 20. The Commission may authorize a licensee to use higher assigned protection factors on receipt of an application that: (a) Describes the situation for which a need exists for higher protection factors; and (b) Demonstrates that the respiratory protection equipment provides these higher protection factors under the proposed conditions of use.	N/A	The RPPM states that requirements for a respiratory protection program has been analyzed and fond not to be needed. All of the 10.17XXX sections refer to the respiratory protection program and if this is true they are not applicable.									
241	20.1801	The licensee shall secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas.	Yes										
242	20.1802	The licensee shall control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage.	Yes										
243	20.1901(a)	Unless otherwise authorized by the Commission, the symbol prescribed by this part shall use the colors magenta, or purple, or black on yellow background. The symbol prescribed by this part is the three-bladed design: (1) Cross-hatched area is to be magenta, or purple, or black, and (2) The background is to be yellow.	Yes										
244	20.1901(b)	Exception to color requirements for standard radiation symbol. Notwithstanding the requirements of paragraph (a) of this section, licensees are authorized to label sources, source holders, or device components containing sources of licensed materials that are subjected to high temperatures, with conspicuously etched or stamped radiation caution symbols and without a color requirement.	Yes										
245	20.1901(c)	Additional information on signs and labels. In addition to the contents of signs and labels prescribed in this part, the licensee may provide, on or near the required signs and labels, additional information, as appropriate, to make individuals aware of potential radiation exposures and to minimize the exposures.	Yes										
246	20.1902(a)	Posting of radiation areas. The licensee shall post each radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIATION AREA."	Yes										
247	20.1902(d)	Posting of airborne radioactivity areas. The licensee shall post each airborne radioactivity area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, AIRBORNE RADIOACTIVITY AREA" or "DANGER, AIRBORNE RADIOACTIVITY AREA."	N/A	No airborne areas possible per SOP 11									
248	20.1902(e)	Posting of areas or rooms in which licensed material is used or stored. The licensee shall post each area or room in which there is used or stored an amount of licensed material exceeding 10 times the quantity of such material specified in appendix C to part 20 with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL(S)" or "DANGER, RADIOACTIVE MATERIAL(S)."	Yes										

Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L				
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations											Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5				
249	20.1903(a)	A licensee is not required to post caution signs in areas or rooms containing radioactive materials for periods of less than 8 hours, if each of the following conditions is met: (1) The materials are constantly attended during these periods by an individual who takes the precautions necessary to prevent the exposure of individuals to radiation or radioactive materials in excess of the limits established in this part; and (2) The area or room is subject to the licensee's control.	N/A													
250	20.1903(c)	A room or area is not required to be posted with a caution sign because of the presence of a sealed source provided the radiation level at 30 centimeters from the surface of the source container or housing does not exceed 0.005 rem (0.05 mSv) per hour.	N/A													
251	20.1904(a)	The licensee shall ensure that each container of licensed material bears a durable, clearly visible label bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL." The label must also provide sufficient information (such as the radionuclide(s) present, an estimate of the quantity of radioactivity, the date for which the activity is estimated, radiation levels, kinds of materials, and mass enrichment) to permit individuals handling or using the containers, or working in the vicinity of the containers, to take precautions to avoid or minimize exposures.	Yes													
252	20.1904(b)	Each licensee shall, prior to removal or disposal of empty uncontaminated containers to unrestricted areas, remove or deface the radioactive material label or otherwise clearly indicate that the container no longer contains radioactive materials.	N/A													
253	20.1906	A licensee is not required to label: Containers holding licensed material in quantities less than the quantities listed in appendix C to part 20; or (b) Containers holding licensed material in concentrations less than those specified in table 3 of appendix B to part 20; or (c) Containers attended by an individual who takes the precautions necessary to prevent the exposure of individuals in excess of the limits established by this part; or (d) Containers when they are in transport and packaged and labeled in accordance with the regulations of the Department of Transportation;3 or (e) Containers that are accessible only to individuals authorized to handle or use them, or to work in the vicinity of the containers, if the contents are identified to these individuals by a readily available written record (examples of containers of this type are containers in locations such as water-filled canals, storage vaults, or hot cells). The record must be retained as long as the containers are in use for the purpose indicated on the record.	N/A	Radioactive material is not shipped to/from the site except for exempt sources.												
254	20.1906(a)	Each licensee who expects to receive a package containing quantities of radioactive material in excess of a Type A quantity, as defined in § 71.4 and appendix A to part 71 of this chapter, shall make arrangements to receive: (1) The package when the carrier offers it for delivery; or (2) Notification of the arrival of the package at the carrier's terminal and to take possession of the package expeditiously.	N/A													
255	20.1906(b)	Each licensee shall(1) Monitor the external surfaces of a labeled3a package for radioactive contamination unless the package contains only radioactive material in the form of a gas or in special form as defined in 10 CFR 71.4; (2) Monitor the external surfaces of a labeled3a package for radiation levels unless the package contains quantities of radioactive material that are less than or equal to the Type A quantity, as defined in § 71.4 and appendix A to part 71 of this chapter; and (3) Monitor all packages known to contain radioactive material for radioactive contamination and radiation levels if there is evidence of degradation of package integrity, such as packages that are crushed, wet, or damaged.	N/A													
256	20.1906(c)	The licensee shall perform the monitoring required by paragraph (b) of this section as soon as practical after receipt of the package, but not later than 3 hours after the package is received at the licensee's facility if it is received during the licensee's normal working hours, or not later than 3 hours from the beginning of the next working day if it is received after working hours.	N/A													
257	20.1965(d)	The licensee shall immediately notify the final delivery carrier and the NRC Operations Center (301-816-5100), by telephone, when (1) Removable radioactive surface contamination exceeds the limits of § 71.87(i) of this chapter; or (2) External radiation levels exceed the limits of § 71.47 of this chapter.	N/A													
258	20.1906(e)	Each licensee shall (1) Establish, maintain, and retain written procedures for safely opening packages in which radioactive material is received; and (2) Ensure that the procedures are followed and that due consideration is given to special instructions for the type of package being opened.	N/A													
259	20.1906(f)	Licenseses transferring special form sources in licensee-owned or licensee-operated vehicles to and from a work site are exempt from the contamination monitoring requirements of paragraph (b) of this section, but are not exempt from the survey requirement in paragraph (b) of this section for measuring radiation levels that is required to ensure that the source is still properly lodged in its shield.	N/A													
260	20.2002	A licensee or applicant for a license may apply to the Commission for approval of proposed procedures, not otherwise authorized in the regulations in this chapter, to dispose of licensed material generated in the licensee's activities.	Yes													
261	20.2007	Nothing in this subpart relieves the licensee from complying with other applicable Federal, State, and local regulations governing any other toxic or hazardous properties of materials that may be disposed of under this subpart	Yes													
262	20.2101(a)	Each licensee shall use the units: curie, rad, rem, including multiples and subdivisions, and shall clearly indicate the units of all quantities on records required by this part	Yes													
263	20.2101(b)	In the records required by this part, the licensee may record quantities in SI units in parentheses following each of the units specified in paragraph (a) of this section. However, all quantities must be recorded as stated in paragraph (a) of this section.	Yes													
264	20.2101(c)	Notwithstanding the requirements of paragraph (a) of this section, when recording information on shipment manifests, as required in § 20.2006(b), information must be recorded in the International System of Units (SI) or in SI and units as specified in paragraph (a) of this section.	N/A													
265	20.2101(d)	The licensee shall make a clear distinction among the quantities entered on the records required by this part (e.g., total effective dose equivalent, shallow-dose equivalent, lens dose equivalent, deep-dose equivalent, committed effective dose equivalent).	Yes													
266	20.2102(a)	Each licensee shall maintain records of the radiation protection program, including: (1) The provisions of the program; and (2) Audits and other reviews of program content and implementation.	Yes													
267	20.2102(b)	The licensee shall retain the records required by paragraph (a)(1) of this section until the Commission terminates each pertinent license requiring the record. The licensee shall retain the records required by paragraph (a)(2) of this section for 3 years after the record is made.	Partial	No retention periods provided	SOP 31 provides an organization for electronic files but does not provide a retention period or disposition for records and files. Develop a records retention program that will identify the records that are generated to meet regulatory requirements, the retention period for each and their disposition once the retention period has been met.		HMC	X	X							
268	20.2103(a)	Each licensee shall maintain records showing the results of surveys and calibrations required by §§ 20.1501 and 20.1906(b). The licensee shall retain these records for 3 years after the record is made.	Partial	No retention periods provided	SOP 31 provides an organization for electronic files but does not provide a retention period or disposition for records and files. Develop a records retention program that will identify the records that are generated to meet regulatory requirements, the retention period for each and their disposition once the retention period has been met.		HMC	X	X							
269	20.2103(b)	The licensee shall retain each of the following records until the Commission terminates each pertinent license requiring the record: (1) Records of the results of surveys to determine the dose from external sources and used, in the absence of or in combination with individual monitoring data, in the assessment of individual dose equivalents. This includes those records of results of surveys to determine the dose from external sources and used, in the absence of or in combination with individual monitoring data, in the assessment of individual dose equivalents required under the standards for protection against radiation in effect prior to January 1, 1994; and (2) Records of the results of measurements and calculations used to determine individual intakes of radioactive material and used in the assessment of internal dose. This includes those records of the results of measurements and calculations used to determine individual intakes of radioactive material and used in the assessment of internal dose required under the standards for protection against radiation in effect prior to January 1, 1994; and (3) Records showing the results of air sampling, surveys, and bioassays required pursuant to § 20.1703(c)(1) and (2). This includes those records showing the results of air sampling, surveys, and bioassays required under the standards for protection against radiation in effect prior to January 1, 1994; and (4) Records of the results of measurements and calculations used to evaluate the release of radioactive effluents to the environment. This includes those records of the results of measurements and calculations used to evaluate the release of radioactive effluents to the environment required under the standards for protection against radiation in effect prior to January 1, 1994.	Partial	No retention periods provided	SOP 31 provides an organization for electronic files but does not provide a retention period or disposition for records and files. Develop a records retention program that will identify the records that are generated to meet regulatory requirements, the retention period for each and their disposition once the retention period has been met.		HMC	X	X							
270	20.2104(a)	For each individual who is likely to receive an annual occupational dose requiring monitoring under § 20.1502, the licensee shall determine the occupational radiation dose received during the current year.	Yes													
271	20.2104(b)	Prior to permitting an individual to participate in a planned special exposure, the licensee shall determine: (1) The internal and external doses from all previous planned special exposures; and (2) All doses in excess of the limits (including doses received during accidents and emergencies) received during the lifetime of the individual.	N/A	No special planned exposures expected												

Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L				
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations											Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5				
272	20.2104(c)	In complying with the requirements of paragraphs (a) or (b) of this section, a licensee may:(1) Accept, as a record of the occupational dose that the individual received during the current year, a written signed statement from the individual, or from the individual's most recent employer for work involving radiation exposure, that discloses the nature and the amount of any occupational dose that the individual may have received during the current year; (2) Accept, as the record of cumulative radiation dose, an up-to-date NRC Form 4, or equivalent, signed by the individual and countersigned by an appropriate official of the most recent employer for work involving radiation exposure, or the individual's current employer (if the individual is not employed by the licensee); and (3) Obtain reports of the individual's dose equivalent(s) from the most recent employer for work involving radiation exposure, or the individual's current employer (if the individual is not employed by the licensee) by telephone, telegram, electronic media, or letter. The licensee shall request a written verification of the dose data if the authenticity of the transmitted report cannot be established.	Yes													
273	20.2104(d)	The licensee shall record the exposure history of each individual, as required by paragraphs (a) or (b) of this section, on NRC Form 4, or other clear and legible record, including all of the information required by NRC Form 4.4 The form or record must show each period in which the individual received occupational exposure to radiation or radioactive material and must be signed by the individual who received the exposure. For each period for which the licensee obtains reports, the licensee shall use the dose shown in the report in preparing the NRC Form 4. For any period in which the licensee does not obtain a report, the licensee shall place a notation on the NRC Form 4 indicating the periods of time for which data are not available.	Yes													
274	20.2104(e)	If the licensee is unable to obtain a complete record of an individual's current and previously accumulated occupational dose, the licensee shall assume (1) In establishing administrative controls under § 20.1201(f) for the current year, that the allowable dose limit for the individual is reduced by 1.25 rems (12.5 mSv) for each quarter for which records were unavailable and the individual was engaged in activities that could have resulted in occupational radiation exposure; and (2) That the individual is not available for planned special exposures.	Yes													
275	20.2104(f)	The licensee shall retain the records on NRC Form 4 or equivalent until the Commission terminates each pertinent license requiring this record. The licensee shall retain records used in preparing NRC Form 4 for 3 years after the record is made. This includes records required under the standards for protection against radiation in effect prior to January 1, 1994.	Yes													
276	20.2105(a)	For each use of the provisions of § 20.1206 for planned special exposures, the licensee shall maintain records that describe: (1) The exceptional circumstances requiring the use of a planned special exposure; and (2) The name of the management official who authorized the planned special exposure and a copy of the signed authorization; and (3) What actions were necessary; and (4) Why the actions were necessary; and (5) How doses were maintained ALARA; and (6) What individual and collective doses were expected to result, and the doses actually received in the planned special exposure.	N/A	Special planned exposures are not planned												
277	20.2105(b)	The licensee shall retain the records until the Commission terminates each pertinent license requiring these records.	Partial	No retention periods provided	SOP 31 provides an organization for electronic files but does not provide a retention period or disposition for records and files. Develop a records retention program that will identify the records that are generated to meet regulatory requirements, the retention period for each and their disposition once the retention period has been met.		HMC	X	X							
278	20.2106 (a)	Each licensee shall maintain records of doses received by all individuals for whom monitoring was required pursuant to § 20.1502, and records of doses received during planned special exposures, accidents, and emergency conditions. These records5 must include, when applicable: (1) The deep-dose equivalent to the whole body, lens dose equivalent, shallow-dose equivalent to the skin, and shallow-dose equivalent to the extremities; (2) The estimated intake of radionuclides (see § 20.1202); (3) The committed effective dose equivalent assigned to the intake of radionuclides; (4) The specific information used to assess the committed effective dose equivalent pursuant to § 20.1204(a) and (c), and when required by § 20.1502; (5) The total effective dose equivalent when required by § 20.1202; and (6) The total of the deep-dose equivalent and the committed dose to the organ receiving the highest total dose.	Yes													
279	20.2106 (b)	The licensee shall make entries of the records specified in paragraph (a) of this section at least annually.	Yes													
280	20.2106 (c)	The licensee shall maintain the records specified in paragraph (a) of this section on NRC Form 5, in accordance with the instructions for NRC Form 5, or in clear and legible records containing all the information required by NRC Form 5.	Yes													
281	20.2106 (d)	The records required under this section should be protected from public disclosure because of their personal privacy nature. These records are protected by most State privacy laws and, when transferred to the NRC, are protected by the Privacy Act of 1974, Public Law 93-579, 5 U.S.C. 552a, and the Commission's regulations in 10 CFR part 9.	No	No policy or procedure for protection of personal information was found	Prepare a personnel record security policy and procedure. This could be part of the records retention policy.		HMC	X	X							
282	20.2106 (e)	The licensee shall maintain the records of dose to an embryo/fetus with the records of dose to the declared pregnant woman. The declaration of pregnancy shall also be kept on file, but may be maintained separately from the dose records.	No	No policy or procedure for pregnant workers was found	Develop a policy and procedure for Pregnant workers exposed to ionizing radiation. Include discussion in RPPM.		HMC	X	X							
283	20.2106 (f)	The licensee shall retain the required form or record until the Commission terminates each pertinent license requiring this record. This includes records required under the standards for protection against radiation in effect prior to January 1, 1994.	Partial	No retention periods provided	SOP 31 provides an organization for electronic files but does not provide a retention period or disposition for records and files. Develop a records retention program that will identify the records that are generated to meet regulatory requirements, the retention period for each and their disposition once the retention period has been met.		HMC	X	X							
284	20.2107 (a)	Each licensee shall maintain records sufficient to demonstrate compliance with the dose limit for individual members of the public (see § 20.1301).	Yes													
285	20.2107(b)	The licensee shall retain the records required by paragraph (a) of this section until the Commission terminates each pertinent license requiring the record.	Partial	No retention periods provided	SOP 31 provides an organization for electronic files but does not provide a retention period or disposition for records and files. Develop a records retention program that will identify the records that are generated to meet regulatory requirements, the retention period for each and their disposition once the retention period has been met.		HMC	X	X							
286	20.2108 (a)	Each licensee shall maintain records of the disposal of licensed materials made under §§ 20.2002, 20.2003, 20.2004, 20.2005, 10 CFR part 61 and disposal by burial in soil, including burials authorized before January 28, 1981	Partial	No retention periods provided	SOP 31 provides an organization for electronic files but does not provide a retention period or disposition for records and files. Develop a records retention program that will identify the records that are generated to meet regulatory requirements, the retention period for each and their disposition once the retention period has been met.		HMC	X	X							
287	20.2108 (b)	The licensee shall retain the records required by paragraph (a) of this section until the Commission terminates each pertinent license requiring the record. Requirements for disposition of these records, prior to license termination, are located in §§ 30.51, 40.61, 70.51, and 72.80 for activities licensed under these parts.	Partial	No retention periods provided	SOP 31 provides an organization for electronic files but does not provide a retention period or disposition for records and files. Develop a records retention program that will identify the records that are generated to meet regulatory requirements, the retention period for each and their disposition once the retention period has been met.		HMC	X	X							
288	20.2110	Each record required by this part must be legible throughout the specified retention period. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records, such as letters, drawings, and specifications, must include all pertinent information, such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.	Yes													
289	20.2201(a)(1)	Each licensee shall report by telephone as follows: (i) Immediately after its occurrence becomes known to the licensee, any lost, stolen, or missing licensed material in an aggregate quantity equal to or greater than 1,000 times the quantity specified in appendix C to part 20 under such circumstances that it appears to the licensee that an exposure could result to persons in unrestricted areas; or (ii) Within 30 days after the occurrence of any lost, stolen, or missing licensed material becomes known to the licensee, all licensed material in a quantity greater than 10 times the quantity specified in appendix C to part 20 that is still missing at this time.	Yes													
290	20.2201(a)(2)	Telephone reports must be made as follows: (i) Licensees having an installed Emergency Notification System shall make the reports to the NRC Operations Center in accordance with § 50.72 of this chapter, and (ii) All other licensees shall make reports by telephone to the NRC Operations Center (301)-816-5100.	Yes													
291	20.2201(b)(1)	Each licensee required to make a written report under paragraph (a) of this section shall, within 30 days after making the telephone report, make a written report setting forth the following information: (i) A description of the licensed material involved, including kind, quantity, and chemical and physical form; and (ii) A description of the circumstances under which the loss or theft occurred; and (iii) A statement of disposition, or probable disposition, of the licensed material involved; and (iv) Exposures of individuals to radiation, circumstances under which the exposures occurred, and the possible total effective dose equivalent to persons in unrestricted areas; and (v) Actions that have been taken, or will be taken, to recover the material; and (vi) Procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed material	Yes													



Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations											Consolidated Deficiency Groupings
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
292	20.2201(b)(2)	Written reports must be made as follows: (i) For holders of an operating license for a nuclear power plant, the events included in paragraph (b) of this section must be reported in accordance with the procedures described in § 50.73(b), (c), (d), (e), and (g) of this chapter and must include the information required in paragraph (b)(1) of this section, and (ii) All other licensees shall make reports to the Administrator of the appropriate NRC Regional Office listed in appendix D to part 20.	Yes									
293	20.220(c)	A duplicate report is not required under paragraph (b) of this section if the licensee is also required to submit a report pursuant to §§ 30.55(c), 37.57, 37.81, 40.64(c), 50.72, 50.73, 70.52, 73.27(b), 73.67(e)(3)(vii), 73.67(g)(3)(iii), 73.71, or 150.19(c) of this chapter.	Yes									
294	20.220(d)	Subsequent to filing the written report, the licensee shall also report any additional substantive information on the loss or theft within 30 days after the licensee learns of such information.	Yes									
295	20.220(e)	The licensee shall prepare any report filed with the Commission pursuant to this section so that names of individuals who may have received exposure to radiation are stated in a separate and detachable part of the report.	Yes									
296	20.2202(a)	Notwithstanding any other requirements for notification, each licensee shall immediately report any event involving byproduct, source, or special nuclear material possessed by the licensee that may have caused or threatens to cause any of the following conditions: (1) An individual to receive; (i) A total effective dose equivalent of 25 rems (0.25 Sv) or more; or (ii) A lens dose equivalent of 75 rems (0.75 Sv) or more; or (iii) A shallow-dose equivalent to the skin or extremities of 250 rads (2.5 Gy) or more; or (2) The release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for 24 hours, the individual could have received an intake five times the annual limit on intake (the provisions of this paragraph do not apply to locations where personnel are not normally stationed during routine operations, such as hot-cells or process enclosures).	Yes									
297	20.2202(b)	Each licensee shall, within 24 hours of discovery of the event, report any event involving loss of control of licensed material possessed by the licensee that may have caused, or threatens to cause, any of the following conditions: (1) An individual to receive, in a period of 24 hours: (i) A total effective dose equivalent exceeding 5 rems (0.05 Sv); or (ii) A lens dose equivalent exceeding 15 rems (0.15 Sv); or (iii) A shallow-dose equivalent to the skin or extremities exceeding 50 rems (0.5 Sv); or (2) The release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for 24 hours, the individual could have received an intake in excess of one occupational annual limit on intake (the provisions of this paragraph do not apply to locations where personnel are not normally stationed during routine operations, such as hot-cells or process enclosures).	Yes									
298	20.2202(c)	The licensee shall prepare any report filed with the Commission pursuant to this section so that names of individuals who have received exposure to radiation or radioactive material are stated in a separate and detachable part of the report.	Yes									
299	20.2202(d)	Reports made by licensees in response to the requirements of this section must be made as follows: (1) Licensees having an installed Emergency Notification System shall make the reports required by paragraphs (a) and (b) of this section to the NRC Operations Center in accordance with 10 CFR 50.72; and (2) All other licensees shall make the reports required by paragraphs (a) and (b) of this section by telephone to the NRC Operations Center (301) 816-5100.	Yes									
300	20.2202(e)	The provisions of this section do not include doses that result from planned special exposures, that are within the limits for planned special exposures, and that are reported under § 20.2204.	Yes									
301	20.2203(a)	In addition to the notification required by § 20.2202, each licensee shall submit a written report within 30 days after learning of any of the following occurrences: (1) Any incident for which notification is required by § 20.2202; or (2) Doses in excess of any of the following dose limits for adults in § 20.1201; or (ii) The occupational dose limits for a minor in § 20.1207; or (iii) The limits for an embryo/fetus of a declared pregnant woman in § 20.1208; or (iv) The limits for an individual member of the public in § 20.1301; or (v) Any applicable limit in the license; or (vi) The ALARA constraints for air emissions established under § 20.1101(d); or (3) Levels of radiation or concentrations of radioactive material in: (i) A restricted area in excess of any applicable limit in the license; or (ii) An unrestricted area in excess of 10 times any applicable limit set forth in this part or in the license (whether or not involving exposure of any individual in excess of the limits in § 20.1301); or (4) For licensees subject to the provisions of EPA's generally applicable environmental radiation standards in 40 CFR part 190, levels of radiation or releases of radioactive material in excess of those standards, or of license conditions related to those standards.	Yes									
302	20.2203(b)	Each report required by paragraph (a) of this section must describe the extent of exposure of individuals to radiation and radioactive material, including, as appropriate: (i) Estimates of each individual's dose; and (ii) The levels of radiation and concentrations of radioactive material involved; and (iii) The cause of the elevated exposures, dose rates, or concentrations; and (iv) Corrective steps taken or planned to ensure against a recurrence, including the schedule for achieving conformance with applicable limits, ALARA constraints, generally applicable environmental standards, and associated license conditions. (2) Each report filed pursuant to paragraph (a) of this section must include for each occupationally overexposed1 individual: the name, Social Security account number, and date of birth. The report must be prepared so that this information is stated in a separate and detachable part of the report and must be clearly labeled "Privacy Act Information: Not for Public Disclosure."	Yes									
303	20.2204	The licensee shall submit a written report to the Administrator of the appropriate NRC Regional Office listed in appendix D to part 20 within 30 days following any planned special exposure conducted in accordance with § 20.1206, informing the Commission that a planned special exposure was conducted and indicating the date the planned special exposure occurred and the information required by § 20.2105.	Yes									
304	20.2205	When a licensee is required by §§ 20.2203 or 20.2204 to report to the Commission any exposure of an identified occupationally exposed individual, or an identified member of the public, to radiation or radioactive material, the licensee shall also provide the individual a report on his or her exposure data included in the report to Commission. This report must be transmitted no later than the transmittal to the Commission.	Yes									
305	Regulatory Guide 8.22 (Rev 2)											
306	1	Individuals should participate in the bioassay programs based on the criteria described below: a. individuals who could receive dose levels in accordance with 10 CFR 20.1502(a), or 20.1502(b); individuals who work in uranium mills or who are close enough to the process that exposure and intake is possible (e.g., within a few meters and in the same room as the worker handling the radioactive material).	Yes	*The requirement for participation in the bioassay program is that: "employees, contractors, consultants, and other vendors who are not expected to be on site more than five days in any given year do not need to participate in the bioassay program. In addition, employees and vendors who provide services to the site, but only do so (or are only expected to do so) within the administrative areas (e.g., the main office) also do not need to participate in the bioassay program..."								
307	1	Bioassay program determinations regarding participation and frequency should be based on estimates of the type and quantity of intakes that may occur based on the procedures that are expected to take place at the licensee's facility during the monitoring year. The program is confirmatory in that low or zero results may indicate that the measures in the workplace to control uranium materials are effective and that no unexpected intakes would occur. Based on operational experience, licensees may be able to justify adjustments in their bioassay program, such as a reduction in bioassay routine monitoring frequency, the inclusion of fewer workers in the bioassay program, or licensees may seek an exemption (see 10 CFR Part 20.2301, "Applications for Exemptions").	Yes	Routine Bioassays are supposed to be performed at least monthly per RG 8.22, but SOP 14 says perform bioassay every 6 months.								
308	2	The NRC staff considers either indirect bioassay (urinalysis) or direct bioassay (lung/thorax count) for estimation of intake to be acceptable methods for providing bioassay measurements. Licensees may perform both direct and indirect bioassay measurements to assess an intake, but it is not required.	Yes	SOP 14 requires urinalysis for those who may be exposed to ore dust.								
309	2.a.	Indirect Bioassay (in vitro) – Urinalysis: Urinalysis is recommended to be performed to monitor exposures to all soluble uranium from ore dust and from yellowcake operations.	Yes	SOP 14 requires urinalysis for those who may be exposed to ore dust, though there is no mention of yellowcake operations.								
310	2.b.	Direct Bioassay (in vivo) – Lung/thorax: Direct lung/thorax measurements is recommended to be performed to detect the presence of (1) the more insoluble (i.e., Class Y) yellowcake component, and (2) uranium in ore dust when air-sampling results indicate an exposure exceeding a concentration of 1×10 <sup>-10</sup> µCi/mL (3.7 µBq/mL).	Yes	SOP 14 does not mention yellow cake or in vivo bioassays. No yellow cake or ore dust at HMC								
311	3	Baseline Bioassay should be performed pre-employment or preoperational - Bioassay should be obtained for each worker at risk before initial assignment for such work.	Yes	SOP 14 requires baseline bioassay.								
312	3	Routine Bioassay, including collection, evaluation, and documentation, should be performed routinely when an individual is: (1) routinely exposed to airborne yellowcake, (2) directly involved in maintenance tasks in which yellowcake dust may be produced, or (3) routinely exposed to airborne uranium ore dust.	Yes	No comment								
313	3	Special bioassay, which could be to reanalysis or repeat, or confirm (validation and verification), should be performed within 90 hours of an exposure or suspected exposure equal to or above the air concentration values (based on the concentration of gross alpha activity) in areas where the transfer of ore from the ore pad to the crusher through the final thickening stage, dust created by uranium extraction and milling activities, or blown by the wind from ore stockpiles, is a potential source of inhalation and contamination. Workers from Ore-Dust Areas exclusively an average concentration of 1×10 <sup>-10</sup> µCi/mL (3.7 µBq/mL) for a period of 3 consecutive months (90 days), or when air concentration data are not available.	Yes	*SOP 14, Procedure for Bioassay Sample Collection, does not mention special bioassays, however, the examples provided in this step are not applicable with no mill onsite.								
314	3	Post-Operational or Termination Bioassay should be performed upon completion of an individual's work assignment at a licensee's facility or when the individual worker has been terminated from tasks involving uranium assignments. The post-operational or termination bioassay sample should be performed within 2 weeks (14 days) of the operations being discontinued or the assignment terminated. A contingency plan should be developed to avoid or eliminate the failure of the last bioassay measurement.	Partial	*SOP 14, Procedure for Bioassay Sample Collection, does mention termination bioassays, but it does not mention the need to perform termination bioassay within 14 days.  2017 annual ALARA audit documents an ongoing problem with collecting termination bioassays for contractor personnel. While previous corrective actions have been partially successful, they have not eliminated the problem.	Revise SOP 14 to require a termination bioassay within 14 days of termination.		HMC	X				



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2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
315	3	Respiratory Protection Bioassay should be performed to verify the effectiveness of the respiratory protection devices used, and to determine the actual intake. This bioassay requirement could validate or determine whether such devices were effective.	n/a	*SOP 14, Procedure for Bioassay Sample Collection, does not mention respiratory protection bioassays.  HMC does not have an active respiratory protection program.								
316	4	Routine uranium bioassay monitoring of workers, whether or not respiratory protection devices were used, should be scheduled appropriately: (a) It should be assumed that any confirmed positive urinalysis results are an indication of soluble uranium (Classes D and W) to which the kidney is exposed. The corrective actions to be taken depend on the amount of uranium detected and should be in accordance with Table A-1 of this guide. (b) If any bioassay is positive (e.g., baseline, routine, post-operational or termination bioassay) then a follow-up Special Bioassay is required or (c) The bioassay sampling frequencies are considered by the NRC staff on a case-by-case basis; however, the values in Tables A-1 and A-2 (Appendix A) are acceptable.	Yes	*SOP 14, Procedure for Bioassay Sample Collection, does discuss the review of bioassay results with reference to RG 8.22 Tables A-1 and A-2, but it does not mention Special bioassays;  Frequencies are set by Table 3 of letter dated 1993-09-02 that is cited in LC 10.								
317	5	Trained licensee personnel should promptly review the bioassay data and take appropriate action if the results exceed a PAL. The corrective actions to be taken depend on the amount of uranium content reported in bioassay measurement. Licensees may follow the recommendations in NUREG-0874, "Internal Dosimetry Model for Applications to Bioassay at Uranium Mills," regarding the frequency, types of bioassay, and recommended corrective licensee actions. If a licensee proposes different PALs and action protocols from those in Appendix A, the proposal will be considered by the NRC staff on a case-by-case basis.	Yes	SOP 14, Procedure for Bioassay Sample Collection, does discuss the review of bioassay results with reference to RG 8.22 Tables A-1 and A-2								
318	5a	It should be assumed that any confirmed positive urinalysis results are an indication of soluble uranium (Classes D and W) to which the kidney is exposed. The corrective actions to be taken depend on the amount of uranium detected and should be in accordance with Table A-1 of this guide.	Yes	SOP 14, Procedure for Bioassay Sample Collection, does discuss the review of bioassay results with reference to RG 8.22 Tables A-1 and A-2.								
319	5b	It should also be assumed that positive lung count activity indicates some of Class Y uranium materials are retained in the tissue. Corrective action should be taken in accordance with Table A-2 of this guide.	n/a	In vivo analyses are not routinely conducted.								
320	5c	For unlisted uranium materials licensees should: (i) For radiation protection (i.e., dose) purposes, classify the materials as inhalation Class Y; (ii) For chemical toxicity purposes (i.e., 10 CFR 20.1201(e)), classify the soluble material as inhalation Class D, and (iii) Licensees can update the inhalation class of any uranium substances and materials when an appropriate analytical analysis is performed and documented.	n/a	Unlisted uranium materials are not an issue at HMC								
321	5d	Figures B-1, B-2, and B-3 (Appendix B) should be used to determine acceptable Predetermined Action Levels (PALs) for workers who were exposed in any insoluble-yellowcake area, soluble-yellowcake area, and ore-dust area, based on an acute single intake.	n/a	No yellow cake or ore dust at HMC								
322	5e	When short-lived uranium components are anticipated in urinalysis, PALs should be set based on Figures B-2 and B-3; for example, 20 µg/L from drying yellowcake operations and 1 µg/L from ore-dust workplaces at the first day or the second day post-intake, respectively.	n/a	No yellow cake or ore dust at HMC								
323	6	All bioassay sample or specimen should be collected in an area free of uranium before the worker enters to the work area. The collection may occur at an area inside or outside the mill that is designated specifically to be maintained free of uranium contamination. Use of disposable collection containers is highly recommended.	Yes	SOP 14 addresses this item								
324	6	Under any circumstances workers should either shower or wash their hands thoroughly before providing the specimen sample. When a shower is not possible, disposable plastic or rubber gloves should be worn during voiding.	Yes	SOP 14 addresses that workers must wash hands before submitting sample								
325	6	Sufficient urine volume should be collected to complete four separate urinalyses, each of which should be capable of achieving the required minimum quantifiable concentration value.	Yes	25 ml required per SOP 14, but no explanation regarding four urinalyses.								
326		All laboratory analyses should be performed in a qualified laboratory free of uranium contamination.	Yes	Samples are analyzed by Energy Laboratories, Inc. which maintains an NRC License and which is National Environmental Laboratory Accreditation Program (NELAP) certified.								
327	6	Both onsite and offsite laboratories should maintain the quality assurance (QA) and quality control (QC) documents as recommended in Section 7 of this guide for verification and validation purposes. The selection and use of the laboratory, sampling containers, and equipment for uranium measurements must be restricted to an ultra-low-level uranium environment.	Yes	Samples are analyzed by Energy Laboratories, Inc. which maintains an NRC License and which is National Environmental Laboratory Accreditation Program (NELAP) certified.								
328	6	External contamination is a common source of false positive results in direct bioassay measurement. Care should be taken to minimize external contamination. All measurements that could reasonably indicate external contamination should be repeated after the individual showers and changes clothes.	N/A									
329	7	A QC program for bioassay measurements should be established and incorporated in each uranium mill bioassay program. The programs should be consistent with the method recommended in Section 4.0, Quality Assurance and Quality Control for Radiobioassay Service Laboratory, of consensus standard ANSI/HPS N13.30-2011, "Performance Criteria for Radiobioassay." The minimum testing levels for uranium in the body through direct and indirect bioassay should be at or greater than 0.81 nano-Ci (30 Bq) and 1,000 nanograms, respectively. A program that supports estimates from urinalysis data with the in vivo determinations, or vice versa, is recommended, but not required	Partial	QC mentioned in SOP 14 but not much detail.	SOP 31 should be modified to include more detailed QC requirements.			X	X			
330	8	If an overexposure occurs, immediate notifications and 24-hour notifications shall be made to the NRC as required by 10 CFR 20.2202. In addition, a report of the certain exposure shall be submitted to the NRC as required by 10 CFR 20.2203	Yes	RPPM 4.4.2.3 references the guidance of RG 8.22 in this instance.								
331	Regulatory Guide 8.31 (Rev 1)											
332	1.1	Licensee management should provide the following: (1) A strong commitment to and continuing support for the development and implementation of the radiation protection and ALARA program; (2) Information and policy statements to employees, contractors, and visitors; (3) A periodic management audit program that reviews procedural and operational efforts to maintain exposures ALARA; (4) Continuing management evaluation of the radiation safety (health physics) program, its staff, and its allocation of adequate space and money; (5) Appropriate briefings and training in radiation safety, including ALARA concepts for all uranium employees in the facility and, when appropriate, for contractors and visitors.	Yes									
333	1.2	The radiation safety officer should be assigned the following: (a) Major responsibility for the development and administration of the radiation protection and ALARA program; (b) Sufficient authority to enforce regulations and administrative policies that affect any aspect of the radiological protection program; (c) Responsibility to review and approve plans for new equipment, process changes, or changes in operating procedures to ensure that the plans do not adversely affect the protection program against uranium and its daughters; and (4) Adequate equipment and laboratory facilities to monitor relative attainment of the ALARA objective.	Yes									
334	1.3	All workers should be responsible for the following: (1) Adhering to all rules, notices, and operating procedures for radiation safety established by licensee management and the RSO; (2) Reporting promptly to the RSO and licensee management equipment malfunctions or violations of standard practices or procedures that could result in increased radiological hazard to any individual; and (3) Suggesting improvements for the radiation protection and ALARA program.	Yes									
335	2.1	The radiation safety officer at a UR site should be responsible for conducting the health physics program and for assisting the resident manager in ensuring compliance with NRC's regulations and the license conditions applicable to worker health protection.	Yes									
336	2.1	The RSO should report directly to the resident manager on matters of radiation safety.	Yes									
337	2.1	The RSO should be directly responsible for supervising the health physics technicians, for overseeing the day-to-day operation of the health physics program, and for ensuring that records required by the NRC are maintained.	Yes	RSO supervises RP Techs on a day-to-day basis via email and phone contact.			HMC					
338	2.1	The RSO should have both the responsibility and the authority, through appropriate line management, to suspend, postpone, or modify any work activity that is unsafe or potentially a violation of the NRC's regulations or license conditions, including the ALARA program. It is recommended that management delegate this responsibility and authority directly to the RSO. The RSO may have other safety-related duties, such as responsibility for programs of industrial hygiene and fire safety, but should have no direct production-related responsibility.	No	RSO not specifically given this authority, Anyone can stop work if work is unsafe. Unsafe acts or deficiencies are reported to the Crew Foreman or RST, not the RSO per RPPM, para. 4.2.3.	The PGD 1, PGD 4 and the RPPM should be modified to give the RSO specific authority to stop work. Also modify the RPPM to ensure that all unsafe acts or deficiencies should be reported to the RSO, not just to the Closure Manager and the RP Technician.		HMC	X				
339	2.2	Written standard operating procedures should be established for all activities that involve handling, processing, or storing radioactive materials. All such procedures should include consideration of pertinent radiation safety practices.	Partial	Not specifically stated. SOPs 15 - Post Treatment Tank (SP2) Water Sampling, Analysis and Reporting Requirements, 24 - Zeolite Water Treatment Plant (300 gpm) - General Operations, SOP 25 - Zeolite Water Treatment Plant (1000 gpm) - General Operations require analysis for uranium concentrations but no procedure provided for performing analysis.	There is a requirement in SOP 15, 24 and 25 to perform an analysis for uranium concentrations in the water. A written procedure should be included in the Manual of Standard Practices for this analysis.		HMC	X				
340	2.2	Written procedures should also be established for such activities as health physics monitoring, sampling, analysis, and instrument calibration. An up-to-date copy of each written procedure, including accident response and radiological fire protection plans, should be kept accessible to all employees.	Partial	Very weak procedure. No discussion of brush or wildland fires. Should call 911 for any type fire. No sure where procedures are located	The SOP on firefighting should be modified to include more discussion of wildland fire procedures since this is most likely the fire hazard. The contacting of the local fire department should be immediate, not after it gets out of control.		HMC	X				

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2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
341	2.2	All written procedures involving radioactive material control should be compiled in a manual that allows documentation of each revision and its date.	Partial	Individual procedures are not signed and dated. No sure all procedures (operation of RO unit) are in the Manual. SOPs 1 - Emergency Response Procedures, 2 - Procedure for Conducting a Field Level Risk Assessment (FLAR), 3 - Procedure for Conducting a Formal Risk Assessment (FRA), 5 - General Work & Maintenance Procedure, 6 - Firefighting Procedure indicate revision number and dates.	Ensure all site procedures are included in the SOP Manual and are controlled.  Provide a date and signature of the RSO for each of the procedures in the in the Manual for Standard Practices that involve radioactive material.		HMC	X				
342	2.2	To ensure that proper radiation protection principles and techniques are being applied, written procedures for all activities should be reviewed and approved in writing by the RSO before being implemented and whenever a change in a procedure is proposed.	No	Procedures are not signed by RSO in manual.	Have the RSO review and sign all radiological procedures when written or changed.		HMC	X				
343	2.2	The RSO should review all existing operating procedures at least annually to ensure the procedures do not violate any newly established radiation protection practices.	No	Referenced as completed in 2017 annual ALARA report, but no records found	Have the RSO document the specific procedures he reviews annually.		HMC	X				
344	2.2	For work on nonroutine maintenance jobs when the potential for exposure to radioactive material exists and for which no standard written operating procedure already exists, a radiation work permit (RWP) should be used.	Yes									
345	2.2	RWPs should describe the following: (1) The details of the job to be performed; (2) Any precautions necessary to reduce exposure to uranium and its daughters; and (3) The radiological monitoring and sampling necessary before, during, and following completion of the job.	Yes									
346	2.2	The RSO should indicate by signature the review of each RWP prior to the initiation of work, and the work should be carried out in strict adherence to the conditions of the RWP.	Partial	No signature requirement in SOP, but space is provided on RWP form	Change the SOP to ensure that all RWPs are signed by the RSO or designated alternate. Formally identify the RSO designated alternate in a document.		HMC	X				
347	2.2	The RSO should designate a member of the radiation safety office staff or a supervisory member of the production staff who has received specialized radiation protection training to review and sign RWPs when the RSO is not available, e.g., during off shifts.	No	No signature requirement and no designate identified.	Change the SOP to ensure that all RWPs are signed by the RSO or designated alternate. Formally identify the RSO designated alternate in a controlled document showing that the alternate has the necessary credentials and/or received adequate specialized radiation protection training.		HMC	X				
348	2.3.1	The RSO and the facility foreman should conduct a weekly inspection of all facility areas to observe general radiation control practices and review required changes in procedures and equipment.	Partial	Not specifically listed under RSO responsibilities, and no frequency provided.	Include RSO or facility foreman attendance and frequency requirements (weekly) in RPPM and SOPs, and create a form to capture completion for records.		HMC	X				
349	2.3.1	The RSO or designated health physics technician should conduct a daily walk-through (visual) inspection of all work and storage areas of the facility to ensure proper implementation of good radiation safety procedures, including good housekeeping and cleanup practices that would minimize unnecessary contamination.	Partial	If to be performed by RST, this duty should be recognized and delineated in a procedure.	Modify RPPM para. 4.2.8 to require RSO or designated RST to perform daily visual inspections of all work and storage areas, and ensure the inspection is documented per the new records retention policy and procedures.		HMC	X	X			
350	2.3.1	Problems observed during all inspections should be noted in writing in an inspection logbook or other retrievable record format. The entries should be dated, signed, and maintained on file for at least 1 year.	Partial	For ponds only	Procedures should be modified or an RSO/RST inspection procedure should be developed to ensure the proper activities are being preformed at the a proper times. All observed problems need to be documented per a procedure and maintained per the new records retention policy and procedure.		HMC	X	X			
351	2.3.1	The RSO should review all violations of radiation safety procedures or other potentially hazardous problems with the resident manager or other mill employees who have authority to correct the problem.	Partial	RSO not notified if violation or incident, only Closure Manager.	Modify PGD 1 to have the RSO notified of any violations or incidents so the RSO can review any violations and corrective actions.		HMC	X				
352	2.3.1	The RSO should review the daily work-order and shift logs on a regular basis to determine that all jobs and operations with a potential for exposing personnel to uranium, especially those RWP jobs that would require a radiation survey and monitoring, were approved in writing by the RSO, the RSO's staff, or the RSO's designee prior to initiation of work.	Yes	Per SOP, all FLARs that could involve significant exposures must be sent to RSO for review and decision to generate a RWP			HMC					
353	2.3.2	At least monthly, the RSO should review the results of daily and weekly inspections, including a review of all monitoring and exposure data for the month.	Partial	But no frequency given.	Modify appropriate procedure and RPPM para. 4.2.8 to require the RSO to review the results of the daily and weekly inspections, and the monitoring and exposure data, monthly. Provide for documentation of the inspection per the new retention policy and procedure.		HMC	X	X			
354	2.3.2	The RSO should provide to the resident manager and all department heads for their review a written summary of the month's significant worker protection activities that contains (1) a summary of the most recent personnel exposure data, including bioassays and time-weighted calculations, and (2) a summary of all pertinent radiation survey records.	Partial	Could not determine who prepared the report.	RPPM para. 2.4 requires the monthly ALARA report be provided to the Closure Manager. This paragraph should be modified to indicate that the RSO is required to prepare the report and specifically indicate what information should be included in the report. These reports should be managed and retained per the new records retention policy and procedure.		HMC	X	X			
355	2.3.2	The monthly summary report should specifically address any trends or deviations from the radiation protection and ALARA program, including an evaluation of the adequacy of the implementation of license conditions regarding radiation protection and ALARA. The summary should provide a description of unresolved problems and the proposed corrective measures.	Yes									
356	2.3.2	Monthly summary reports should be maintained on file and readily accessible for at least 5 years.	Partial	No procedure on record retention requirements found.	SOP 31 provides an organization for electronic files but does not provide a retention period or disposition for records and files. Develop a records retention program that will identify the records that are generated to meet regulatory requirements, the retention period for each and their disposition once the retention period has been met.		HMC	X	X			
357	2.3.3	Licensee management should have annual audits of the radiation protection and ALARA program performed and written reports on the audits submitted to corporate management.	Yes									
358	2.3.3	All members of the annual audit team should be knowledgeable concerning the radiation protection program at the UR facility.	Yes									
359	2.3.3	One member of the annual audit team should be experienced in the operational aspects of specialized mill tailings facility radiation protection practices.	Yes									
360	2.3.3	The RSO should accompany the annual audit team but should not be a member.	Partial	Only present during opening and closing according to report.	RPPM, para. 4.2.8 should be modified to ensure that the RSO is available for the entire annual ALARA audit, not just the opening and closing. He is not part of the audit team, but should be available to ensure the audit team findings are understood by management.		HMC	X				
361	2.3.3	The audit report should summarize the following data: 1) Employee exposure records (external and time-weighted calculations), (2) Bioassay results, (3) Inspection log entries and summary reports of daily, weekly, and monthly inspections, (4) Documented training program activities, (5) Radiation safety meeting reports, (6) Radiological survey and sampling data, (7) Reports on overexposure of workers submitted to the NRC, Mine Safety and Health Administration (MSHA), or States, (8) and Operating procedures that were reviewed during this time period.	Yes									
362	2.3.3	The report on the annual radiation protection and ALARA audit should specifically discuss the following: (1) Trends in personnel exposures for identifiable categories of workers and types of operational activities; (2) Whether equipment for exposure control is being properly used, maintained, and inspected; and (3) Recommendations on ways to further reduce personnel exposures from uranium and its daughters.	Yes									
363	2.4.1	The RSO should have a bachelor's degree in the physical sciences, industrial hygiene, or engineering from an accredited college or university or an equivalent combination of training and relevant experience in mill tailings facility radiation protection. Two years of relevant experience are generally considered equivalent to 1 year of academic study.	Yes									
364	2.4.1	The RSO should have at least 1 year of work experience relevant to mill tailings operations in applied health physics, radiation protection, industrial hygiene, or similar work. This experience should involve actually working with radiation detection and measurement equipment, not strictly administrative or "desk" work.	Yes									
365	2.4.1	The RSO should have at least 4 weeks of specialized classroom training in health physics specifically applicable to uranium mill tailings management. In addition, the RSO should attend refresher training on mill tailings facility health physics every 2 years.	Partial	RPPM requires 1 week not 4 weeks of specialized training.  RSO attended 40-hour RSO refresher training for uranium recovery facilities in June 2017 to fulfill the biennial refresher training specified in NRC Regulatory Guide 8.31	The RSO should be scheduled to receive the required 4 weeks (160 hours) of specialized training and the training records and the RSO's resume should reflect this training. Alternately, HMC should submit a license amendment request from this provision intended for a mill site actively processing uranium ores.		HMC			X		
366	2.4.1	The RSO should have a thorough knowledge of the proper application and use of all health physics equipment used at a mill tailings facility, the chemical and analytical procedures used for radiological sampling and monitoring, methodologies used to calculate personnel exposure to uranium and its daughters, and a thorough understanding of the mill tailings reclamation process.	Yes									
367	2.4.2	In addition to the RSO, there should be a minimum of one full-time health physics technician at any full-scale uranium mill tailings facility.	Yes									

Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations							Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
368	2.4.2	The Health Physics Technician should have (1) an associate degree or 2 or more years of study in the physical sciences, engineering, or a health-related field; at least a total of 4 weeks of generalized training (up to 2 weeks may be on- the-job training) in radiation health protection applicable to uranium mill tailings facilities; and one year of work experience using sampling and analytical laboratory procedures that involve health physics, industrial hygiene, or industrial safety measures to be applied in a mill tailings facility; or (2) a high school diploma; a total of at least 3 months of specialized training (up to 1 month may be on- the-job training) in radiation health protection relevant to uranium mill tailings facilities; and two years of relevant work experience in applied radiation protection.	No	RPPM requirements do not match the RG requirements	The RPPM, para. 3.2.1 requirements should be changed to meet the Reg. Guide requirements or a license amendment request initiated.		HMC	X		X		
369	2.4.2	The health physics technician should demonstrate a working knowledge of the proper operation of health physics instruments used in the UR facility, surveying and sampling techniques, and personnel dosimetry requirements.	Yes									
370	2.5	All new employees should be instructed by means of an established course in the inherent risks of exposure to radiation and the fundamentals of protection against exposure to uranium and its daughters before beginning their jobs. Other guidance pertinent to this course is found in Regulatory Guide 8.13, "Instruction Concerning Prenatal Radiation Exposure", and Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure". Additionally, the training should be commensurate with the risks and hazards of the task.	Yes									
371	2.5	This course of instruction should include the following topics: (1) Fundamentals of Health Protection; (2) <b>Personal Hygiene at Uranium Mill Tailings Facilities</b> , (3) Facility-Provided Protection, (4) Health Protection Measurements, (5) Radiation Protection Regulations and (6) Emergency Procedures. [More details for each topic is provided in RG 8.31]	Partial	The current new hire training course does not match the RG requirements	The RPPM, para. 3.2.2 requirements should be changed to meet the Reg. Guide requirements or a license amendment request initiated.		HMC	X		X		
372	2.5	A written or oral test with questions directly relevant to the principles of radiation safety and health protection at a uranium mill tailings facility covered in the training course should be given to each worker. The instructor should review the test results with each worker. The instructor should discuss any wrong answers to test questions with the worker until the worker understands the correct answer. Workers who fail the test should be retested after receiving additional training. These tests and results should be maintained on file	Yes									
373	2.5	Each permanent worker should be provided an abbreviated retraining course annually.	Yes									
374	2.5	Documented successful completion of the annual retraining course should also be maintained on file. Retraining should include relevant information that has become available during the past year, a review of safety problems that have arisen during the year, changes in regulations and license conditions, exposure trends, and other current topics.	Partial	RPPM has no requirement for training records retention.	SOP 31 provides an organization for electronic files but does not provide a retention period or disposition for records and files. Develop a records retention program that will identify the records that are generated to meet regulatory requirements, the retention period for each and their disposition once the retention period has been met.		HMC	X	X			
375	2.5	All new workers, including supervisors, should be given specialized instruction on the health and radiation safety aspects and on the nonradiological hazards of the specific jobs they will perform. This instruction should be in the form of individualized on-the-job training.	Partial	Supervisory and OJT requirements not specified.	The radiation safety training program and RPPM para. 3.2.1 and 3.2.2 should be changed to include the requirement for on-the-job training and define the types of tasks that should be included.			X		X		
376	2.5	Supervisors should be provided additional specialized training on their supervisory responsibilities in the area of worker radiation protection. Retraining should be conducted annually and documented.	Yes	Site Supervisor and Asst. are the site RSTs.			HMC					
377	2.5	All employees should sign a statement that they received job-specific radiation safety training. The statement should indicate the dates the training was received and it should be co-signed by the instructor.	Yes				HMC					
378	2.5	Radiation safety matters of concern that arise during plant operation should be discussed with all workers during regular monthly or bimonthly meetings.	Yes									
379	2.5	All visitors who have not received training should be escorted by someone properly trained and knowledgeable about the hazards of the facility. At a minimum, visitors should be instructed specifically on what they should do to avoid possible radiological and nonradiological hazards in the areas of the facility they will be visiting.	Yes									
380	2.5	Contractors that have work assignments in a mill tailings facility should also be given appropriate training and safety instruction. Contractor workers who will perform work on heavily contaminated equipment should receive the same training and radiation safety instruction normally required of all permanent workers. Only job-specific radiation safety instruction is necessary for contract workers who have previously received full training on prior work assignments at the facility or have evidence of recent and relevant radiation safety training elsewhere.	Yes									
381	2.6	The RSO and radiation safety office staff are responsible for performing all routine and special radiation surveys as required by license conditions and by 10 CFR Part 20. Acceptable survey methods are specified in the Regulatory Position of Regulatory Guide 8.30, "Health Physics Surveys in Uranium Recovery Facilities"	Yes									
382	2.7	The RSO and the radiation safety office staff are responsible for the implementation of a respiratory protection program, if one is needed.	N/A									
383	2.7	There should be adequate supplies of respiratory protection devices to enable issuing a device to each individual who enters an airborne radioactivity area. Additional respiratory protection devices should be located near access points of airborne radioactivity areas.	N/A									
384	2.7	All airborne radioactivity areas should have controlled access.	N/A									
385	2.7	Routine physical (medical) evaluation should be required of these individuals who will use respiratory protective equipment.	N/A									
386	2.7	If the licensee elects to take credit for protection factors, the respiratory protection program must meet, at a minimum,	N/A									
387	2.8	The RSO is responsible for implementing a bioassay program. The frequency adopted and the type of analysis should meet the recommendations in Regulatory Guide 8.22, "Bioassay at Uranium Mills".	Partial	RST not RSO	Change SOP 14 and RPPM, para. 4.5 to ensure the RSO is identified as the responsible individual person for the bioassay program.		HMC	X				
388	3	General considerations for the design of uranium mill tailings should not be based solely on chemical process efficiency, but should also be based on the relative potential for radiologic and toxic hazards resulting from exposure of personnel to uranium and its daughters.	Yes									
389	3.1	The facility layout should be designed to maintain employee exposures ALARA while at the same time ensuring that exposure to other persons is not thereby increased.	Yes									
390	3.1	The facility layout should provide for: (1) Safe access to process equipment for routine maintenance; (2) Adequate ventilation in all facility areas in which radioactive materials might be spilled, suspended, or volatilized, (e.g., engineered controls); (3) Controlling access to the facility and the ability to secure or restrict entry to any airborne radioactivity areas; (4) Change rooms and shower facilities so that all workers can remove any possible radioactive contamination before leaving the site; (5) Dispersion control on radioactive materials moving from contamination areas to relatively contamination-free areas; and (6) Isolation of facility areas where there is a high potential for the dispersal of uranium as the result of a fire.	Yes									
391	3.2	Access to airborne radioactivity areas should be controlled or restricted by the use of caution signs and procedures, or security locks when permitted by fire protection regulations.	Yes									
392	3.3	N/A. No ventilation systems	N/A									
393	3.4	Because of the potential for loss of control of radioactive material in the event of a fire ,the facility should have adequate firefighting equipment and workers should be trained in its proper use.	Yes									
394	3.4	Provisions should be made for fire alarms, fire extinguishers, fire hydrants, water tanks, and other general firefighting equipment. Emergency procedures and training should include immediate fire control as a priority item. Appropriate caution signs should be posted in areas of fire hazard. Fire detection systems should be checked weekly.	Partial	fire extinguishers only	A hazardous analysis should be performed of the fire fighting capabilities and available equipment. Training should include actual use of fire suppression equipment.		HMC	X		X	X	
395	3.4	Fire drills should be performed at least semiannually.	No		The record of semi-annual fire drills should be maintained in accordance with the new record retention policy ad procedure.		HMC	X	X			
396	3.5	Consideration should be given to providing different laboratory facilities for metallurgical and bioassay analyses, if they are both performed at the UR site.	N/A									
397	3.5	Laboratory equipment and surfaces should be constructed of materials that are easily decontaminated. Laboratory surfaces used for the preparation of bioassay samples should be decontaminated daily to be as close to background as practicable but less than 200 dpm/100 cm2 of total surface contamination.	N/A									
398	3.5	All laboratories in the facility should provide adequate general ventilation and exhaust fume hoods.	N/A									
399	3.5	The design of the laboratory should provide for the safe handling, storage, and disposal of radioactive wastes resulting from sample analyses.	N/A									
400	3.6	N/A. For yellowcake and raw ore storage.	N/A									

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2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
401	3.7	General features applicable to equipment that will be used for handling, containing, or contacting uranium and its daughters are as follows: (1) Equipment that contains large volumes of uranium-bearing liquids should be designed with sumps or dikes to contain the liquids in the event of leaks or spills; (2) Equipment should be designed for optimum ease of carrying out procedures, especially routine maintenance, to minimize working time where personnel are exposed to radiation or radioactive material, and to maximize distances of personnel from the source of radiation with which they are working; and (3) Appropriate caution signs and symbols should be provided to meet the requirements of 10 CFR 20.1901, as discussed in more detail in Revision 1 of Regulatory Guide 8.30, "Health Physics Surveys in Uranium Recovery Facilities";	Yes									
402	4	Properly designed ventilation and dust control systems are needed to ensure that exposure of workers is maintained ALARA.	Yes									
403	4.1 - 4.3	N/A	N/A									
404	4.4	Facilities that have the potential to contain hazardous levels of uranium and its daughters in air, RO area and laboratories, should be serviced by ventilation systems designed to maintain air concentration of natural uranium and its daughters to less than 25% of the DAC for natural uranium.	N/A	No SOP, operating procedures or mention of ventilation system in RO area								
405	NUREG-1620, Appendix C (rev 1)		n/a									
406	N/A	The licensee shall supply sufficient information for the U.S. Nuclear Regulatory Commission (NRC) to verify that the amount of coverage provided by the financial assurance will permit the completion of all decontamination, decommissioning, and reclamation of sites, structures, and equipment used in conjunction with byproduct material.	Yes									
407	N/A	Cost estimates for the following items (where applicable) should be submitted to NRC with the initial license application or reclamation plan, and should be updated annually as specified in the license.	Yes									
408	N/A	Cost estimates must be calculated on the basis of completion of all activities by a third party.	Yes									
409	N/A	Unit costs, calculations, references, assumptions, equipment and operator efficiencies, <i>et cetera</i> , must be provided.	Yes									
410	N/A	The annual surety estimate must be prospective of all work to be performed at the site.	Yes									
411	N/A	The licensee must provide estimated costs for all decommissioning, reclamation, and ground-water cleanup work remaining to be performed at the site, not simply deduct the cost of work already performed from the previous surety estimate [see NRC Generic Letter 97-03 (NRC, 1997)]. The licensee can propose to deduct for work done and approved by NRC as meeting specifications.	Yes									
412	N/A	The detailed cost information necessary to verify the cost estimates for the preceding categories of closure work is summarized in the recommended outline provided in NUREG-1620 Appendix C. For each area identified, estimates should include costs for equipment; materials; labor and overhead; licenses, permits, and miscellaneous site-specific costs; and any other activity or resource that will require expenditure of funds.	Yes									
413	N/A	See Unirig 1620, Appendix C for details on what must be included in cost estimate.	Yes									
414	N/A	To avoid unnecessary duplication and expense, NRC shall take into account surety arrangements required by other federal agencies, state agencies, or other local governing bodies. However, the Commission is not required to accept such sureties if they are not sufficient. Similarly, no reduction to surety amounts established with other agencies shall be effected without NRC approval.	Yes									
415	N/A	Copies of all correspondence relating to the surety between the licensee and the state should be submitted to NRC.	Yes									
416	N/A	If authorized by NRC to maintain a surety with the state as the beneficiary, it is the responsibility of the licensee to give NRC verification of that surety; ensure that the agreement with the State specifically identifies the financial surety's application, uranium mill tailings site, and decommissioning/reclamation requirements; and transfer the long-term surveillance and control fee to the U.S. Department of the Treasury before license termination.	Yes									
417	N/A	All costs (unit and total) are to be estimated on the basis of third party independent contractor costs (include overhead and profit in unit costs or as a percentage of the total).	Yes									
418	N/A	Equipment owned by the licensee and the availability of licensee staff should not be considered in the estimate to reduce cost calculations.	Yes									
419	N/A	All costs should be based on current-year dollars.	Yes									
420	N/A	Credit for salvage value is generally not acceptable on the estimated costs.	Yes									
421	N/A	The licensee should provide supporting information or the basis for selection of the unit cost figures used in estimates.	Yes									
422	N/A	The staff may elect to use a publicly available computer code such as RACER™ or spreadsheet to assess these costs.	N/A									
423	Email sent to NRC received 3/17/2008 (Response to NRC comments on ER											
424	1	If seepage in the double EP3 liner system is in excess of 775 gallons per acre of liner per day, a liner inspection will be performed to identify where liner repair or remediation is necessary, and associated repairs undertaken.	Yes									
425	1	Two wells will be installed down gradient of the EP3 evaporation pond in the alluvial aquifer to monitor water quality.	Yes									
426	1	If EP3 is suspected based on observed increased trends in water quality in the down gradient wells, an investigation will be undertaken to confirm that seepage is occurring and determine the remedial action option to be undertaken.	n/a	Potential EP3 liner leakage was not evidenced by down gradient well water quality.								
427	2	If Alternative C of the ER is selected for the alternate pond siting, relocation or re-siting of existing air monitoring stations will be completed in consultation with the NRC staff.	n/a	Alternate B chosen and constructed								
428	3	If a forced spray system is used in conjunction with EP3, a meteorological monitoring control system will be installed to shutdown the system spray during periods of adverse wind conditions to assist in management of TSP levels related to the forced spray system.	Yes									
429	4	"The project site, however, has recently started to record the presence, number and frequency of waterfowl occurrences on the existing site evaporation ponds. This is being done on a routine <b>daily</b> inspection basis for the site facilities which include the evaporation ponds."	No	Regarding potential violation of LC 35D, a March 17, 2008 supplemental document to LC indicates that daily waterfowl identification would be performed for EP-3. HMC has been only performing the waterfowl measurements on a weekly basis. NRC indicated this would be a suitable candidate to perform a SERP and maybe switch to only daily during work days or request a license amendment if determined to be needed. HMC indicated that they have immediately resumed daily waterfowl measurements, including weekends.	Current SOP 30 and SOP 23 require daily inspections of all ponds. It would seem that only weekly inspections are being performed according to the records [per NRC inspection results]. This procedure should be fully implemented. This task is a SERP candidate to change inspection frequency to each working day versus daily.	SERP candidate to change inspection frequency to each working day versus daily.	HMC	X	X			
430	Ltr sent to NRC dated 2/7/2007 (Response to NRC comments on ER3 RAI)											
431	2	If well DD must be replaced due to the location of EP3, the replacement well will be located in close proximity to, and hydrologically down gradient of EP3 In the case that well DD must be replaced with a new monitoring well to provide down gradient monitoring for EP3, Well DD will be properly plugged and abandoned pursuant to all applicable regulatory requirements.	n/a	well DD did not need replacement								
432	4	The project Reclamation Plan will be reviewed and updated as deemed appropriate, based on the revised Corrective Action Plan.	Yes	2013 DRP reflects updated CAP; both of which have not received NRC approval yet.								
433	Ltr sent to NRC dated 7/18/2007 (Response to NRC comments on Pond License Amendment)											
434	1(1)	HMC will monitor leakage in the leak detection sumps twice weekly in each cell of EP3 from the start of initial pond filling until one week after the pond bottom is covered with water, then once weekly thereafter.	Yes									
435	1(2)	If greater than 775 gallons per acre per day is found in the EP3 in the leak detection sumps, plans will be initiated within one week to survey for the leakage and repair the liner as needed to stop leakage in excess of the allowable leak rate (ALR).	Partial	SOP 23 should include a section on response to leakage from the ponds to include developing a corrective action plan within 1 week of exceeding the ALR.	SOP 23 should include a section on response to leakage from the ponds to include developing a corrective action plan within 1 week of exceeding the ALR.			X			X	
436	1(6)	A sump at N-7 was inadvertently omitted from the specifications for EP3. A revision to the specifications will be issued to include sump N-7.	n/a									
437	3	A revision to the EP3 specification requiring additional borrow material testing for changes in soil type will be made.	n/a									
438	Ltr sent to NRC dated 10/28/2007 (Request for extension od reclamation milestones)											
439	No commitments other than LC and dates		n/a									
440	Ltr sent to NRC dated 1/21/2003 (Review of 2002 Settlement Monitoring Data)											
441	No commitments other than LC		n/a									
442	Ltr sent to NRC dated 10/25/2006 (Request for license amendment)											
443	Implement engineering design package requirements for EP3		Yes	Construction completed								

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2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
444	Ltr sent to NRC dated 7/26/1994 (CAP Modifications)											
445		Implement construction of EP2 per the specification dated 3/29/1994.	Yes	Construction completed								
446		Implement the operating plan for EP2. Develop and use procedures.	Yes									
447	Ltr sent to NRC dated 8/6/1996 (Radon Barrier Design for STP)											
448		Implement final barrier design for the small tailings pile	Future									
449	Ltr sent to NRC dated 6/8/1990 (EP design specification)											
450		Implement construction of EP1? per design specification	Yes	Construction completed								
451	Ltr sent to NRC dated 6/28/1990 (EP design specification water balance)											
452		No commitments other than LC	n/a									
453	Ltr sent to NRC dated 9/29/1999 (Groundwater monitoring program)											
454		Implement Table 2 (8-99)	Yes	The gaps of LC 35.1 are not applicable here since it doesn't include the changes of the LC								
455	Ltr sent to NRC dated 6/16/1995 (final radon barrier design for LTP)											
456		Implement final barrier design for the large tailings pile	Future									
457	Ltr sent to NRC dated 9/2/1993 (Modify LC 10 and 35C)											
		Implement Table 3 of the letter	No	Table 1 "Homestake Environmental Monitoring Program Excluding Groundwater Monitoring (2-93)." 3/7/96 letter removed vegetation and soil sampling from the environmental sampling of Table 1.  Table 3 "Homestake Occupational Monitoring Program ( 8-93)" Table 3 includes weekly alpha surveys in lunchrooms and changing areas, as well as calibration of radiation detection instruments every 6 months.	Implement Table 3 survey and calibration frequencies until a license amendment removes this requirement.			X	X			
458												
459	Fax sent to NRC dated 9/2/1994 (Stability Analysis)	Implement procedures for ALARA, Respiratory Protection and Bioassay	Yes									
460												
461	Ltr sent to NRC dated 8/16/1994 (Foundation & fill material for EP2)	No commitment, just providing information	n/a									
462												
463	Ltr sent to NRC dated 8/19/1994 (Response to EP2 questions)	No commitment, just providing information	n/a									
464												
465	3	A test boring program has been developed to take samples for soil classification and to perform standard penetration tests in six borings.	Yes	Data from the 6 borings (EP2-1 through EP2-6) were provided in this submittal.								
466	Ltr sent to NRC dated 9/15/1989 (License Amendment Request)											
467		Implement proposed changes to CAP.	Yes		GW CAP 2006 now in effect							
468	Ltr sent to NRC dated 1/15/1998 (Change in Ground-water Restoration Plan)											
469		Implement ground-water restoration plan changes	Yes	Letter implemented RO plant into GW restoration plan								
470	Ltr sent to NRC dated 10/28/2003 (Extension of Reclamation <Milestones)											
471		HMC proposes to verify compliance with the flux standard on an annual basis during the extension period by comparing the ambient radon measured around the Site to the 1996 results.	Yes									
472		HMC is committed to continue an active maintenance program for the interim cover for the STP and LTP.	Yes									
473	Document - Ground-Water Hydrology for Support of Background Concentration at the Grants Reclamation (12/2001)											
474		No commitment, just providing information	n/a									
475	Document - Background Water Quality Evaluation of the Chinle Aquifers (10/2003)											
476		No commitment, just providing information	n/a									
477	Staff Technical Position Paper dated 1/1989											
478		Implement positions provided in STPP	Yes									
479	Ltr sent to NRC dated 4/30/1992 (supplemental responses to 4/28/1992 NRC comments)											
480		Homestake will consider the design parameters that the NRC has stated would be acceptable and will evaluate other design parameters following procedures acceptable to the NRC.	Yes	was included in subsequent 10/29/93 DRP submittal								
481		Homestake will evaluate through laboratory test procedures and geochemical expertise the water retention effects of the tailings chemistry.	Yes	was included in subsequent 10/29/93 DRP submittal								
482		Homestake will submit a final design for the radon barrier for NRC approval prior to placement of any final barrier material.	Yes	Homestake Mining Company's Final Radon Barrier Design for the Large Tailings Pile, submitted June 16, 1995.  Homestake Mining Company's Final Radon Barrier Design for the Small Tailings Pile, transmitted to the NRC in August 1996.								
483		Specification B6 will be modified to clearly state that both the 90-125% rock cover thickness criteria and the surface uniformity criteria of specification B6 must be satisfied and that the testing called for under paragraph C2 does not negate or substitute for rock thickness testing.	Yes	was included in subsequent 10/29/93 DRP submittal								
484		Homestake will edit specification B5, paragraph B6 to state that settling monitoring will be performed on a bi-weekly-to-monthly schedule for the first six months, then quarterly thereafter until future settlements can be shown to no longer have a potential to adversely affect the cover.	Yes	was included in subsequent 10/29/93 DRP submittal								
485		Homestake will develop and provide additional analysis to support the design of the rock apron at the pile outslope toe and will submit drawings showing the design details of same.	Yes	was included in subsequent 10/29/93 DRP submittal								
486		Homestake will prepare drawings of the types of toe drainage systems that will be used to intercept seepage from the large pile slope toe.	Yes	was included in subsequent 10/29/93 DRP submittal								
487		Homestake will place rock for erosion protection over the levee surfaces.	Yes	was included in subsequent 10/29/93 DRP submittal								
488		Homestake will use rock for erosion protection of the small pile that has the following minimum D50 sizes and appropriate gradations: Top surface - 0.4 inches, Outslope - 4.0 inches.	Yes	was included in subsequent 10/29/93 DRP submittal								
489		Homestake will prepare and submit construction drawings and specifications containing all provisions of the approved plan not later than March 1, 1993.	Yes	was included in subsequent 10/29/93 DRP submittal								
490	Ltr to NRC dated 9/15/1994 (soil verification amendment)											
491		Implement the soil cleanup verification survey and sampling plan dated 12/1994.	Yes									
492	Ltr to NRC dated 9/15/1994 (EP2 amendment)											
493		Information provided only	Yes									
494	Ltr to NRC dated 9/15/1994 (CAP revision)											
495		Implement the Groundwater CAP revision dated 12/12/2006.	Yes									
496	Document - Environmental Report for the Construction of EP3 and Associated Operations Boundary Expansion (1/30/2007)											
497		Information provided only	n/a									
498	10 CFR 19											
499	19.2	(a) The regulations in this part apply to: (1) All persons who receive, possess, use, or transfer material licensed by the NRC under the regulations in parts 30 through 36, 39, 40, 60, 61, 63, 70, or 72 of this chapter, including persons licensed to operate a production or utilization facility under parts 50 or 52 of this chapter, persons licensed to possess power reactor spent fuel in an independent spent fuel storage installation (ISFSI) under part 72 of this chapter, and in accordance with 10 CFR 76.60 to persons required to obtain a certificate of compliance or an approved compliance plan under part 76 of this chapter.	n/a	applicability statement only								



Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations											Consolidated Deficiency Groupings
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
500	19.5	Except where otherwise specified in this part, all communications and reports concerning the regulations in this part should be addressed to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in Appendix D of part 20 of this chapter. Communications, reports, and applications may be delivered in person at the Commission's offices at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland.	No	Licensee could be depending on LC-40 vs. LC-40 and regs.	Revise appropriate policy and procedures to identify the NRC address for the submittal of written reports. As an alternative, this can be included in the procedure that provides the records retention period or a new document on records and written correspondence in general.		HMC		X			
501	19.11(a)	Each licensee (except for a holder of an early site permit under subpart A of part 52 of this chapter, or a holder of a manufacturing license under subpart F of part 52 of this chapter) shall post current copies of the following documents: (1) The regulations in this part and in part 20 of this chapter; (2) The license, license conditions, or documents incorporated into a license by reference, and amendments thereto; (3) The operating procedures applicable to licensed activities; (4) Any notice of violation involving radiological working conditions, proposed imposition of civil penalty, or order issued pursuant to subpart B of part 2 of this chapter, and any response from the licensee.	Partial	New official bulletin board procured and mounted, but still needs to post several of these items (or notice of availability per 19.11(d))	Post required information on official bulletin boards. Develop a procedure governing required content of official bulletin boards and their upkeep.		HMC				X	
502	19.11(d)	If posting of a document specified in paragraphs (a)(1), (2) or (3), or (b)(1) or (2) of this section is not practicable, the licensee or regulated entity may post a notice which describes the document and states where it may be examined.	Partial	New official bulletin board procured and mounted, but still needs to post several of these items (or notice of availability per 19.11(d))	Post required information on official bulletin boards. Develop a procedure governing required content of official bulletin boards and their upkeep.		HMC				X	
503	19.11(e)	Each licensee, each applicant for a specific license, each applicant for or holder of a standard design approval under subpart E of part 52 of this chapter, each applicant for an early site permit under subpart A of part 52 of this chapter, and each applicant for a standard design certification under subpart B of part 52 of this chapter shall prominently post NRC Form 3, "Notice to Employees," dated August 1997. Later versions of NRC Form 3 that supersede the August 1997 version shall replace the previously posted version within 30 days of receiving the revised NRC Form 3 from the Commission.	Yes	No posting SOP								
504	19.11(f)	Documents, notices, or forms posted under this section shall appear in a sufficient number of places to permit individuals engaged in NRC-licensed or regulated activities to observe them on the way to or from any particular licensed or regulated activity location to which the document applies, shall be conspicuous, and shall be replaced if defaced or altered	Yes	No posting SOP								
505	19.11(g)	Commission documents posted under paragraphs (a)(4) or (b)(3) of this section shall be posted within 2 working days after receipt of the documents from the Commission; the licensee's or regulated entity's response, if any, shall be posted within 2 working days after dispatch by the licensee or regulated entity. These documents shall remain posted for a minimum of 5 working days or until action correcting the violation has been completed, whichever is later.	Yes	No posting SOP								
506	19.12(a)	All individuals who in the course of employment are likely to receive in a year an occupational dose in excess of 100 mrem (1 mSv) shall be: (1) Kept informed of the storage, transfer, or use of radiation and/or radioactive material; (2) Instructed in the health protection problems associated with exposure to radiation and/or radioactive material, in precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed; (3) Instructed in, and required to observe, to the extent within the workers control, the applicable provisions of Commission regulations and licenses for the protection of personnel from exposure to radiation and/or radioactive material; (4) Instructed of their responsibility to report promptly to the licensee any condition which may lead to or cause a violation of Commission regulations and licenses or unnecessary exposure to radiation and/or radioactive material; (5) Instructed in the appropriate response to warnings made in the event of any unusual occurrence or malfunction that may involve exposure to radiation and/or radioactive material; and (6) Advised as to the radiation exposure reports which workers may request pursuant to § 19.13	Partial	RPPM and SOPs cover these items at a high level. Items (5) and (6) of 19.12(a) are not clearly discussed.	Review current training programs to ensure that the information required by this requirement are included. The listed policies and procedures should also be reviewed to ensure this information is incorporated.		HMC	X		X		
507	19.12(b)	In determining those individuals subject to the requirements of paragraph (a) of this section, licensees must take into consideration assigned activities during normal and abnormal situations involving exposure to radiation and/or radioactive material which can reasonably be expected to occur during the life of a licensed facility. The extent of these instructions must be commensurate with potential radiological health protection problems present in the work place	Yes									
508	19.13(a)	Radiation exposure data for an individual, and the results of any measurements, analyses, and calculations of radioactive material deposited or retained in the body of an individual, shall be reported to the individual as specified in this section. The information reported shall include data and results obtained pursuant to Commission regulations, orders or license conditions, as shown in records maintained by the licensee pursuant to Commission regulations. Each notification and report shall: be in writing; include appropriate identifying data such as the name of the licensee, the name of the individual, the individual's social security number; include the individual's exposure information; and contain the following statement:	Partial	Given HMC has no one above 100 mrem in a year, they take the position they do not need to do annual reports other than that reported in the annual ALARA audit which is included in the Annual Report	Reconsider providing an annual report even if no exposure was received per measurements. If any dosimetry was performed, then a report should be given even if the exposure results n zero dose. This information is very useful to workers who might work a other nuclear facilities in the future.						X	
509	19.13(b)	Each licensee shall make dose information available to workers as shown in records maintained by the licensee under the provisions of 10 CFR 20.2106. The licensee shall provide an annual report to each individual monitored under 10 CFR 20.1502 of the dose received in that monitoring year if: (1) The individual's occupational dose exceeds 1 mSv (100 mrem) TDEE or 1 mSv (100 mrem) to any individual organ or tissue; or (2) The individual requests his or her annual dose report.	Partial	Given HMC has no one above 100 mrem in a year, they take the position they do not need to do annual reports other than that reported in the annual ALARA audit which is included in the Annual Report	Reconsider providing an annual report even if no exposure was received per measurements. If any dosimetry was performed, then a report should be given even if the exposure results n zero dose. This information is very useful to workers who might work a other nuclear facilities in the future. SOP 13 should be modified to explain the process for requesting a record of any worker's exposure and define the requirements of HMC to provide this information. Update Radiation Safety training to reflect the updated requirements of SOP-13 once revised.						X	
510	19.13(c)(1)	At the request of a worker formerly engaged in licensed activities controlled by the licensee, each licensee shall furnish to the worker a report of the worker's exposure to radiation and/or to radioactive material: (i) As shown in records maintained by the licensee pursuant to § 20.2106 for each year the worker was required to be monitored under the provisions of § 20.1502; and (ii) For each year the worker was required to be monitored under the monitoring requirements in effect prior to January 1, 1994.	Partial	Given HMC has no one above 100 mrem in a year, they take the position they do not need to do annual reports other than that reported in the annual ALARA audit which is included in the Annual Report	Reconsider providing an annual report even if no exposure was received per measurements. If any dosimetry was performed, then a report should be given even if the exposure results n zero dose. This information is very useful to workers who might work a other nuclear facilities in the future. SOP 13 should be modified to explain the process for requesting a record of any worker's exposure and define the requirements of HMC to provide this information. Update Radiation Safety training to reflect the updated requirements of SOP-13 once revised.						X	
511	19.13(c)(2)	This report must be furnished within 30 days from the time the request is made or within 30 days after the exposure of the individual has been determined by the licensee, whichever is later. This report must cover the period of time that the worker's activities involved exposure to radiation from radioactive material licensed by the Commission and must include the dates and locations of licensed activities in which the worker participated during this period.	Partial	Given HMC has no one above 100 mrem in a year, they take the position they do not need to do annual reports other than that reported in the annual ALARA audit which is included in the Annual Report	Reconsider providing an annual report even if no exposure was received per measurements. If any dosimetry was performed, then a report should be given even if the exposure results n zero dose. This information is very useful to workers who might work a other nuclear facilities in the future. SOP 13 should be modified to explain the process for requesting a record of any worker's exposure and define the requirements of HMC to provide this information. Update Radiation Safety training to reflect the updated requirements of SOP-13 once revised.						X	
512	19.13(d)	When a licensee is required by §§ 20.2202, 20.2203 or 20.2204 of this chapter to report to the Commission any exposure of an individual to radiation or radioactive material, the licensee shall also provide the individual a report on his or her exposure data included in the report to the Commission. This report must be transmitted no later than the transmittal to the Commission.	Partial	Need reporting SOP to capture requirement	Develop an SOP containing a centralized and integrated list of reporting criteria for the site. For each report, identify the criteria/threshold, required content, and addressees as specified in the governing regulations.						X	
513	19.13(e)	At the request of a worker who is terminating employment with the licensee that involved exposure to radiation or radioactive materials, during the current calendar quarter or the current year, each licensee shall provide at termination to each worker, or to the worker's designee, a written report regarding the radiation dose received by that worker from operations of the licensee during the current year or fraction thereof. If the most recent individual monitoring results are not available at that time, a written estimate of the dose must be provided together with a clear indication that this is an estimate.	Partial	Implementation based on skill of RSO.	Reconsider providing an annual report even if no exposure was received per measurements. If any dosimetry was performed, then a report should be given even if the exposure results n zero dose. This information is very useful to workers who might work a other nuclear facilities in the future. SOP 13 should be modified to explain the process for requesting a record of any worker's exposure and define the requirements of HMC to provide this information. Update Radiation Safety training to reflect the updated requirements of SOP-13 once revised.						X	
514	19.14(a)	Each licensee, applicant for a license, applicant for or holder of a standard design approval under subpart E of part 52 of this chapter, applicant for an early site permit under subpart A of part 52 of this chapter, and applicant for a standard design certification under subpart B of part 52 of this chapter shall afford to the Commission at all reasonable times opportunity to inspect materials, activities, facilities, premises, and records under the regulations in this chapter.	Yes	Implementation based on skill of RSO.								
515	19.14(b)	During an inspection, Commission inspectors may consult privately with workers as specified in § 19.15. The licensee, regulated entity, or the licensee's or regulated entity's representative may accompany Commission inspectors during other phases of an inspection.	Partial	Implementation based on skill of RSO.	The requirements of 10 CFR Part 19 should be identified in a policy statement. This will inform workers of their rights.			X				
516	19.14(c)	If, at the time of inspection, an individual has been authorized by the workers to represent them during Commission inspections, the licensee or regulated entity shall notify the inspectors of such authorization and shall give the workers' representative an opportunity to accompany the inspectors during the inspection of physical working conditions.	Partial	Implementation based on skill of RSO.	The requirements of 10 CFR Part 19 should be identified in a policy statement. This will inform workers of their rights.			X				



Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations							Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
517	19.14(d)	Each workers' representative shall be routinely engaged in NRC-licensed or regulated activities under control of the licensee or regulated entity, and shall have received instructions as specified in § 19.12.	Partial	Implementation based on skill of RSO.	The requirements of 10 CFR Part 19 should be identified in a policy statement. This will inform workers of their rights.			X				
518	19.14(e)	Different representatives of licensees or regulated entities, and workers may accompany the inspectors during different phases of an inspection if there is no resulting interference with the conduct of the inspection. However, only one workers' representative at a time may accompany the inspectors.	Partial	Implementation based on skill of RSO.	The requirements of 10 CFR Part 19 should be identified in a policy statement. This will inform workers of their rights.			X				
519	19.14(f)	With the approval of the licensee or regulated entity, and the workers' representative an individual who is not routinely engaged in licensed or regulated activities under control of the license or regulated entity (for example, a consultant to the licensee, the regulated entity, or the workers' representative), shall be afforded the opportunity to accompany Commission inspectors during the inspection of physical working conditions.	Partial	Implementation based on skill of RSO.	The requirements of 10 CFR Part 19 should be identified in a policy statement. This will inform workers of their rights.			X				
520	19.14(g)	Notwithstanding the other provisions of this section, Commission inspectors are authorized to refuse to permit accompaniment by any individual who deliberately interferes with a fair and orderly inspection. With regard to areas containing information classified by an agency of the U.S. Government in the interest of national security, an individual who accompanies an inspector may have access to such information only if authorized to do so. With regard to any area containing proprietary information, the workers' representative for that area shall be an individual previously authorized by the licensee or regulated entity to enter that area.	Partial	Implementation based on skill of RSO.	The requirements of 10 CFR Part 19 should be identified in a policy statement. This will inform workers of their rights.			X				
521	19.15(a)	Commission inspectors may consult privately with workers concerning matters of occupational radiation protection and other matters related to applicable provisions of Commission regulations and licenses to the extent the inspectors deem necessary for the conduct of an effective and thorough inspection.	Partial	Implementation based on skill of RSO.	The requirements of 10 CFR Part 19 should be identified in a policy statement. This will inform workers of their rights.			X				
522	19.15(b)	During the course of an inspection any worker may bring privately to the attention of the inspectors, either orally or in writing, any past or present condition which he has reason to believe may have contributed to or caused any violation of the act, the regulations in this chapter, or license condition, or any unnecessary exposure of an individual to radiation from licensed radioactive material under the licensee's control. Any such notice in writing shall comply with the requirements of § 19.16(a).	Partial	Implementation based on skill of RSO.	The requirements of 10 CFR Part 19 should be identified in a policy statement. This will inform workers of their rights.			X				
523	19.15(c)	The provisions of paragraph (b) of this section shall not be interpreted as authorization to disregard instructions pursuant to § 19.12.	Partial	Implementation based on skill of RSO.	The requirements of 10 CFR Part 19 should be identified in a policy statement. This will inform workers of their rights.			X				
524	19.16(a)	Any worker or representative of workers who believes that a violation of the Act, the regulations in this chapter, or license conditions exists or has occurred in license activities with regard to radiological working conditions in which the worker is engaged, may request an inspection by giving notice of the alleged violation to the Administrator of the appropriate Commission Regional Office, or to Commission inspectors. Any such notice shall be in writing, shall set forth the specific grounds for the notice, and shall be signed by the worker or representative of workers. A copy shall be provided the licensee by the Regional Office Administrator, or the inspector no later than at the time of inspection except that, upon the request of the worker giving such notice, his name and the name of individuals referred to therein shall not appear in such copy or on any record published, released or made available by the Commission, except for good cause shown.	Partial	Implementation based on skill of RSO.	The requirements of 10 CFR Part 19 should be identified in a policy statement. This will inform workers of their rights.			X				
525	19.16(b)	If, upon receipt of such notice, the Regional Office Administrator determines that the complaint meets the requirements set forth in paragraph (a) of this section, and that there are reasonable grounds to believe that the alleged violation exists or has occurred, he shall cause an inspection to be made as soon as practicable, to determine if such alleged violation exists or has occurred. Inspections pursuant to this section need not be limited to matters referred to in the complaint.	N/A	N/A								
526	19.20	Employment discrimination by a licensee, a holder of a certificate of compliance issued under part 76 of this chapter or regulated entity subject to the requirements in this part as delineated in § 19.2(a), or a contractor or subcontractor of a licensee, a holder of a certificate of compliance issued under part 76 of this chapter, or regulated entity subject to the requirements in this part as delineated in § 19.2(a), against an employee for engaging in protected activities under this part or parts 30, 40, 50, 52, 54, 60, 61, 63, 70, 72, 76, or 150 of this chapter is prohibited.	Partial	Implementation based on skill of RSO.	The requirements of 10 CFR Part 19 should be identified in a policy statement. This will inform workers of their rights.			X				
527	10 CFR 21											
528	21.2(a)	The regulations in this part apply, except as specifically provided otherwise in parts 31, 34, 35, 39, 40, 60, 61, 63, 70, or part 72 of this chapter, to: (1) Each individual, partnership, corporation, or other entity applying for or holding a license or permit under the regulations in this chapter to possess, use, or transfer within the United States source material, byproduct material, special nuclear material, and/or spent fuel and high-level radioactive waste, or to construct, manufacture, possess, own, operate, or transfer within the United States, any production or utilization facility or independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS); and each director and responsible officer of such a licensee.	No	HMC does not have a Part 21 program. Most small licensees do not understand that it does apply to them, but in a way very different from power reactors or suppliers.  Reference NRC Information Notice 91-39 for details on applicability and minimum scope required to implement.	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	Evaluating	HMC	X				
529	21.5	Except where otherwise specified in this part, written communications and reports concerning the regulations in this part must be addressed to the NRC's Document Control Desk, and sent by mail to the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at <a href="http://www.nrc.gov/site-help/e-submittals.html">http://www.nrc.gov/site-help/e-submittals.html</a> ; by e-mail to <a href="mailto:MSHD.Resource@nrc.gov">MSHD.Resource@nrc.gov</a> ; or by writing the Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. In the case of a licensee or permit holder, a copy of the communication must also be sent to the appropriate Regional Administrator at the address specified in appendix D to part 20 of this chapter.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
530	21.6(a)	(1) Each individual, partnership, corporation, dedicating entity, or other entity subject to the regulations in this part shall post current copies of: (i) The regulations in this part; (ii) Section 206 of the Energy Reorganization Act of 1974; and (iii) Procedures adopted pursuant to the regulations in this part. (2) These documents must be posted in a conspicuous position on any premises within the United States where the activities subject to this part are conducted.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
531	21.6(b)	If posting of the regulations in this part or the procedures adopted pursuant to the regulations in this part is not practicable, the licensee or firm subject to the regulations in this part may, in addition to posting section 206, post a notice which describes the regulations/procedures, including the name of the individual to whom reports may be made, and states where they may be examined.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
532	21.21(a)(1)	Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall adopt appropriate procedures to: (1) Evaluate deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazards as soon as practicable, and, except as provided in paragraph (a)(2) of this section, in all cases within 60 days of discovery, in order to identify a reportable defect or failure to comply that could create a substantial safety hazard, were it to remain uncorrected, and	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				

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1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations							Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5
533	21.21(a)(2)	Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall adopt appropriate procedures to: (2) Ensure that if an evaluation of an identified deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted to the Commission through a director or responsible officer or designated person as discussed in § 21.21(d)(5). The interim report should describe the deviation or failure to comply that is being evaluated and should also state when the evaluation will be completed. This interim report must be submitted in writing within 60 days of discovery of the deviation or failure to comply.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
534	21.21(a)(3)	Ensure that a director or responsible officer subject to the regulations of this part is informed as soon as practicable, and, in all cases, within the 5 working days after completion of the evaluation described in paragraphs (a)(1) or (a)(2) of this section if the manufacture, construction, or operation of a facility or activity, a basic component supplied for such facility or activity, or the design certification or design approval under part 52 of this chapter: (i) Fails to comply with the Atomic Energy Act of 1954, as amended, or any applicable rule, regulation, order, or license of the Commission or standard design approval under part 52 of this chapter, relating to a substantial safety hazard, or (ii) Contains a defect.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
535	21.21(b)	Ensure that a director or responsible officer subject to the regulations of this part is informed as soon as practicable, and, in all cases, within the 5 working days after completion of the evaluation described in paragraphs (a)(1) or (a)(2) of this section if the manufacture, construction, or operation of a facility or activity, a basic component supplied for such facility or activity, or the design certification or design approval under part 52 of this chapter: (i) Fails to comply with the Atomic Energy Act of 1954, as amended, or any applicable rule, regulation, order, or license of the Commission or standard design approval under part 52 of this chapter, relating to a substantial safety hazard, or (ii) Contains a defect.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
536	21.21(c)	A dedicating entity is responsible for: (1) Identifying and evaluating deviations and reporting defects and failures to comply associated with substantial safety hazards for dedicated items; and (2) Maintaining auditable records for the dedication process.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
537	21.21(d)(1)	A director or responsible officer subject to the regulations of this part or a person designated under § 21.21(d)(5) must notify the Commission when he or she obtains information reasonably indicating a failure to comply or a defect affecting: (i) The manufacture, construction or operation of a facility or an activity within the United States that is subject to the licensing requirements under parts 30, 40, 50, 52, 60, 61, 63, 70, 71, or 72 of this chapter and that is within his or her organization's responsibility; or (ii) A basic component that is within his or her organization's responsibility and is supplied for a facility or an activity within the United States that is subject to the licensing, design certification, or approval requirements under parts 30, 40, 50, 52, 60, 61, 63, 70, 71, or 72 of this chapter.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
538	21.21(d)(2)	The notification to NRC of a failure to comply or of a defect under paragraph (d)(1) of this section and the evaluation of a failure to comply or a defect under paragraphs (a)(1) and (a)(2) of this section, are not required if the director or responsible officer has actual knowledge that the Commission has been notified in writing of the defect or the failure to comply.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
539	21.21(d)(3)	Notification required by paragraph (d)(1) of this section must be made as follows:(i) Initial notification by facsimile, which is the preferred method of notification, to the NRC Operations Center at (301) 816 - 5151 or by telephone at (301) 816 - 5100 within two days following receipt of information by the director or responsible corporate officer under paragraph (a)(1) of this section, on the identification of a defect or a failure to comply. Verification that the facsimile has been received should be made by calling the NRC Operations Center. This paragraph does not apply to interim reports described in § 21.21(a)(2). (ii) Written notification to the NRC at the address specified in § 21.5 within 30 days following receipt of information by the director or responsible corporate officer under paragraph (a)(3) of this section, on the identification of a defect or a failure to comply.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
540	21.21(d)(4)	The written report required by this paragraph shall include, but need not be limited to, the following information, to the extent known: (i) Name and address of the individual or individuals informing the Commission. (ii) Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect. (iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect. (iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply. (v) The date on which the information of such defect or failure to comply was obtained. (vi) In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part. (vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action. (viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees. (ix) In the case of an early site permit, the entities to whom an early site permit was transferred.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
541	21.21(d)(5)	The director or responsible officer may authorize an individual to provide the notification required by this paragraph, provided that, this shall not relieve the director or responsible officer of his or her responsibility under this paragraph.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
542	21.21 €	Individuals subject to this part may be required by the Commission to supply additional information related to a defect or failure to comply. Commission action to obtain additional information may be based on reports of defects from other reporting entities	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
543	21.31	Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall ensure that each procurement document for a facility, or a basic component issued by him, her or it on or after January 6, 1978, specifies, when applicable, that the provisions of 10 CFR Part 21 apply.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				
544	21.41	Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall permit the Commission to inspect records, premises, activities, and basic components as necessary to accomplish the purposes of this part.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X				

Appendix B - Unfiltered  
Crosswalk of NRC License and Other Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K	L	
1	Materials License SUA-1471, Amendment 49 and Other Applicable Regulatory Obligations								Consolidated Deficiency Groupings				
2	License Condition or Requirement	Requirement	Requirement met?	Comments	Corrective Action Items	Status	Responsible	1	2	3	4	5	
	21.51(a)	Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall prepare and maintain records necessary to accomplish the purposes of this part, specifically: (1) Retain evaluations of all deviations and failures to comply for a minimum of five years after the date of the evaluation; (2) Suppliers of basic components must retain any notifications sent to purchasers and affected licensees for a minimum of five years after the date of the notification. (3) Suppliers of basic components must retain a record of the purchasers of basic components for 10 years after delivery of the basic component or service associated with a basic component. (4) Applicants for standard design certification under subpart B of part 52 of this chapter and others providing a design which is the subject of a design certification, during and following Commission adoption of a final design certification rule for that design, shall retain any notifications sent to purchasers and affected licensees for a minimum of 5 years after the date of the notification, and retain a record of the purchasers for 15 years after delivery of design which is the subject of the design certification rule or service associated with the design. (5) Applicants for or holders of a standard design approval under subpart E of part 52 of this chapter and others providing a design which is the subject of a design approval shall retain any notifications sent to purchasers and affected licensees for a minimum of 5 years after the date of the notification, and retain a record of the purchasers for 15 years after delivery of the design which is the subject of the design approval or service associated with the design.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X					
545													
	21.51(b)	Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall permit the Commission the opportunity to inspect records pertaining to basic components that relate to the identification and evaluation of deviations, and the reporting of defects and failures to comply, including (but not limited to) any advice given to purchasers or licensees on the placement, erection, installation, operation, maintenance, modification, or inspection of a basic component.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X					
546													
	21.61(a)	Any director or responsible officer of an entity (including dedicating entity) that is not otherwise subject to the deliberate misconduct provisions of this chapter but is subject to the regulations in this part who knowingly and consciously fails to provide the notice required as by § 21.21 shall be subject to a civil penalty equal to the amount provided by section 234 of the Atomic Energy Act of 1954, as amended.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X					
547													
	21.61(b)	Any NRC licensee or applicant for a license (including an applicant for, or holder of, a permit), applicant for a design certification under part 52 of this chapter during the pendency of its application, applicant for a design certification after Commission adoption of a final design certification rule for that design, or applicant for or holder of a standard design approval under part 52 of this chapter subject to the regulations in this part who fails to provide the notice required by § 21.21, or otherwise fails to comply with the applicable requirements of this part shall be subject to a civil penalty as provided by Section 234 of the Atomic Energy Act of 1954, as amended.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X					
548													
	21.61(c)	The dedicating entity, pursuant to § 21.21(c) of this part, is responsible for identifying and evaluating deviations, reporting defects and failures to comply for the dedicated item, and maintaining auditable records of the dedication process. NRC enforcement action can be taken for failure to identify and evaluate deviations, failure to report defects and failures to comply, or failure to maintain auditable records.	No	see Part 21.2(a) for details	Develop Part 21 program policy or incorporate minimum required provisions into either PGD 5 – Accident / Incident Reporting Policy, SOP 1 – Emergency Response Procedures, or SOP 21 – HMC Water Spill Reporting and Response Procedure.  Will also need to post the required information per Part 21.6(a).	see Part 21.2(a) for details	see Part 21.2(a) for details	X					
549													
550	43 CFR 7												
	7.5(a)	Any person proposing to excavate and/or remove archaeological resources from public lands or Indian lands, and to carry out activities associated with such excavation and/or removal, shall apply to the Federal land manager for a permit for the proposed work, and shall not begin the proposed work until a permit has been issued. The Federal land manager may issue a permit to any qualified person, subject to appropriate terms and conditions, provided that the person applying for a permit meets conditions in § 7.8(a) of this part.	Yes	Implemented via License Condition 43.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notifications to be made and documentation that is required.								
551		Exceptions:(1) No permit shall be required under this part for any person conducting activities on the public lands under other permits, leases, licenses, or entitlements for use, when those activities are exclusively for purposes other than the excavation and/or removal of archaeological resources, even though those activities might incidentally result in the disturbance of archaeological resources. General earth-moving excavation conducted under a permit or other authorization shall not be construed to mean excavation and/or removal as used in this part. This exception does not, however, affect the Federal land manager's responsibility to comply with other authorities which protect archaeological resources prior to approving permits, leases, licenses, or entitlements for use; any excavation and/or removal of archaeological resources required for compliance with those authorities shall be conducted in accordance with the permit requirements of this part.(2) No permit shall be required under this part for any person collecting for private purposes any rock, coin, bullet, or mineral which is not an archaeological resource as defined in this part, provided that such collecting does not result in disturbance of any archaeological resource.(3) No permit shall be required under this part or under section 3 of the Act of June 8, 1906 (16 U.S.C. 432), for the excavation or removal by any Indian tribe or member thereof of any archaeological resource located on Indian lands of such Indian tribe, except that in the absence of tribal law regulating the excavation or removal or archaeological resources on Indian lands, an individual tribal member shall be required to obtain a permit under this part;(4) No permit shall be required under this part for any person to carry out any archaeological activity authorized by a permit issued under section 3 of the Act of June 8, 1906 (16 U.S.C. 432), before the enactment of the Archaeological Resources Protection Act of 1979. Such permit shall remain in effect according to its terms and conditions until expiration.(5) No permit shall be required under section 3 of the Act of June 8, 1906 (16 U.S.C. 432) for any archaeological work for which a permit is issued under this part.	Yes	Implemented via License Condition 43.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notifications to be made and documentation that is required.								
552	7.5(b)												
	7.5(c)	Persons carrying out official agency duties under the Federal land manager's direction, associated with the management of archaeological resources, need not follow the permit application procedures of § 7.6. However, the Federal land manager shall insure that provisions of §§ 7.8 and 7.9 have been met by other documented means, and that any official duties which might result in harm to or destruction of any Indian tribal religious or cultural site, as determined by the Federal land manager, have been the subject of consideration under § 7.7.	Yes	Implemented via License Condition 43.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notifications to be made and documentation that is required.								
553													
	7.5(d)	Upon the written request of the Governor of any State, on behalf of the State or its educational institutions, the Federal land manager shall issue a permit, subject to the provisions of §§ 7.5(b)(5), 7.7, 7.8(a) (3), (4), (5), (6), and (7), 7.9, 7.10, 7.12, and 7.13(a) to such Governor or to such designee as the Governor deems qualified to carry out the intent of the Act, for purposes of conducting archaeological research, excavating and/or removing archaeological resources, and safeguarding and preserving any materials and data collected in a university, museum, or other scientific or educational institution approved by the Federal land manager.	Yes	Implemented via License Condition 43.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notifications to be made and documentation that is required.								
554													
	7.5(e)	Under other statutory, regulatory, or administrative authorities governing the use of public lands and Indian lands, authorizations may be required for activities which do not require a permit under this part. Any person wishing to conduct on public lands or Indian lands any activities related to but believed to fall outside the scope of this part should consult with the Federal land manager, for the purpose of determining whether any authorization is required, prior to beginning such activities.	Yes	Implemented via License Condition 43.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notifications to be made and documentation that is required.								
555													
556	36 CFR 800												
	13(b)	If historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed the section 106 process without establishing a process under paragraph (a) of this section, the agency official shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties and:	Yes	Implemented via License Condition 43.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notifications to be made and documentation that is required.								
557													
	13(b)(1)	If the agency official has not approved the undertaking or if construction on an approved undertaking has not commenced, consult to resolve adverse effects pursuant to § 800.6; or	Yes	Implemented via License Condition 43.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notifications to be made and documentation that is required.								
558													
	13(b)(2)	If the agency official, the SHPO/THPO and any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property agree that such property is of value solely for its scientific, prehistoric, historic or archeological data, the agency official may comply with the Archeological and Historic Preservation Act instead of the procedures in this part and provide the Council, the SHPO/THPO, and the Indian tribe or Native Hawaiian organization with a report on the actions within a reasonable time after they are completed; or	Yes	Implemented via License Condition 43.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notifications to be made and documentation that is required.								
559													
	13(b)(3)	If the agency official has approved the undertaking and construction has commenced, determine actions that the agency official can take to resolve adverse effects, and notify the SHPO/THPO, any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property, and the Council within 48 hours of the discovery. The notification shall describe the agency official's assessment of National Register eligibility of the property and proposed actions to resolve the adverse effects. The SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council shall respond within 48 hours of the notification. The agency official shall take into account their recommendations regarding National Register eligibility and proposed actions, and then carry out appropriate actions. The agency official shall provide the SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council a report of the actions when they are completed.	Yes	Implemented via License Condition 43.	A specific procedure should be prepared that provides information on how to identify potential historic properties or material and archaeological resources, actions to be taken, notifications to be made and documentation that is required.								
560													

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
3	1904 Reporting Requirements									
4		1904.0 - Purpose	The purpose of this rule (part 1904) is to require employers to record and report work-related fatalities, injuries, and illnesses. Note to § 1904.0: Recording or reporting a work-related injury, illness, or fatality does not mean that the employer or employee was at fault, that an OSHA rule has been violated, or that the employee is eligible for workers' compensation or other benefits. Note to Subpart B: All employers covered by the Occupational Safety and Health Act (OSH Act) are covered by these Part 1904 regulations. However, most employers do not have to keep OSHA injury and illness records unless OSHA or the Bureau of Labor Statistics (BLS) informs them in writing that they must keep records. For example, employers with 10 or fewer employees and business establishments in certain industry classifications are partially exempt from keeping OSHA injury and illness records.							
5		1904.1 -Partial exemption for employers with 10 or fewer employees	<b>1904.1(a)(1)</b> If your company had ten (10) or fewer employees at all times during the last calendar year, you do not need to keep OSHA injury and illness records unless OSHA or the BLS informs you in writing that you must keep records under § 1904.41 or § 1904.42. However, as required by § 1904.39, all employers covered by the OSH Act must report to OSHA any workplace incident that results in a fatality or the hospitalization of three or more employees. <b>1904.1(a)(2)</b> If your company had more than ten (10) employees at any time during the last calendar year, you must keep OSHA injury and illness records unless your establishment is classified as a partially exempt industry under § 1904.2 <b>1904.1(b) Implementation.</b> <b>1904.1(b)(1)</b> <i>Is the partial exemption for size based on the size of my entire company or on the size of an individual business establishment?</i> The partial exemption for size is based on the number of employees in the entire company <b>1904.1(b)(2)</b> <i>How do I determine the size of my company to find out if I qualify for the partial exemption for size?</i> To determine if you are exempt because of size, you need to determine your company's peak employment during the last calendar year. If you had no more than 10 employees at any time in the last calendar year, your company qualifies for the partial exemption for size.	n/a						
6		1904.2- Partial exemption for establishments in certain industries.	<b>1904.2(a)(1)</b> If your business establishment is classified in a specific industry group listed in appendix A to this subpart, you do not need to keep OSHA injury and illness records unless the government asks you to keep the records under §§ 1904.41 or 1904.42. However, all employers must report to OSHA any workplace incident that results in an employee's fatality, inpatient hospitalization, amputation, or loss of an eye (see § 1904.39) <b>1904.2(a)(2)</b> If one or more of your company's establishments are classified in a non-exempt industry, you must keep OSHA injury and illness records for all of such establishments unless your company is partially exempted because of size under § 1904.11 <b>1904.2(b) Implementation.</b> <b>1904.2(b)(1)</b> <i>Is the partial industry classification exemption based on the industry classification of my entire company or on the classification of individual business establishments operated by my company?</i> The partial industry classification exemption applies to individual business establishments. If a company has several business establishments engaged in different classes of business activities, some of the company's establishments may be required to keep records, while others may be partially exempt <b>1904.2(b)(2)</b> <i>How do I determine the correct NAICS code for my company or for individual establishments?</i> You can determine your NAICS code by using one of three methods, or you may contact your nearest OSHA office or State agency for help in determining your NAICS code: <b>1904.2(b)(2)(i)</b> You can use the search feature at the U.S. Census Bureau NAICS main Web page: <a href="http://www.census.gov/eos/www/naics/">http://www.census.gov/eos/www/naics/</a> In the search box for the most recent NAICS, enter a keyword that describes your kind of business. A list of primary business activities containing that keyword and the corresponding NAICS codes will appear. Choose the one that most closely corresponds to your primary business activity, or refine your search to obtain other choices <b>1904.2(b)(2)(ii)</b> Rather than searching through a list of primary business activities, you may also view the most recent complete NAICS structure with codes and titles by clicking on the link for the most recent NAICS on the U.S. Census Bureau NAICS main Web page: <a href="http://www.census.gov/eos/www/naics/">http://www.census.gov/eos/www/naics/</a> Then click on the two-digit Sector code to see all the NAICS codes under that Sector. Then choose the six-digit code of your interest to see the corresponding definition, as well as cross-references and index items, when available <b>1904.2(b)(2)(iii)</b> If you know your old SIC code, you can also find the appropriate 2002 NAICS code by using the detailed conversion (concordance) between the 1987 SIC and 2002 NAICS available in Excel format for download at the "Concordances" link at the U.S. Census Bureau NAICS main Web page: <a href="http://www.census.gov/eos/www/naics/">http://www.census.gov/eos/www/naics/</a>	n/a						
7		1904.3 - Keeping records for more than one agency.	If you create records to comply with another government agency's injury and illness recordkeeping requirements, OSHA will consider those records as meeting OSHA's Part 1904 recordkeeping requirements if OSHA accepts the other agency's records under a memorandum of understanding with that agency, or if the other agency's records contain the same information as this Part 1904 requires you to record. You may contact your nearest OSHA office or State agency for help in determining whether your records meet OSHA's requirements.	n/a						
8		1904 Subpart B App A - Partially Exempt	<del>Non-Mandatory Appendix A to Subpart B - Partially Exempt Industries</del> Employers are not required to keep OSHA injury and illness records for any establishment classified in the following North American Industry Classification System (NAICS) codes, unless they are asked in writing to do so.	n/a						
9		1904.4 - Recording criteria	<b>1904.4(a)</b> <i>Basic requirement.</i> Each employer required by this part to keep records of fatalities, injuries, and illnesses must record each fatality, injury and illness that: <b>1904.4(a)(1)</b> Is work-related; and <b>1904.4(a)(2)</b> Is a new case; and <b>1904.4(a)(3)</b> Meets one or more of the general recording criteria of §1904.7 or the application to specific cases of §§1904.8 through 1904.12. <b>1904.4(b)</b> <b>Implementation—</b> <b>1904.4(b)(1)</b> <i>What sections of this rule describe recording criteria for recording work-related injuries and illnesses?</i> The table below indicates which sections of the rule address each topic. <b>1904.4(b)(1)(i)</b> Determination of work-relatedness. See §1904.5. <b>1904.4(b)(1)(ii)</b> Determination of a new case. See §1904.6. <b>1904.4(b)(1)(iii)</b> General recording criteria. See §1904.7. <b>1904.4(b)(1)(iv)</b> Additional criteria. (Needlestick and sharps injury cases, tuberculosis cases, hearing loss cases, medical removal cases, and musculoskeletal disorder cases). See §§1904.8 through 1904.12. <b>1904.4(b)(2)</b> How do I decide whether a particular injury or illness is recordable? The decision tree for recording work-related injuries and illnesses below shows the steps involved in making this determination.	Partial	Policy states immediate reporting to management for all work-related accidents, however policy is too brief/high-level and is silent on many individual provisions of the regulation.	x	x			
10		1904.5 - Determination of work-relatedness.	<b>1904.5(a)</b> <i>Basic requirement.</i> You must consider an injury or illness to be work-related if an event or exposure in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing injury or illness. Work-relatedness is presumed for injuries and illnesses resulting from events or exposures occurring in the work environment, unless an exception in §1904.5(b)(2) specifically applies <b>1904.5(b)</b> <b>Implementation.</b> <b>1904.5(b)(1)</b> What is the "work environment"? OSHA defines the work environment as "the establishment and other locations where one or more employees are working or are present as a condition of their employment. The work environment includes not only physical locations, but also the equipment or materials used by the employee during the course of his or her work." <b>1904.5(b)(2)</b> <i>Are there situations where an injury or illness occurs in the work environment and is not considered work-related?</i> Yes, an injury or illness occurring in the work environment that falls under one of the following exceptions is not work-related, and therefore is not recordable. 1904.5(b)(7) How do I decide if a case is work-related when the employee is working at home? Injuries and illnesses that occur while an employee is working at home, including work in a home office, will be considered work-related if the injury or illness occurs while the employee is performing work for pay or compensation in the home, and the injury or illness is directly related to the performance of work rather than to the general home environment or setting. For example, if an employee drops a box of work documents and injures his or her foot, the case is considered work-related. If an employee's fingernail is punctured by a needle from a sewing machine used to perform garment work at home, becomes infected and requires medical treatment, the injury is considered work-related. If an employee is injured because he or she trips on the family dog while rushing to answer a work phone call, the case is not considered work-related. If an employee working at home is electrocuted because of faulty home wiring, the injury is not considered work-related.	Partial	Policy states immediate reporting to management for all work-related accidents, however policy is too brief/high-level and is silent on many individual provisions of the regulation.	x				
11		1904.6 - Determination of new cases.	<b>1904.6(a)</b> <i>Basic requirement.</i> You must consider an injury or illness to be a "new case" if: <b>1904.6(a)(1)</b> The employee has not previously experienced a recorded injury or illness of the same type that affects the same part of the body, or <b>1904.6(a)(2)</b> The employee previously experienced a recorded injury or illness of the same type that affected the same part of the body but had recovered completely (all signs and symptoms had disappeared) from the previous injury or illness and an event or exposure in the work environment caused the signs or symptoms to reappear. <b>1904.6(b)</b> <b>Implementation.</b> <b>1904.6(b)(1)</b> <i>When an employee experiences the signs or symptoms of a chronic work-related illness, do I need to consider each recurrence of signs or symptoms to be a new case?</i> No, for occupational illnesses where the signs or symptoms may recur or continue in the absence of an exposure in the workplace, the case must only be recorded once. Examples may include occupational cancer, asbestosis, byssinosis and silicosis. <b>1904.6(b)(2)</b> <i>When an employee experiences the signs or symptoms of an injury or illness as a result of an event or exposure in the workplace, such as an episode of occupational asthma, must I treat the episode as a new case?</i> Yes, because the episode or recurrence was caused by an event or exposure in the workplace, the incident must be treated as a new case. <b>1904.6(b)(3)</b> <i>May I rely on a physician or other licensed health care professional to determine whether a case is a new case or a recurrence of an old case?</i> You are not required to seek the advice of a physician or other licensed health care professional. However, if you do seek such advice, you must follow the physician or other licensed health care professional's recommendation about whether the case is a new case or a recurrence. If you receive recommendations from two or more physicians or other licensed health care professionals, you must make a decision as to which recommendation is the most authoritative (best documented, best reasoned, or most authoritative), and record the case based upon that recommendation.	Partial	Policy states immediate reporting to management for all work-related accidents, however policy is too brief/high-level and is silent on many individual provisions of the regulation.	x	x		x	



Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
12		1904.7 - General recording criteria.	<p><b>1904.7(a) Basic requirement.</b> You must consider an injury or illness to meet the general recording criteria, and therefore to be recordable, if it results in any of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. You must also consider a case to meet the general recording criteria if it involves a significant injury or illness diagnosed by a physician or other licensed health care professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness. <b>1904.7(b) Implementation.</b> <b>1904.7(b)(1) How do I decide if a case meets one or more of the general recording criteria?</b> A work-related injury or illness must be recorded if it results in one or more of the following: <b>1904.7(b)(1)(i)</b> Death. See § 1904.7(b)(2). <b>1904.7(b)(1)(ii)</b> Days away from work. See § 1904.7(b)(3). <b>1904.7(b)(1)(iii)</b> Restricted work or transfer to another job. See § 1904.7(b)(4). <b>1904.7(b)(1)(iv)</b> Medical treatment beyond first aid. See § 1904.7(b)(5). <b>1904.7(b)(1)(v)</b> Loss of consciousness. See § 1904.7(b)(6). <b>1904.7(b)(1)(vi)</b> A significant injury or illness diagnosed by a physician or other licensed health care professional. See § 1904.7(b)(7). <b>1904.7(b)(2) How do I record a work-related injury or illness that results in the employee's death?</b> You must record an injury or illness that results in death by entering a check mark on the OSHA 300 Log in the space for cases resulting in death. You must also report any work-related fatality to OSHA within eight (8) hours, as required by § 1904.39. <b>1904.7(b)(3) How do I record a work-related injury or illness that results in days away from work?</b> When an injury or illness involves one or more days away from work, you must record the injury or illness on the OSHA 300 Log with a check mark in the space for cases involving days away and an entry of the number of calendar days away from work in the number of days column. If the employee is out for an extended period of time, you must enter an estimate of the days that the employee will be away, and update the day count when the actual number of days is known. <b>1904.7(b)(3)(i) Do I count the day on which the injury occurred or the illness began?</b> No, you begin counting days away on the day after the injury occurred or the illness began. <b>1904.7(b)(3)(ii) How do I record an injury or illness when a physician or other licensed health care professional recommends that the worker stay at home but the employee comes to work anyway?</b> You must record these injuries and illnesses on the OSHA 300 Log using the check box for cases with days away from work and enter the number of calendar days away recommended by the physician or other licensed health care professional. If a physician or other licensed health care professional recommends days away, you should encourage your employee to follow that recommendation. However, the days away must be recorded whether the injured or ill employee follows the physician or licensed health care professional's recommendation or not. If you receive recommendations from two or more physicians or other licensed health care professionals, you may make a decision as to which recommendation is the most authoritative, and record the case based upon that recommendation. <b>1904.7(b)(3)(iii) How do I handle a case when a physician or other licensed health care professional recommends that the worker return to work but the employee stays at home anyway?</b> In this situation, you must end the count of days away from work on the date the physician or other licensed health care professional recommends that the employee return to work. <b>1904.7(b)(3)(iv) How do I count weekends, holidays, or other days the employee would not have worked anyway?</b> You must count the number of calendar days the employee was unable to work as a result of the injury or illness, regardless of whether or not the employee was scheduled to work on those day(s). Weekend days, holidays, vacation days or other days off are included in the total number of days recorded if the employee would not have been able to work on those days because of a work-related injury or illness. <b>1904.7(b)(3)(v) How do I record a case in which a worker is injured or becomes ill on a Friday and reports to work on a Monday, and was not scheduled to work on the weekend?</b> You need to record this case only if you receive information from a physician or other licensed health care professional indicating that the employee should not have worked, or should have performed only restricted work, during the weekend. If so, you must record the injury or illness as a case with days away from work or restricted work, and enter the day counts, as appropriate. <b>1904.7(b)(3)(vi) How do I record a case in which a worker is injured or becomes ill on the day before scheduled time off such as a holiday, a planned vacation, or a temporary plant closing?</b> You need to record a case of this type only if you receive information from a physician or other licensed health care professional indicating that the employee should not have worked, or should have performed only restricted work, during the scheduled time off. If so, you must record the injury or illness as a case with days away from work or restricted work, and enter the day counts, as appropriate. <b>1904.7(b)(3)(vii) Is there a limit to the number of days away from work I must count?</b> Yes, you may "cap" the total days away at 180 calendar days. You are not required to keep track of the number of calendar days away from work if the injury or illness resulted in more than 180 calendar days away from work and/or days of job transfer or restriction. In such a case, entering 180 in the total days away column will be considered adequate. <b>1904.7(b)(3)(viii) May I stop counting days if an employee who is away from work because of an injury or illness retires or leaves my company?</b> Yes, if the employee leaves your company for some reason unrelated to the injury or illness, such as retirement, a plant closing, or to take another job, you may stop counting days away from work or days of restriction/job transfer. If the employee leaves your company because of the injury or illness, you must estimate the total number of days away or days of restriction/job transfer and enter the day count on the 300 Log. <b>1904.7(b)(3)(ix) If a case occurs in one year but results in days away during the next calendar year, do I record the case in both years?</b> No, you only record the injury or illness once. You must enter the number of calendar days away for the injury or illness on the OSHA 300 Log for the year in which the injury or illness occurred. If the employee is still away from work because of the injury or illness when you prepare the annual summary, estimate the total number of calendar days you expect the employee to be away from work, use this number to calculate the total for the annual summary, and then update the initial log entry later when the day count is known or reaches the 180-day cap. <b>1904.7(b)(4) How do I record a work-related injury or illness that results in restricted work or job transfer?</b> When an injury or illness involves restricted work or job transfer but does not involve death or days away from work, you must record the injury or illness on the OSHA 300 Log by placing a check mark in the space for job transfer or restriction and an entry of the number of restricted or transferred days in the restricted workdays column. <b>1904.7(b)(4)(i) How do I decide if the injury or illness resulted in restricted work?</b> Restricted work occurs when, as the result of a work-related injury or illness: <b>1904.7(b)(4)(i)(A)</b> You keep the employee from performing one or more of the routine functions of his or her job, or not work the full workday that he or she would otherwise have been scheduled to work; or <b>1904.7(b)(4)(i)(B)</b> A physician or other licensed health care professional recommends that the employee not perform one or more of the routine functions of his or her job, or not work the full workday that he or she would otherwise have been scheduled to work. <b>1904.7(b)(4)(ii) What is meant by "routine functions"?</b> For recordkeeping purposes, an employee's routine functions are those work activities the employee regularly performs at least once per week. <b>1904.7(b)(4)(iii) Do I have to record restricted work or job transfer if it applies only to the day on which the injury occurred or the illness began?</b> No, you do not have to record restricted work or job transfers if you, or the physician or other licensed health care professional, impose the restriction or transfer only for the day on which the injury occurred or the illness began. <b>1904.7(b)(4)(iv) If you or a physician or other licensed health care professional recommends a work restriction, is the injury or illness automatically recordable as a "restricted work" case?</b> No, a recommended work restriction is recordable only if it affects one or more of the employee's routine job functions. To determine whether this is the case, you must evaluate the restriction in light of the routine functions of the injured or ill employee's job. If the restriction from you or the physician or other licensed health care professional keeps the employee from performing one or more of his or her routine job functions, or from working the full workday the injured or ill employee would otherwise have worked, the employee's work has been restricted and you must record the case. <b>1904.7(b)(4)(v) How do I record a case where the worker works only for a partial work shift because of a work-related injury or illness?</b> A partial day of work is recorded as a day of job transfer or restriction for recordkeeping purposes, except for the day on which the injury occurred or the illness began. <b>1904.7(b)(4)(vi) If the injured or ill worker produces fewer goods or services than he or she would have produced prior to the injury or illness but otherwise performs all of the routine functions of his or her work, is the case considered a restricted work case?</b> No, the case is considered restricted work only if the worker does not perform all of the routine functions of his or her job or does not work the full shift that he or she would otherwise have worked. <b>1904.7(b)(4)(vii) How do I handle vague restrictions from a physician or other licensed health care professional, such as that the employee engage only in "light duty" or "take it easy for a week"?</b> If you are not clear about the physician or other licensed health care professional's recommendation, you may ask that person whether the employee can do all of his or her routine job functions and work all of his or her normally assigned work shift. If the answer to both of these questions is "Yes," then the case does not involve a work restriction and does not have to be recorded as such. If the answer to one or both of these questions is "No," the case involves restricted work and must be recorded as a restricted work case. If you are unable to obtain this additional information from the physician or other licensed health care professional who recommended the restriction, record the injury or illness as a case involving restricted work. <b>1904.7(b)(4)(viii) What do I do if a physician or other licensed health care professional recommends a job restriction meeting OSHA's definition, but the employee does all of his or her routine job functions anyway?</b> You must record the injury or illness on the OSHA 300 Log as a restricted work case. If a physician or other licensed health care professional recommends a job restriction, you should ensure that the employee complies with that restriction. If you receive recommendations from two or more physicians or other licensed health care professionals, you may make a decision as to which recommendation is the most authoritative, and record the case based upon that recommendation. <b>1904.7(b)(4)(ix) How do I decide if an injury or illness involved a transfer to another job?</b> If you assign an injured or ill employee to a job other than his or her regular job for part of the day, the case involves transfer to another job. Note: This does not include the day on which the injury or illness occurred. <b>1904.7(b)(4)(x) Are transfers to another job recorded in the same way as restricted work cases?</b> Yes, both job transfer and restricted work cases are recorded in the same box on the OSHA 300 Log. For example, if you assign, or a physician or other licensed health care professional recommends that you assign, an injured or ill worker to his or her routine job duties for part of the day and to another job for the rest of the day, the injury or illness involves a job transfer. You must record an injury or illness that involves a job transfer by placing a check in the box for job transfer. <b>1904.7(b)(4)(xi) How do I count days of job transfer or restriction?</b> You count days of job transfer or restriction in the same way you count days away from work, using § 1904.7(b)(3)(i) to (viii), above. The only difference is that, if you permanently assign the injured or ill employee to a job that has been modified or permanently changed in a manner that eliminates the routine functions the employee was restricted from performing, you may stop the day count when the modification or change is made permanent. You must count at least one day of restricted work or job transfer for such cases. <b>1904.7(b)(5) How do I record an injury or illness that involves medical treatment beyond first aid?</b> If a work-related injury or illness results in medical treatment beyond first aid, you must record it on the OSHA 300 Log. If the injury or illness did not involve death, one or more days away from work, one or more days of restricted work, or one or more days of job transfer, you enter a check mark in the box for cases where the employee received medical treatment but remained at work and was not transferred or restricted. <b>1904.7(b)(5)(i) What is the definition of medical treatment?</b> "Medical treatment" means the management and care of a patient to combat disease or disorder. For the purposes of Part 1904, medical treatment does not include: <b>1904.7(b)(5)(i)(A)</b> Visits to a physician or other licensed health care professional solely for observation or counseling; <b>1904.7(b)(5)(i)(B)</b> The conduct of diagnostic procedures, such as x-rays and blood tests, including the administration of prescription medications used solely for diagnostic purposes (e.g., eye drops to dilate pupils); or <b>1904.7(b)(5)(i)(C)</b> "First aid" as defined in paragraph (b)(5)(ii) of this section. <b>1904.7(b)(5)(ii) What is "first aid"?</b> For the purposes of Part 1904, "first aid" means the following: <b>1904.7(b)(5)(ii)(A)</b> Using a non-prescription medication at nonprescription strength (for medications available in both prescription and non-prescription form, a recommendation by a physician or other licensed health care professional to use a non-prescription medication at prescription strength is considered medical treatment for recordkeeping purposes); <b>1904.7(b)(5)(ii)(B)</b> Administering tetanus immunizations (other immunizations, such as Hepatitis B vaccine or rabies vaccine, are considered medical treatment); <b>1904.7(b)(5)(ii)(C)</b> Cleaning, flushing or soaking wounds on the surface of the skin; <b>1904.7(b)(5)(ii)(D)</b> Using wound coverings such as bandages, Band-Aids™, gauze pads, etc.; or using butterfly bandages or Steri-Strips™ (other wound closing devices such as sutures, staples, etc., are considered medical treatment); <b>1904.7(b)(5)(ii)(E)</b> Using hot or cold therapy; <b>1904.7(b)(5)(ii)(F)</b> Using any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc. (devices with rigid stays or other systems designed to immobilize parts of the body are considered medical treatment for recordkeeping purposes); <b>1904.7(b)(5)(ii)(G)</b> Using temporary immobilization devices while transporting an accident victim ( e.g., splints, slings, neck collars, back boards, etc.). <b>1904.7(b)(5)(ii)(H)</b> Drilling of a fingernail or toenail to relieve pressure, or draining fluid from a blister; <b>1904.7(b)(5)(ii)(I)</b> Using eye patches; <b>1904.7(b)(5)(ii)(J)</b> Removing foreign bodies from the eye using only irrigation or a cotton swab; <b>1904.7(b)(5)(ii)(K)</b> Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means; <b>1904.7(b)(5)(ii)(L)</b> Using finger guards; <b>1904.7(b)(5)(ii)(M)</b> Using massages (physical therapy or chiropractic treatment are considered medical treatment for recordkeeping purposes); or <b>1904.7(b)(5)(ii)(N)</b> Drinking fluids for relief of heat stress. <b>1904.7(b)(5)(iii) Are any other procedures included in first aid?</b> No, this is a complete list of all treatments considered first aid for Part 1904 purposes. <b>1904.7(b)(5)(iv) Does the professional status of the person providing the treatment have any effect on what is considered first aid or medical treatment?</b> No, OSHA considers the treatments listed in § 1904.7(b)(5)(ii) of this Part to be first aid regardless of the professional status of the person providing the treatment. Even when these treatments are provided by a physician or other licensed health care professional, they are considered first aid for the purposes of Part 1904. Similarly, OSHA considers treatment beyond first aid to be medical treatment even when it is provided by someone other than a physician or other licensed health care professional. <b>1904.7(b)(5)(v) What if a physician or other licensed health care professional recommends medical treatment but the employee does not follow the recommendation?</b> If a physician or other licensed health care professional recommends medical treatment, you should encourage the injured or ill employee to follow that recommendation. However, you must record the case even if the injured or ill employee does not follow the physician or other licensed health care professional's recommendation. <b>1904.7(b)(6) Is every work-related injury or illness case involving a loss of consciousness recordable?</b> Yes, you must record a work-related injury or illness if the worker becomes unconscious, regardless of the length of time the employee remains unconscious. <b>1904.7(b)(7) What is a "significant" diagnosed injury or illness that is recordable under the general criteria even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness?</b> Work-related cases involving cancer, chronic irreversible disease, a fractured or cracked bone, or a punctured eardrum must always be recorded under the general criteria at the time of diagnosis by a physician or other licensed health care professional. <b>Note to § 1904.7:</b> OSHA believes that most significant injuries and illnesses will result in one of the criteria listed in § 1904.7(a): death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness. However, there are some significant injuries, such as a punctured eardrum or a fractured toe or rib, for which neither medical treatment nor work restrictions may be recommended. In addition, there are some significant progressive diseases, such as byssinosis, silicosis, and some types of cancer, for which medical treatment or work restrictions may not be recommended at the time of diagnosis but are likely to be recommended as the disease progresses. OSHA believes that cancer, chronic irreversible diseases, fractured or cracked bones, and punctured eardrums are generally considered significant injuries and illnesses, and must be recorded at the initial diagnosis even if medical treatment or work restrictions are not recommended, or are postponed, in a particular case.</p>	Partial	Policy states immediate reporting to management for all work-related accidents, however policy is too brief/high-level and is silent on many individual provisions of the regulation.		X			X	
13											
14		1904.8 - Recording criteria for needlestick and sharps injuries.	<p><b>1904.8(a) Basic requirement.</b> You must record all work-related needlestick injuries and cuts from sharp objects that are contaminated with another person's blood or other potentially infectious material (as defined by 29 CFR 1910.1030). You must enter the case on the OSHA 300 Log as an injury. To protect the employee's privacy, you may not enter the employee's name on the OSHA 300 Log (see the requirements for privacy cases in paragraphs 1904.29(b)(6) through 1904.29(b)(9)). <b>1904.8(b) Implementation.</b> <b>1904.8(b)(1) What does "other potentially infectious material" mean?</b> The term "other potentially infectious materials" is defined in the OSHA Bloodborne Pathogens standard at § 1910.1030(b). These materials include: <b>1904.8(b)(1)(i)</b> Human bodily fluids, tissues and organs, and <b>1904.8(b)(1)(ii)</b> Other materials infected with the HIV or hepatitis B (HBV) virus such as laboratory cultures or tissues from experimental animals. <b>1904.8(b)(2) Does this mean that I must record all cuts, lacerations, punctures, and scratches?</b> No, you need to record cuts, lacerations, punctures, and scratches only if they are work-related and involve contamination with another person's blood or other potentially infectious material. If the cut, laceration, or scratch involves a clean object, or a contaminant other than blood or other potentially infectious material, you need to record the case only if it meets one or more of the recording criteria in § 1904.7. <b>1904.8(b)(3) If I record an injury and the employee is later diagnosed with an infectious bloodborne disease, do I need to update the OSHA 300 Log?</b> Yes, you must update the classification of the case on the OSHA 300 Log if the case results in death, days away from work, restricted work, or job transfer. You must also update the description to identify the infectious disease and change the classification of the case from an injury to an illness. <b>1904.8(b)(4) What if one of my employees is splashed or exposed to blood or other potentially infectious material without being cut or scratched?</b> Do I need to record this incident? You need to record such an incident on the OSHA 300 Log as an illness if: <b>1904.8(b)(4)(i)</b> It results in the diagnosis of a bloodborne illness, such as HIV, hepatitis B, or hepatitis C; or <b>1904.8(b)(4)(ii)</b> It meets one or more of the recording criteria in § 1904.7.</p>	Partial	Policy requires the use of Universal Precautions when exposed to bloodborne pathogens, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including needlestick/sharps injuries and recordkeeping of incidents.		X			X	
15											

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
16		1904.9 - Recording criteria for cases involving medical removal under OSHA standards.	<b>1904.9(a) Basic requirement.</b> If an employee is medically removed under the medical surveillance requirements of an OSHA standard, you must record the case on the OSHA 300 Log. <b>1904.9(b) Implementation.</b> <b>1904.9(b)(1) How do I classify medical removal cases on the OSHA 300 Log?</b> You must enter each medical removal case on the OSHA 300 Log as either a case involving days away from work or a case involving restricted work activity, depending on how you decide to comply with the medical removal requirement. If the medical removal is the result of a chemical exposure, you must enter the case on the OSHA 300 Log by checking the "poisoning" column. <b>1904.9(b)(2) Do all of OSHA's standards have medical removal provisions?</b> No, some OSHA standards, such as the standards covering bloodborne pathogens and noise, do not have medical removal provisions. Many OSHA standards that cover specific chemical substances have medical removal provisions. These standards include, but are not limited to, lead, cadmium, methylene chloride, formaldehyde, and benzene. <b>1904.9(b)(3) Do I have to record a case where I voluntarily removed the employee from exposure before the medical removal criteria in an OSHA standard are met?</b> No, if the case involves voluntary medical removal before the medical removal levels required by an OSHA standard, you do not need to record the case on the OSHA 300 Log.	Partial	Policy is too brief/high-level and is silent on many individual provisions of the regulation.		X		X	
17		1904.10 - Recording criteria for cases involving occupational hearing loss.	<b>1904.10(a) Basic requirement.</b> If an employee's hearing test (audiogram) reveals that the employee has experienced a work-related Standard Threshold Shift (STS) in hearing in one or both ears, and the employee's total hearing level is 25 decibels (dB) or more above audiometric zero (average 2000, 3000, and 4000 Hz) in the same ear(s) as the STS, you must record the case on the OSHA 300 Log. <b>1904.10(b) Implementation.</b> <b>1904.10(b)(1) What is a Standard Threshold Shift?</b> A Standard Threshold Shift, or STS, is defined in the occupational noise exposure standard at 29 CFR 1910.95(g)(10)(i) as a change in hearing threshold, relative to the baseline audiogram for that employee, of an average of 10 decibels (dB) or more at 2000, 3000, and 4000 hertz (Hz) in one or both ears. <b>1904.10(b)(2) How do I evaluate the current audiogram to determine whether an employee has an STS and a 25-dB hearing level?</b> <b>1904.10(b)(2)(i) STS.</b> If the employee has never previously experienced a recordable hearing loss, you must compare the employee's current audiogram with that employee's baseline audiogram. If the employee has previously experienced a recordable hearing loss, you must compare the employee's current audiogram with the employee's revised baseline audiogram (the audiogram reflecting the employee's previous recordable hearing loss calculated as a 25-dB loss. Audiometric test results reflect the employee's overall hearing ability in comparison to audiometric zero. Therefore, using the employee's current audiogram, you must use the average hearing level at 2000, 3000, and 4000 Hz to determine whether or not the employee's total hearing level is 25 dB or more above audiometric zero (average 2000, 3000, and 4000 Hz) in the same ear(s) as the STS, you must use the average hearing level at 2000, 3000, and 4000 hertz (Hz) in one or both ears. <b>1904.10(b)(3) May I adjust the current audiogram to reflect the effects of aging on hearing?</b> Yes. When you are determining whether an STS has occurred, you may age adjust the employee's current audiogram results by using Tables F-1 or F-2, as appropriate, in Appendix F of 29 CFR 1910.95. You may not use an age adjustment when determining whether the employee's total hearing level is 25 dB or more above audiometric zero. <b>1904.10(b)(4) Do I have to record the hearing loss if I am going to retest the employee's hearing?</b> No, if you retest the employee's hearing within 30 days of the first test, and the retest does not confirm the recordable STS, you are not required to record the hearing loss case on the OSHA 300 Log. If the retest confirms the recordable STS, you must record the hearing loss illness within seven (7) calendar days of the retest. If subsequent audiometric testing performed under the testing requirements of the § 1910.95 noise standard indicates that an STS is not persistent, you may erase or line-out the recorded entry. <b>1904.10(b)(5) Are there any special rules for determining whether a hearing loss case is work-related?</b> No. You must use the rules in § 1904.5 to determine if the hearing loss is work-related. If an event or exposure in the work environment either caused or contributed to the hearing loss, or significantly aggravated a pre-existing hearing loss, you must consider the case to be work related. <b>1904.10(b)(6) If a physician or other licensed health care professional determines the hearing loss is not work-related, do I still need to record the case?</b> If a physician or other licensed health care professional determines that the hearing loss is not work-related or has not been significantly aggravated by occupational noise exposure, you are not required to consider the case work-related or to record the case on the OSHA 300 Log. <b>1904.10(b)(7) How do I complete the 300 Log for a hearing loss case?</b> When you enter a recordable hearing loss case on the OSHA 300 Log, you must check the 300 Log column for hearing loss. (Note: § 1904.10(b)(7) is effective beginning January 1, 2004.)	n/a						
18		1904.11 - Recording criteria for work-related tuberculosis cases.	<b>1904.11(a) Basic requirement.</b> If any of your employees has been occupationally exposed to anyone with a known case of active tuberculosis (TB), and that employee subsequently develops a tuberculosis infection, as evidenced by a positive skin test or diagnosis by a physician or other licensed health care professional, you must record the case on the OSHA 300 Log by checking the "respiratory condition" column. <b>1904.11(b) Implementation.</b> <b>1904.11(b)(1) Do I have to record, on the Log, a positive TB skin test result obtained at a pre-employment physical?</b> No, you do not have to record it because the employee was not occupationally exposed to a known case of active tuberculosis in your workplace. <b>1904.11(b)(2) (May I line-out or erase a recorded TB case if I obtain evidence that the case was not caused by occupational exposure?)</b> Yes, you may line-out or erase the case from the Log under the following circumstances: <b>1904.11(b)(2)(i)</b> The worker is living in a household with a person who has been diagnosed with active TB; <b>1904.11(b)(2)(ii)</b> The Public Health Department has identified the worker as a contact of an individual with a case of active TB unrelated to the workplace; or <b>1904.11(b)(2)(iii)</b> A medical investigation shows that the employee's infection was caused by exposure to TB away from work, or proves that the case was not related to the workplace TB exposure.	n/a						
19		1904.13-28	Reserved	n/a						
20		1904.29 - Forms.	<b>1904.29(a) Basic requirement.</b> You must use OSHA 300, 300-A, and 301 forms, or equivalent forms, for recordable injuries and illnesses. The OSHA 300 form is called the Log of Work-Related Injuries and Illnesses, the 300-A is the Summary of Work-Related Injuries and Illnesses, and the OSHA 301 form is called the Injury and Illness Incident Report. <b>1904.29(b) Implementation — 1904.29(b)(1) What do I need to do to complete the OSHA 300 Log?</b> You must enter information about your business at the top of the OSHA 300 Log, enter a one or two line description for each recordable injury or illness, and summarize this information on the OSHA 300-A at the end of the year. <b>1904.29(b)(2) What do I need to do to complete the OSHA 301 Incident Report?</b> You must complete an OSHA 301 Incident Report form, or an equivalent form, for each recordable injury or illness entered on the OSHA 300 Log. <b>1904.29(b)(3) How quickly must each injury or illness be recorded?</b> You must enter each recordable injury or illness on the OSHA 300 Log and 301 Incident Report within seven (7) calendar days of receiving information that a recordable injury or illness has occurred. <b>1904.29(b)(4) What is an equivalent form?</b> An equivalent form is one that has the same information, is as readable and understandable, and is completed using the same instructions as the OSHA form it replaces. Many employers use an insurance form instead of the OSHA 301 Incident Report, or supplement an insurance form by adding any additional information required by OSHA. <b>1904.29(b)(5) May I keep my records on a computer?</b> Yes, if the computer can produce equivalent forms when they are needed, as described under §§1904.35 and 1904.40, you may keep your records using the computer system. <b>1904.29(b)(6) Are there situations where I do not put the employee's name on the forms for privacy reasons?</b> Yes, if you have a "privacy concern case," you may not enter the employee's name on the OSHA 300 Log. Instead, enter "privacy case" in the space normally used for the employee's name. This will protect the privacy of the injured or ill employee when another employee, a former employee, or an authorized employee representative is provided access to the OSHA 300 Log under §1904.35(b)(2). You must keep a separate, confidential list of the case numbers and employee names for your privacy concern cases so you can update the cases and provide the information to the government if asked to do so. <b>1904.29(b)(7) How do I determine if an injury or illness is a privacy concern case?</b> You must consider the following injuries or illnesses to be privacy concern cases: <b>1904.29(b)(7)(i)</b> An injury or illness to an intimate body part or the reproductive system; <b>1904.29(b)(7)(ii)</b> An injury or illness resulting from a sexual assault; <b>1904.29(b)(7)(iii)</b> Mental illnesses; <b>1904.29(b)(7)(iv)</b> HIV infection, hepatitis, or tuberculosis; <b>1904.29(b)(7)(v)</b> Needlestick injuries and cuts from sharp objects that are contaminated with another person's blood or other potentially infectious material (see §1904.8 for definitions); and <b>1904.29(b)(7)(vi)</b> Other illnesses, if the employee voluntarily requests that his or her name not be entered on the log. <b>1904.29(b)(8) May I classify any other types of injuries and illnesses as privacy concern cases?</b> No, this is a complete list of all injuries and illnesses considered privacy concern cases for part 1904 purposes. <b>1904.29(b)(9) If I have removed the employee's name, but still believe that the employee may be identified from the information on the forms, is there anything else that I can do to further protect the employee's privacy?</b> Yes, if you have a reasonable basis to believe that information describing the privacy concern case may be personally identifiable even though the employee's name has been omitted, you may use discretion in describing the injury or illness on both the OSHA 300 and 301 forms. You must enter enough information to identify the cause of the incident and the general severity of the injury or illness, but you do not need to include details of an intimate or private nature. For example, a sexual assault case could be described as "injury from assault," or an injury to a reproductive organ could be described as "lower abdominal injury." <b>1904.29(b)(10) What must I do to protect employee privacy if I wish to provide access to the OSHA Forms 300 and 301 to persons other than government representatives, employees, former employees or authorized representatives?</b> If you decide to voluntarily disclose the Forms to persons other than government representatives, employees, former employees or authorized representatives (as required by §§1904.35 and 1904.40), you must remove or hide the employees' names and other personally identifying information, except for the following cases. You may disclose the Forms with personally identifying information only: <b>1904.29(b)(10)(i)</b> to an auditor or consultant hired by the employer to evaluate the safety and health program; <b>1904.29(b)(10)(ii)</b> to the extent necessary for processing a claim for workers' compensation or other insurance benefits; or <b>1904.29(b)(10)(iii)</b> to a public health authority or law enforcement agency for uses and disclosures for which consent, an authorization, or opportunity to agree or object is not required under Department of Health and Human Services Standards for Privacy of Individually Identifiable Health Information, 45 CFR 164.512.	No	Policy or procedure needed to capture this requirement and assign responsibility..	X	X		X	
21		1904.30 - Multiple business establishments.	<b>1904.30(a) Basic requirement.</b> You must keep a separate OSHA 300 Log for each establishment that is expected to be in operation for one year or longer. <b>1904.30(b) Implementation.</b> <b>1904.30(b)(1) Do I need to keep OSHA injury and illness records for short-term establishments (i.e., establishments that will exist for less than a year)?</b> Yes, however, you do not have to keep a separate OSHA 300 Log for each such establishment. You may keep one OSHA 300 Log that covers all of your short-term establishments. You may also include the short-term establishments' recordable injuries and illnesses on an OSHA 300 Log that covers short-term establishments for individual company divisions or geographic regions. <b>1904.30(b)(2) May I keep the records for all of my establishments at my headquarters location or at some other central location?</b> Yes, you may keep the records for an establishment at your headquarters or other central location if you can. <b>1904.30(b)(2)(i)</b> Transmit information about the injuries and illnesses from the establishment to the central location within seven (7) calendar days of receiving information that a recordable injury or illness has occurred; and <b>1904.30(b)(2)(ii)</b> Produce and send the records from the central location to the establishment within the time frames required by § 1904.35 and § 1904.40 when you are required to provide records to a government representative, employees, former employees or employee representatives. <b>1904.30(b)(3) Some of my employees work at several different locations or do not work at any of my establishments at all. How do I record cases for these employees?</b> You must link each of your employees with one of your establishments, for recordkeeping purposes. You must record the injury and illness on the OSHA 300 Log of the injured or ill employee's establishment, or on an OSHA 300 Log that covers that employee's short-term establishment. <b>1904.30(b)(4) How do I record an injury or illness when an employee of one of my establishments is injured or becomes ill while visiting or working at another of my establishments, or while working away from any of my establishments?</b> If the injury or illness occurs at one of your establishments, you must record the injury or illness on the OSHA 300 Log of the establishment at which the injury or illness occurred. If the employee is injured or becomes ill and is not at one of your establishments, you must record the case on the OSHA 300 Log at the establishment at which the employee normally works.	n/a						



Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
22		1904.31 - Covered employees.	<b>1904.31(a) Basic requirement.</b> You must record on the OSHA 300 Log the recordable injuries and illnesses of all employees on your payroll, whether they are labor, executive, hourly, salary, part-time, seasonal, or migrant workers. You also must record the recordable injuries and illnesses that occur to employees who are not on your payroll if you supervise these employees on a day-to-day basis. If your business is organized as a sole proprietorship or partnership, the owner or partners are not considered employees for recordkeeping purposes. <b>1904.31(b) Implementation.</b> <b>1904.31(b)(1) If a self-employed person is injured or becomes ill while doing work at my business, do I need to record the injury or illness?</b> No, self-employed individuals are not covered by the OSH Act or this regulation. <b>1904.31(b)(2) If I obtain employees from a temporary help service, employee leasing service, or personnel supply service, do I have to record an injury or illness occurring to one of those employees?</b> You must record these injuries and illnesses if you supervise these employees on a day-to-day basis. <b>1904.31(b)(3) If an employee in my establishment is a contractor's employee, must I record an injury or illness occurring to that employee?</b> If the contractor's employee is under the day-to-day supervision of the contractor, the contractor is responsible for recording the injury or illness. If you supervise the contractor employee's work on a day-to-day basis, you must record the injury or illness. <b>1904.31(b)(4) Must the personnel supply service, temporary help service, employee leasing service, or contractor also record the injuries or illnesses occurring to temporary, leased or contract employees that I supervise on a day-to-day basis?</b> No, you and the temporary help service, employee leasing service, personnel supply service, or contractor should coordinate your efforts to make sure that each injury and illness is recorded only once: either on your OSHA 300 Log (if you provide day-to-day supervision) or on the other employer's OSHA 300 Log (if that company provides day-to-day supervision).	No	Policy or procedure needed to capture this requirement and assign responsibility..	X	X			
23		1904.32 - Annual summary.	<b>1904.32(a) Basic requirement.</b> At the end of each calendar year, you must: <b>1904.32(a)(1)</b> Review the OSHA 300 Log to verify that the entries are complete and accurate, and correct any deficiencies identified; <b>1904.32(a)(2)</b> Create an annual summary of injuries and illnesses recorded on the OSHA 300 Log; <b>1904.32(a)(3)</b> Certify the summary; and <b>1904.32(a)(4)</b> Post the annual summary. <b>1904.32(b) Implementation—</b> <b>1904.32(b)(1)</b> How extensively do I have to review the OSHA 300 Log entries at the end of the year? You must review the entries as extensively as necessary to make sure that they are complete and correct. <b>1904.32(b)(2)</b> How do I complete the annual summary? You must: <b>1904.32(b)(2)(i)</b> Total the columns on the OSHA 300 Log (if you had no recordable cases, enter zeros for each column total); and <b>1904.32(b)(2)(ii)</b> Enter the calendar year covered, the company's name, establishment name, establishment address, annual average number of employees covered by the OSHA 300 Log, and the total hours worked by all employees covered by the OSHA 300 Log. <b>1904.32(b)(2)(iii)</b> If you are using an equivalent form other than the OSHA 300-A summary form, as permitted under § <b>1904.6(b)(4)</b> , the summary you use must also include the employee access and employer penalty statements found on the OSHA 300-A Summary form. <b>1904.32(b)(3)</b> How do I certify the annual summary? A company executive must certify that he or she has examined the OSHA 300 Log and that he or she reasonably believes, based on his or her knowledge of the process by which the information was recorded, that the annual summary is correct and complete. <b>1904.32(b)(4)</b> Who is considered a company executive? The company executive who certifies the log must be one of the following persons: <b>1904.32(b)(4)(i)</b> An owner of the company (only if the company is a sole proprietorship or partnership); <b>1904.32(b)(4)(ii)</b> An officer of the corporation; <b>1904.32(b)(4)(iii)</b> The highest ranking company official working at the establishment; or <b>1904.32(b)(4)(iv)</b> The immediate supervisor of the highest ranking company official working at the establishment. <b>1904.32(b)(5)</b> How do I post the annual summary? You must post a copy of the annual summary in each establishment in a conspicuous place or places where notices to employees are customarily posted. You must ensure that the posted annual summary is not altered, defaced or covered by other material. <b>1904.32(b)(6)</b> When do I have to post the annual summary? You must post the summary no later than February 1 of the year following the year covered by the records and keep the posting in place until April 30.	No	Policy or procedure needed to capture this requirement and assign responsibility..		X		X	
24		1904.33 - Retention and updating.	<b>1904.33(a) Basic requirement.</b> You must save the OSHA 300 Log, the privacy case list (if one exists), the annual summary, and the OSHA 301 Incident Report forms for five (5) years following the end of the calendar year that these records cover. <b>1904.33(b) Implementation</b> — <b>1904.33(b)(1) Do I have to update the OSHA 300 Log during the five-year storage period?</b> Yes, during the storage period, you must update your stored OSHA 300 Logs to include newly discovered recordable injuries or illnesses and to show any changes that have occurred in the classification of previously recorded injuries and illnesses. If the description or outcome of a case changes, you must remove or line out the original entry and enter the new information. <b>1904.33(b)(2) Do I have to update the annual summary?</b> No, you are not required to update the annual summary, but you may do so if you wish. <b>1904.33(b)(3) Do I have to update the OSHA 301 Incident Reports?</b> No, you are not required to update the OSHA 301 Incident Reports, but you may do so if you wish.	No	Policy or procedure needed to capture this requirement and assign responsibility..		X			
25		1904.34 - Change in business ownership.	If your business changes ownership, you are responsible for recording and reporting work-related injuries and illnesses only for that period of the year during which you owned the establishment. You must transfer the part 1904 records to the new owner. The new owner must save all records of the establishment kept by the prior owner, as required by § 1904.33 of this part, but need not update or correct the records of the prior owner.	n/a						
26		1904.35 - Employee involvement.	<b>1904.35(a) Basic requirement.</b> Your employees and their representatives must be involved in the recordkeeping system in several ways. <b>1904.35(a)(1)</b> You must inform each employee of how he or she is to report a work-related injury or illness to you. <b>1904.35(a)(2)</b> You must provide employees with the information described in paragraph (b)(1)(iii) of this section. <b>1904.35(a)(3)</b> You must provide access to your injury and illness records for your employees and their representatives as described in paragraph (b)(2) of this section. <b>1904.35(b) Implementation.</b> <b>1904.35(b)(1) What must I do to make sure that employees report work-related injuries and illnesses to me?</b> <b>1904.35(b)(1)(i)</b> You must establish a reasonable procedure for employees to report work-related injuries and illnesses promptly and accurately. A procedure is not reasonable if it would deter or discourage a reasonable employee from accurately reporting a workplace injury or illness; <b>1904.35(b)(1)(ii)</b> You must inform each employee of your procedure for reporting work-related injuries and illnesses; <b>1904.35(b)(1)(iii)</b> You must inform each employee that: <b>1904.35(b)(1)(iii)(A)</b> Employees have the right to report work-related injuries and illnesses; and <b>1904.35(b)(1)(iii)(B)</b> Employers are prohibited from discharging or in any manner discriminating against employees for reporting work-related injuries or illnesses; and <b>1904.35(b)(1)(iv)</b> You must not discharge or in any manner discriminate against any employee for reporting a work-related injury or illness. <b>1904.35(b)(2) Do I have to give my employees and their representatives access to the OSHA injury and illness records?</b> Yes, your employees, former employees, their personal representatives, and their authorized employee representatives have the right to access the OSHA injury and illness records, with some limitations, as discussed below. <b>1904.35(b)(2)(i) Who is an authorized employee representative?</b> An authorized employee representative is an authorized collective bargaining agent of employees. <b>1904.35(b)(2)(ii) Who is a "personal representative" of an employee or former employee?</b> A personal representative is: <b>1904.35(b)(2)(ii)(A)</b> Any person that the employee or former employee designates as such, in writing; or <b>1904.35(b)(2)(ii)(B)</b> The legal representative of a deceased or legally incapacitated employee or former employee. <b>1904.35(b)(2)(iii) If an employee or representative asks for access to the OSHA 300 Log, when do I have to provide it?</b> When an employee, former employee, personal representative, or authorized employee representative asks for copies of your current or stored OSHA 300 Log(s) for an establishment the employee or former employee has worked in, you must give the requester a copy of the relevant OSHA 300 Log(s) by the end of the next business day. <b>1904.35(b)(2)(iv) May I remove the names of the employees or any other information from the OSHA 300 Log before I give copies to an employee, former employee, or employee representative?</b> No, you must leave the names on the 300 Log. However, to protect the privacy of injured and ill employees, you may not record the employee's name on the OSHA 300 Log for certain "privacy concern cases," as specified in § 1904.29(b)(6) through (9). <b>1904.35(b)(2)(v) If an employee or representative asks for access to the OSHA 301 Incident Report, when do I have to provide it?</b> <b>1904.35(b)(2)(v)(A)</b> When an employee, former employee, or personal representative asks for a copy of the OSHA 301 Incident Report describing an injury or illness to that employee or former employee, you must give the requester a copy of the OSHA 301 Incident Report containing that information by the end of the next business day. <b>1904.35(b)(2)(v)(B)</b> When an authorized employee representative asks for copies of the OSHA 301 Incident Reports for an establishment where the agent represents employees under a collective bargaining agreement, you must give copies of those forms to the authorized employee representative within 7 calendar days. You are only required to give the authorized employee representative information from the OSHA 301 Incident Report section titled "Tell us about the case." You must remove all other information from the copy of the OSHA 301 Incident Report or the equivalent substitute form that you give to the authorized employee representative. <b>1904.35(b)(2)(vi) May I charge for the copies?</b> No, you may not charge for these copies the first time they are provided. However, if one of the designated persons asks for additional copies, you may assess a reasonable charge for retrieving and copying the records."	Partial	Policy requires employees to report incidents, and has an anonymity provision, however policy is too brief/high-level and is silent on many individual provisions of the regulation.	X	X			
27		1904.36 - Prohibition against discrimination.	In addition to § 1904.35, section 11(c) of the OSH Act also prohibits you from discriminating against an employee for reporting a work-related fatality, injury, or illness. That provision of the Act also protects the employee who files a safety and health complaint, asks for access to the part 1904 records, or otherwise exercises any rights afforded by the OSH Act.	Yes						
28		1904.37 - State recordkeeping regulations.	<b>1904.37(a) Basic requirement.</b> Some States operate their own OSHA programs, under the authority of a State plan as approved by OSHA. States operating OSHA-approved State plans must have occupational injury and illness recording and reporting requirements that are substantially identical to the requirements in this part (see 29 CFR 1902.3(j), 29 CFR 1902.7, and 29 CFR 1956.10(i)). <b>1904.37(b) Implementation.</b> <b>1904.37(b)(1)</b> State-Plan States must have the same requirements as Federal OSHA for determining which injuries and illnesses are recordable and how they are recorded. <b>1904.37(b)(2)</b> For other Part 1904 provisions (for example, industry exemptions, reporting of fatalities and hospitalizations, record retention, or employee involvement), State-Plan State requirements may be more stringent than or supplemental to the Federal requirements, but because of the unique nature of the national recordkeeping program, States must consult with and obtain approval of any such requirement. <b>1904.37(b)(3)</b> Although State and local government employees are not covered Federally, all State-Plan States must provide coverage, and must develop injury and illness statistics, for these workers. State Plan recording and reporting requirements for State and local government entities may differ from those for the private sector but must meet the requirements of paragraphs 1904.37(b)(1) and (b)(2). <b>1904.37(b)(4)</b> A State-Plan State may not issue a variance to a private sector employer and must recognize all variances issued by Federal OSHA. <b>1904.37(b)(5)</b> A State Plan State may only grant an injury and illness recording and reporting variance to a State or local government employer within the State after obtaining approval to grant the variance from Federal OSHA.	n/a						
29		1904.38 - Variances from the recordkeeping rule.	<b>1904.38(a) Basic requirement.</b> If you wish to keep records in a different manner from the manner prescribed by the Part 1904 regulations, you may submit a variance petition to the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, Washington, DC 20210. You can obtain a variance only if you can show that your alternative recordkeeping system: <b>1904.38(a)(1)</b> Collects the same information as this Part requires; <b>1904.38(a)(2)</b> Meets the purposes of the Act; and <b>1904.38(a)(3)</b> Does not interfere with the administration of the Act. <b>1904.38(b) Implementation.</b> <b>1904.38(b)(1) What do I need to include in my variance petition?</b> You must include the following items in your petition: <b>1904.38(b)(1)(i)</b> Your name and address; <b>1904.38(b)(1)(ii)</b> A list of the State(s) where the variance would be used; <b>1904.38(b)(1)(iii)</b> The address(es) of the business establishment(s) involved; <b>1904.38(b)(1)(iv)</b> A description of why you are seeking a variance; <b>1904.38(b)(1)(v)</b> A description of the different recordkeeping procedures you propose to use; <b>1904.38(b)(1)(vi)</b> A description of how your proposed procedures will collect the same information as would be collected by this Part and achieve the purpose of the Act; and <b>1904.38(b)(1)(vii)</b> A statement that you have informed your employees of the petition by giving them or their authorized representative a copy of the petition and by posting a statement summarizing the petition in the same way as notices are posted under § 1903.2(a). <b>1904.38(b)(2) How will the Assistant Secretary handle my variance petition?</b> The Assistant Secretary will take the following steps to process your variance petition: <b>1904.38(b)(2)(i)</b> The Assistant Secretary will offer your employees and their authorized representatives an opportunity to submit written data, views, and arguments about your variance petition; <b>1904.38(b)(2)(ii)</b> The Assistant Secretary may allow the public to comment on your variance petition by publishing the petition in the <b>Federal Register</b> . If the petition is published, the notice will establish a public comment period and may include a schedule for a public meeting on the petition; <b>1904.38(b)(2)(iii)</b> After reviewing your variance petition and any comments from your employees and the public, the Assistant Secretary will decide whether or not your proposed recordkeeping procedures will meet the purposes of the Act, and will provide the same information as the Part 1904 regulations provide. If your procedures meet these criteria, the Assistant Secretary may grant the variance subject to such conditions as he or she finds appropriate. <b>1904.38(b)(2)(iv)</b> If the Assistant Secretary grants your variance petition, OSHA will publish a notice in the <b>Federal Register</b> to announce the variance. The notice will include the practices the variance allows you to use, any conditions that apply, and the reasons for allowing the variance. <b>1904.38(b)(3) If I apply for a variance, may I use my proposed recordkeeping procedures while the Assistant Secretary is processing the variance petition?</b> No, alternative recordkeeping practices are only allowed after the variance is approved. You must comply with the Part 1904 regulations while the Assistant Secretary is reviewing your variance petition. <b>1904.38(b)(4) If I have already been cited by OSHA for not following the Part 1904 regulations, will my variance petition have any effect on the citation and penalty?</b> No, in addition, the Assistant Secretary may elect not to review your variance petition if it includes an element for which you have been cited and the citation is still under review by a court, an Administrative Law Judge (ALJ), or the OSH Review Commission. <b>1904.38(b)(5) If I receive a variance, may the Assistant Secretary revoke the variance at a later date?</b> Yes, the Assistant Secretary may revoke your variance if he or she has good cause. The procedures revoking a variance will follow the same process as OSHA uses for reviewing variance petitions, as outlined in paragraph 1904.38(b)(2). Except in cases of willfulness or where necessary for public safety, the Assistant Secretary will: <b>1904.38(b)(5)(i)</b> Notify you in writing of the facts or conduct that may warrant revocation of your variance; and <b>1904.38(b)(5)(ii)</b> Provide you, your employees, and authorized employee representatives with an opportunity to participate in the revocation procedures.	n/a						

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
30		1904.39 - Reporting fatalities, hospitalizations, amputations, and losses of an eye as a result of work-related incidents to OSHA.	<b>1904.39(a) Basic requirement.</b> <b>1904.39(a)(1)</b> Within eight (8) hours after the death of any employee as a result of a work-related incident, you must report the fatality to the Occupational Safety and Health Administration (OSHA), U.S. Department of Labor. <b>1904.39(a)(2)</b> Within twenty-four (24) hours after the in-patient hospitalization of one or more employees or an employee's amputation or an employee's loss of an eye, as a result of a work-related incident, you must report the in-patient hospitalization, amputation, or loss of an eye using one of the following methods: <b>1904.39(a)(3)(i)</b> By telephone or in person to the OSHA Area Office that is nearest to the site of the incident. <b>1904.39(a)(3)(ii)</b> By telephone to the OSHA toll-free central telephone number, 1-800-321-OSHA (1-800-321-6742). <b>1904.39(a)(3)(iii)</b> By electronic submission using the reporting application located on OSHA's public Web site at <a href="http://www.osha.gov">www.osha.gov</a> . <b>1904.39(b) Implementation</b> <b>1904.39(b)(1)</b> <i>If the Area Office is closed, may I report the fatality, in-patient hospitalization, amputation, or loss of an eye by leaving a message on OSHA's answering machine, faxing the Area Office, or sending an email?</i> No, if the Area Office is closed, you must report the fatality, in-patient hospitalization, amputation, or loss of an eye using either the 800 number or the reporting application located on OSHA's public Web site at <a href="http://www.osha.gov">www.osha.gov</a> . <b>1904.39(b)(2)</b> <i>What information do I need to give to OSHA about the in-patient hospitalization, amputation, or loss of an eye?</i> You must give OSHA the following information for each fatality, in-patient hospitalization, amputation, or loss of an eye: <b>1904.39(b)(2)(i)</b> The establishment name; <b>1904.39(b)(2)(ii)</b> The location of the work-related incident; <b>1904.39(b)(2)(iii)</b> The time of the work-related incident; <b>1904.39(b)(2)(iv)</b> The type of reportable event (i.e., fatality, in-patient hospitalization, amputation, or loss of an eye); <b>1904.39(b)(2)(v)</b> The number of employees who suffered a fatality, in-patient hospitalization, amputation, or loss of an eye; <b>1904.39(b)(2)(vi)</b> The names of the employees who suffered a fatality, in-patient hospitalization, amputation, or loss of an eye; <b>1904.39(b)(2)(vii)</b> Your contact person and his or her phone number; and <b>1904.39(b)(2)(viii)</b> A brief description of the work-related incident. <b>1904.39(b)(3)</b> <i>Do I have to report the fatality, inpatient hospitalization, amputation, or loss of an eye if it resulted from a motor vehicle accident on a public street or highway?</i> If the motor vehicle accident occurred in a construction work zone, you must report the fatality, in-patient hospitalization, amputation, or loss of an eye to OSHA. However, the fatality, in-patient hospitalization, amputation, or loss of an eye must be recorded on your OSHA injury and illness records, if you are required to keep such records. <b>1904.39(b)(4)</b> <i>Do I have to report the fatality, inpatient hospitalization, amputation, or loss of an eye if it occurred on a commercial or public transportation system?</i> No, you do not have to report the fatality, in-patient hospitalization, amputation, or loss of an eye to OSHA if it occurred on a commercial or public transportation system (e.g., airplane, train, subway, or bus). However, the fatality, in-patient hospitalization, amputation, or loss of an eye must be recorded on your OSHA injury and illness records, if you are required to keep such records. <b>1904.39(b)(5)</b> <i>Do I have to report a work-related fatality or in-patient hospitalization caused by a heart attack?</i> Yes, your local OSHA Area Office director will decide whether to investigate the event, depending on the circumstances of the heart attack. <b>1904.39(b)(6)</b> <i>What if the fatality, in-patient hospitalization, amputation, or loss of an eye does not occur during or right after the work-related incident?</i> You must only report a fatality to OSHA if the fatality occurs within thirty (30) days of the work-related incident. For an in-patient hospitalization, amputation, or loss of an eye, you must only report the event to OSHA if it occurs within twenty-four (24) hours of the work-related incident. However, the fatality, in-patient hospitalization, amputation, or loss of an eye must be recorded on your OSHA injury and illness records, if you are required to keep such records. <b>1904.39(b)(7)</b> <i>What if I don't learn about a reportable fatality, in-patient hospitalization, amputation, or loss of an eye right away?</i> If you do not learn about a reportable fatality, in-patient hospitalization, amputation, or loss of an eye at the time it takes place, you must make the report to OSHA within the following time period after the fatality, in-patient hospitalization, amputation, or loss of an eye is reported to you or to any of your agent(s): Eight (8) hours for a fatality, and twenty-four (24) hours for an in-patient hospitalization, an amputation, or a loss of an eye. <b>1904.39(b)(8)</b> <i>What if I don't learn right away that the reportable fatality, in-patient hospitalization, amputation, or loss of an eye was the result of a work-related incident?</i> If you do not learn right away that the reportable fatality, in-patient hospitalization, amputation, or loss of an eye was the result of a work-related incident, you must make the report to OSHA within the following time period after you or any of your agent(s) learn that the reportable fatality, in-patient hospitalization, amputation, or loss of an eye was the result of a work-related incident: Eight (8) hours for a fatality, and twenty-four (24) hours for an inpatient hospitalization, an amputation, or a loss of an eye. <b>1904.39(b)(9)</b> <i>How does OSHA define "in-patient hospitalization?"</i> OSHA defines inpatient hospitalization as a formal admission to the in-patient service of a hospital or clinic for care or treatment. <b>1904.39(b)(10)</b> <i>Do I have to report an in-patient hospitalization that involves only observation or diagnostic testing?</i> No, you do not have to report an in-patient hospitalization that involves only observation or diagnostic testing. You must only report to OSHA each inpatient hospitalization that involves care or treatment. <b>1904.39(b)(11)</b> <i>How does OSHA define "amputation?"</i> An amputation is the traumatic loss of a limb or other external body part. Amputations include a part, such as a limb or appendage, that has been severed, cut off, amputated (either completely or partially); fingertip amputations with or without bone loss; medical amputations resulting from irreparable damage; amputations of body parts that have since been reattached. Amputations do not include avulsions, enucleations, degloving, scalplings, severed ears, or broken or chipped teeth.	Partial	Policy states immediate reporting to management for all work-related accidents, however policy is too brief/high-level and is silent on many individual provisions of the regulation.	X					
31		1904.40 - Providing records to government representatives.	<b>1904.40(a) Basic requirement.</b> When an authorized government representative asks for the records you keep under part 1904, you must provide copies of the records within four (4) business hours. <b>1904.40(b) Implementation</b> — <b>1904.40(b)(1)</b> <i>What government representatives have the right to get copies of my part 1904 records?</i> The government representatives authorized to receive the records are: <b>1904.40(b)(1)(i)</b> A representative of the Secretary of Labor conducting an inspection or investigation under the Act; <b>1904.40(b)(1)(ii)</b> A representative of the Secretary of Health and Human Services (including the National Institute for Occupational Safety and Health—NIOSH) conducting an investigation under section 20(b) of the Act, or <b>1904.40(b)(1)(iii)</b> A representative of a State agency responsible for administering a State plan approved under section 18 of the Act. <b>1904.40(b)(2)</b> <i>Do I have to produce the records within four (4) hours if my records are kept at a location in a different time zone?</i> OSHA will consider your response to be timely if you give the records to the government representative within four (4) business hours of the request. If you maintain the records at a location in a different time zone, you may use the business hours of the establishment at which the records are located when calculating the deadline.	No	Not covered in PGDs		X				
32		1904.41 - Electronic submission of injury and illness records to OSHA.	<b>1904.41(a) Basic requirements</b> <b>1904.41(a)(1) Annual electronic submission of part 1904 records by establishments with 250 or more employees.</b> If your establishment had 250 or more employees at any time during the previous calendar year, and this part requires your establishment to keep records, then you must electronically submit information from the three recordkeeping forms that you keep under this part (OSHA Form 300A Summary of Work-Related Injuries and Illnesses, OSHA Form 300 Log of Work-Related Injuries and Illnesses, and OSHA Form 301 Injury and Illness Incident Report) to OSHA or OSHA's designee. You must submit the information once a year, no later than the date listed in paragraph (c) of this section of the year after the calendar year covered by the form. <b>1904.41(a)(2) Annual electronic submission of OSHA Form 300A Summary of Work-Related Injuries and Illnesses by establishments with 20 or more employees but fewer than 250 employees in designated industries.</b> If your establishment had 20 or more employees but fewer than 250 employees at any time during the previous calendar year, and your establishment is classified in an industry listed in appendix A to subpart E of this part, then you must electronically submit information from OSHA Form 300A Summary of Work-Related Injuries and Illnesses to OSHA or OSHA's designee. You must submit the information once a year, no later than the date listed in paragraph (c) of this section of the year after the calendar year covered by the form. <b>1904.41(a)(3) Electronic submission of part 1904 records upon notification.</b> Upon notification, you must electronically submit the requested information from your part 1904 records to OSHA or OSHA's designee. <b>1904.41(b) Implementation</b> <b>1904.41(b)(1) Does every employer have to routinely submit information from the injury and illness records to OSHA?</b> No, only two categories of employers must routinely submit information from their injury and illness records. First, if your establishment had 250 or more employees at any time during the previous calendar year, and this part requires your establishment to keep records, then you must submit the required Form 300A, 300, and 301 information to OSHA once a year. Second, if your establishment had 20 or more employees but fewer than 250 employees at any time during the previous calendar year, and your establishment is classified in an industry listed in appendix A to subpart E of this part, then you must submit the required Form 300A information to OSHA once a year. Employers in these two categories must submit the required information by the date listed in paragraph (c) of this section of the year after the calendar year covered by the form or forms (for example, 2017 for the 2016 forms). If you are not in either of these two categories, then you must submit information from the injury and illness records to OSHA only if OSHA notifies you to do so for an individual data collection. <b>1904.41(b)(2) If I have to submit information under paragraph (a)(1) of this section, do I have to submit all of the information from the recordkeeping form?</b> No, you are required to submit all of the information from the form except the following: <b>1904.41(b)(2)(i)</b> Log of Work-Related Injuries and Illnesses (OSHA Form 300): Employee name (column B) <b>1904.41(b)(2)(ii)</b> Injury and Illness Incident Report (OSHA Form 301): Employee name (field 1), employee address (field 2), name of physician or other health care professional (field 6), facility name and address if treatment was given away from the worksite (field <b>1904.41(b)(3) Do part-time, seasonal, or temporary workers count as employees in the criteria for number of employees in paragraph (a) of this section?</b> Yes, each individual employed in the establishment at any time during the calendar year counts as one employee, including full-time, part-time, seasonal, and temporary workers. <b>1904.41(b)(4) How will OSHA notify me that I must submit information from the injury and illness records as part of an individual data collection under paragraph (a)(3) of this section?</b> OSHA will notify you by mail if you will have to submit information as part of an individual data collection under paragraph (a)(3). OSHA will also announce individual data collections through publication in the <b>Federal Register</b> and the OSHA newsletter, and announcements on the OSHA Web site. If you are an employer who must routinely submit the information, then OSHA will not notify you about your routine submission. <b>1904.41(b)(5) How often do I have to submit the information from the injury and illness records?</b> If you are required to submit information under paragraph (a)(1) or (2) of this section, then you must submit the information once a year, by the date listed in paragraph (c) of this section of the year after the calendar year covered by the form or forms. If you are submitting information because OSHA notified you to submit information as part of an individual data collection under paragraph (a)(3) of this section, then you must submit the information as often as specified in the notification. <b>1904.41(b)(6) How do I submit the information?</b> You must submit the information electronically. OSHA will provide a secure Web site for the electronic submission of information. For individual data collections under paragraph (a)(3) of this section, OSHA will include the Web site's location in the notification for the data collection. <b>1904.41(b)(7) Do I have to submit information if my establishment is partially exempt from keeping OSHA injury and illness records?</b> If you are partially exempt from keeping injury and illness records under §§ 1904.1 and/or 1904.2, then you do not have to routinely submit part 1904 information under paragraphs (a)(1) and (2) of this section. You will have to submit information under paragraph (a)(3) of this section if OSHA informs you in writing that it will collect injury and illness information from you. If you receive such a notification, then you must keep the injury and illness records required by this part and submit information as directed. <b>1904.41(b)(8) Do I have to submit information if I am located in a State Plan State?</b> Yes, the requirements apply to employers located in State Plan States. <b>1904.41(b)(9) May an enterprise or corporate office electronically submit part 1904 records for its establishment(s)?</b> Yes, if your enterprise or corporate office had ownership of or control over one or more establishments required to submit information under paragraph (a)(1) or (2) of this section, then the enterprise or corporate office may collect and electronically submit the information for the establishment(s). <b>1904.41(c) Reporting dates.</b> <b>1904.41(c)(1)</b> In 2017 and 2018, establishments required to submit under paragraph (a)(1) or (2) of this section must submit the required information according to the table in this paragraph (c)(1): <b>1904.41(c)(2)</b> Beginning in 2019, establishments that are required to submit under paragraph (a)(1) or (2) of this section will have to submit all of the required information by March 2 of the year after the calendar year covered by the form or forms (for example, by March 2, 2019, for the forms covering 2018).	n/a							
33		1904.41 App A - Appendix A to Subpart E of Part 1904-Designated Industries for § 1904.41(a)(2) Annual Electronic Submission of OSHA Form 300A Summary of Work-Related Injuries and Illnesses by Establishments With 20 or More Employees but Fewer Than 250 Employees in Designated Industries	Appendix A to Subpart E of Part 1904-Designated Industries for § 1904.41(a)(2) Annual Electronic Submission of OSHA Form 300A Summary of Work-Related Injuries and Illnesses by Establishments With 20 or More Employees but Fewer Than 250 Employees in Designated Industries	n/a							
34		1904.42 - Requests from the Bureau of Labor Statistics for data.	<b>1904.42(a) Basic requirement.</b> If you receive a Survey of Occupational Injuries and Illnesses Form from the Bureau of Labor Statistics (BLS), or a BLS designee, you must promptly complete the form and return it following the instructions contained on the survey form. <b>1904.42(b) Implementation.</b> <b>1904.42(b)(1) Does every employer have to send data to the BLS?</b> No, each year, the BLS sends injury and illness survey forms to randomly selected employers and uses the information to create the Nation's occupational injury and illness statistics. In any year, some employers will receive a BLS survey form and others will not. You do not have to send injury and illness data to the BLS unless you receive a survey form. <b>1904.42(b)(2) If I get a survey form from the BLS, what do I have to do?</b> If you receive a Survey of Occupational Injuries and Illnesses Form from the Bureau of Labor Statistics (BLS), or a BLS designee, you must promptly complete the form and return it, following the instructions contained on the survey form. <b>1904.42(b)(3) Do I have to respond to a BLS survey form if I am normally exempt from keeping OSHA injury and illness records?</b> Yes, even if you are exempt from keeping injury and illness records under § 1904.1 to § 1904.3, the BLS may inform you in writing that it will be collecting injury and illness information from you in the coming year. If you receive such a letter, you must keep the injury and illness records required by § 1904.5 to § 1904.15 and make a survey report for the year covered by the survey. <b>1904.42(b)(4) Do I have to answer the BLS survey form if I am located in a State-Plan State?</b> Yes, all employers who receive a survey form must respond to the survey, even those in State-Plan States.	No	Not covered in PGDs		X				

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
35		1904.43 - Summary and posting of 2001 data.	1904.43(a) Basic requirement. If you were required to keep OSHA 200 Logs in 2001, you must post a 2000 annual summary from the OSHA 200 Log of occupational injuries and illnesses for each establishment.1904.43(b) Implementation. 1904.43(b)(1) What do I have to include in the summary? 1904.43(b)(1)(i) You must include a copy of the totals from the 2001 OSHA 200 Log and the following information from that form:1904.43(b)(1)(i)(A) The calendar year covered;1904.43(b)(1)(i)(B) Your company name;1904.43(b)(1)(i)(C) The name and address of the establishment; and1904.43(b)(1)(i)(D) The certification signature, title and date.1904.43(b)(1)(ii) If no injuries or illnesses occurred at your establishment in 2001, you must enter zeros on the totals line and post the 2001 summary.1904.43(b)(2) When am I required to summarize and post the 2001 information? 1904.43(b)(2)(i) You must complete the summary by February 1, 2002; and1904.43(b)(2)(ii) You must post a copy of the summary in each establishment in a conspicuous place or places where notices to employees are customarily posted. You must ensure that the summary is not altered, defaced or covered by other material.1904.43(b)(3) You must post the 2001 summary from February 1, 2002 to March 1, 2002.	n/a						
36		1904.44 - Retention and updating of old forms.	You must save your copies of the OSHA 200 and 101 forms for five years following the year to which they relate and continue to provide access to the data as though these forms were the OSHA 300 and 301 forms. You are not required to update your old 200 and 101 forms.	n/a						
37		1904.45 - OMB control numbers under the Paperwork Reduction Act.	The following sections each contain a collection of information requirement which has been approved by the Office of Management and Budget under the control number listed : 1904.4-35 (OMB Control No. 1218-0176), 1904.39-41(OMB Control No. 1218-0176), 1904.42 (OMB Control No.	n/a						
38	1910 Subpart D - Walking-Working Surfaces			Yes	Policy requires a clean an orderly work environment including clear aisleways and clean and dry walking and working surfaces.					
39		1910.22 - General requirements.	1910.22(a) Surface conditions. The employer must ensure:1910.22(a)(1) All places of employment, passageways, storerooms, service rooms, and walking-working surfaces are kept in a clean, orderly, and sanitary condition;1910.22(a)(2) The floor of each workroom is maintained in a clean and, to the extent feasible, in a dry condition. When wet processes are used, drainage must be maintained and, to the extent feasible, dry standing places, such as false floors, platforms, and mats must be provided;1910.22(a)(3) Walking-working surfaces are maintained free of hazards such as sharp or protruding objects, loose boards, corrosion, leaks, spills, snow, and ice.	Yes	Policy requires a clean an orderly work environment including clear aisleways and clean and dry walking and working surfaces.					
40		1910.23 - Ladders.	From the HASP "Except where more stringent requirements may exist, all stairways and ladders shall be in accordance with OSHA 29 CFR 1926 Subpart X."	Partial	Policies require correct use of ladders and reference OSHA 29 CRF 1926 Subpart X, however policy is too brief/high-level and is silent on many individual provisions of the regulation such as ladder type, material and load rating.	X				
41		1910.24 - Step bolts and manhole steps.	n/a	n/a						
42		1910.25 - Stairways.	From the HASP "Except where more stringent requirements may exist, all stairways and ladders shall be in accordance with OSHA 29 CFR 1926 Subpart X."	Partial	Policies reference OSHA 29 CRF 1926 Subpart X, however policy is too brief/high-level and is silent on many individual provisions of the regulation such as handrail/stairrail requirements.	X				
43		1910.26 - Dockboards.	1910.26(a) Dockboards are capable of supporting the maximum intended load in accordance with § 1910.22(b)1910.26(b)(1) Dockboards put into initial service on or after January 17, 2017 are designed, constructed, and maintained to prevent transfer vehicles from running off the dockboard edge;1910.26(b)(2) Exception to paragraph (b)(1) of this section. When the employer demonstrates there is no hazard of transfer vehicles running off the dockboard edge, the employer may use dockboards that do not have run-off protection;1910.26(c) Portable dockboards are secured by anchoring them in place or using equipment or devices that prevent the dockboard from moving out of a safe position. When the employer demonstrates that securing the dockboard is not feasible, the employer must ensure there is sufficient contact between the dockboard and the surface to prevent the dockboard from moving out of a safe position1910.26(d) Measures, such as wheel chocks or sand shoes, are used to prevent the transport vehicle (e.g. a truck, semitrailer, trailer, or rail car) on which a dockboard is placed, from moving while employees are on the dockboard; and1910.26(e) Portable dockboards are equipped with handholds or other means to permit safe handling of dockboards.	n/a						
44		1910.27 - Scaffolds and rope descent systems	See 29 CFR 1926 Subpart L	n/a						
45		1910.28 - Duty to have fall protection and falling object protection.	1910.28(a)(1) This section requires employers to provide protection for each employee exposed to fall and falling object hazards. Unless stated otherwise, the employer must ensure that all fall protection and falling object protection required by this section meet the criteria in § 1910.29, except that personal fall protection systems required by this section meet the criteria of § 1910.140. 1910.28(b) Protection from fall hazards- 1910.28(b)(1) Unprotected sides and edges. 1910.28(b)(1)(i) Except as provided elsewhere in this section, the employer must ensure that each employee on a walking-working surface with an unprotected side or edge that is 4 feet (1.2 m) or more above a lower level is protected from falling by one or more of the following: 1910.28(b)(1)(i)(A) Guardrail systems; 1910.28(b)(1)(i)(B) Safety net systems; or 1910.28(b)(1)(i)(C) Personal fall protection systems, such as personal fall arrest, travel restraint, or positioning systems. 1910.28(b)(1)(ii) When the employer can demonstrate that it is not feasible or creates a greater hazard to use guardrail, safety net, or personal fall protection systems on residential roofs, the employer must develop and implement a fall protection plan that meets the requirements of 29 CFR 1926.502(k) and training that meets the requirements of 29 CFR 1926.503(a) and (c).	Partial	Policy states the need for fall protection when working at heights, however policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
46		1910.29 - Fall protection systems and falling object protection-criteria and practices.	1910.29(a)(1) Ensure each fall protection system and falling object protection, other than personal fall protection systems, that this part requires meets the requirements in this section. The employer must ensure each personal fall protection system meets the requirements in subpart I of this part; and1910.29(a)(2) Provide and install all fall protection systems and falling object protection this subpart requires, and comply with the other requirements in this subpart before any employee begins work that necessitates fall or falling object protection.	Partial	Policy states the need for fall protection when working at heights, however policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
47		1910.30 - Training requirements.		Partial	Policy states the need for fall protection when working at heights, however policy is too brief/high-level and is silent on many individual provisions of the regulation.	X	X	X		
48	1926 Subpart L - Scaffolds			n/a						
49		1926.451 - General requirements.	1926.451(a)(6) Scaffolds shall be designed by a qualified person and shall be constructed and loaded in accordance with that design. Non-mandatory Appendix A to this subpart contains examples of criteria that will enable an employer to comply with paragraph (a) of this section."Scaffold platform construction."1926.451(b)(1) Each platform on all working levels of scaffolds shall be fully planked or decked between the front uprights and the guardrail supports as follows:1926.451(b)(1)(i) Each platform unit (e.g., scaffold plank, fabricated deck, or fabricated platform) shall be installed so that the space between adjacent units and the space between the platform and the uprights is no more than 1 inch (2.5 cm) wide, except where the employer can demonstrate that a wider space is necessary (for example, to fit around uprights when side brackets are used to extend the width of the platform).1926.451(b)(1)(ii) Where the employer makes the demonstration provided for in paragraph (b)(1)(i) of this section, the platform shall be planked or decked as fully as possible and the remaining open space between the platform and the uprights shall not exceed 9 1/2 inches (24.1 cm). Exception to paragraph (b)(1): The requirement in paragraph (b)(1) to provide full planking or decking does not apply to platforms used solely as walkways or solely by employees performing scaffold erection or dismantling. In these situations, only the planking that the employer establishes is necessary to provide safe working conditions is required.1926.451(b)(2) Except as provided in paragraphs (b)(2)(i) and (b)(2)(ii) of this section, each scaffold platform and walkway shall be at least 18 inches (46 cm) wide.1926.451(b)(2)(i) Each ladder jack scaffold, top plate bracket scaffold, roof bracket scaffold, and pump jack scaffold shall be at least 12 inches (30 cm) wide. There is no minimum width requirement for boatswains' chairs. Note to paragraph (b)(2)(i): Pursuant to an administrative stay effective November 29, 1996 and published in the Federal Register on November 25, 1996, the requirement in paragraph (b)(2)(i) that roof bracket scaffolds be at least 12 inches wide is stayed until November 25, 1997 or until rulemaking regarding the minimum width of roof bracket scaffolds has been completed, whichever is later. 1926.451(b)(2)(ii) Where scaffolds must be used in areas that the employer can demonstrate are so narrow that platforms and walkways cannot be at least 18 inches (46 cm) wide, such platforms and walkways shall be as wide as feasible, and employees on those platforms and walkways shall be protected from fall hazards by the use of guardrails and/or personal fall arrest systems1926.451(b)(3) Except as provided in paragraphs (b)(3)(i) and (ii) of this section, the front edge of all platforms shall not be more than 14 inches (36 cm) from the face of the work, unless guardrail systems are erected along the front edge and/or personal fall arrest systems are used in accordance with paragraph (g) of this section to protect employees from falling.	n/a						

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
50		1926.452 - Additional requirements applicable to specific types of scaffolds.	n/a	n/a						
51		1926.453 - Aerial lifts.	<b>1926.453(a)(1)</b> Unless otherwise provided in this section, aerial lifts acquired for use on or after January 22, 1973 shall be designed and constructed in conformance with the applicable requirements of the American National Standards for "Vehicle Mounted Elevating and Rotating Work Platforms," ANSI A92.2-1969, including appendix. Aerial lifts acquired before January 22, 1973 which do not meet the requirements of ANSI A92.2-1969, may not be used after January 1, 1976, unless they shall have been modified so as to conform with the applicable design and construction requirements of ANSI A92.2-1969. Aerial lifts include the following types of vehicle-mounted aerial devices used to elevate personnel to job-sites above ground: <b>1926.453(a)(1)(i)</b> Extensible boom platforms; <b>1926.453(a)(1)(ii)</b> Aerial ladders; <b>1926.453(a)(1)(iii)</b> Articulating boom platforms; <b>1926.453(a)(1)(iv)</b> Vertical towers; and <b>1926.453(a)(1)(v)</b> A combination of any such devices. Aerial equipment may be made of metal, wood, fiberglass reinforced plastic (FRP), or other material; may be powered or manually operated; and are deemed to be aerial lifts whether or not they are capable of rotating about a substantially vertical axis. <b>1926.453(a)(2)</b> Aerial lifts may be "field modified" for uses other than those intended by the manufacturer provided the modification has been certified in writing by the manufacturer or by any other equivalent entity, such as a nationally recognized testing laboratory, to be in conformity with all applicable provisions of ANSI A92.2-1969 and this section and to be at least as safe as the equipment was before modification. <b>1926.453(b)</b> "Specific requirements." <b>1926.453(b)(1)</b> Ladder trucks and tower trucks. Aerial ladders shall be secured in the lower traveling position by the locking device on top of the truck cab, and the manually operated device at the base of the ladder before the truck is moved for highway travel. <b>1926.453(b)(2)</b> Extensible and articulating boom platforms. <b>1926.453(b)(2)(i)</b> Lift controls shall be tested each day prior to use to determine that such controls are in safe working condition. <b>1926.453(b)(2)(ii)</b> Only authorized persons shall operate an aerial lift. <b>1926.453(b)(2)(iii)</b> Belting off to an adjacent pole, structure, or equipment while working from an aerial lift shall not be permitted. <b>1926.453(b)(2)(iv)</b> Employees shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position while working from an aerial lift. Note to paragraph (b)(2)(v): As of January 1, 1998, subpart M of this part (1926.502(d)) provides that body belts are not acceptable as part of a personal fall arrest system. The use of a body belt in a tethering system or in a restraint system is acceptable and is regulated under 1926.502(e). <b>1926.453(b)(2)(vi)</b> Boom and basket load limits specified by the manufacturer shall not be exceeded. <b>1926.453(b)(2)(vii)</b> The brakes shall be set and when outriggers are used, they shall be positioned on pads or a solid surface. Wheel chocks shall be installed before using an aerial lift on an incline, provided they can be safely installed. <b>1926.453(b)(2)(viii)</b> An aerial lift truck shall not be moved when the boom is elevated in a working position with men in the basket, except for equipment which is specifically designed for this type of operation in accordance with the provisions of paragraphs (a)(1) and (2) of this section. <b>1926.453(b)(2)(ix)</b> Articulating boom and extensible boom platforms, primarily designed as personnel carriers, shall have both platform (upper) and lower controls. Upper controls shall be in or beside the platform within easy reach of the operator. Lower controls shall provide for overriding the upper controls. Controls shall be plainly marked as to their function. Lower level controls shall not be operated unless permission has been obtained from the employee in the lift, except in case of emergency. <b>1926.453(b)(2)(x)</b> Climbers shall not be worn while performing work from an aerial lift. <b>1926.453(b)(2)(xi)</b> The insulated portion of an aerial lift shall not be altered in any manner that might reduce its insulating value. <b>1926.453(b)(2)(xii)</b> Before moving an aerial lift for travel, the boom(s) shall be inspected to see that it is properly cradled and outriggers are in stowed position except as provided in paragraph (b)(2)(viii) of this section. <b>1926.453(b)(3)</b> Electrical tests. All electrical tests shall conform to the requirements of ANSI A92.2-1969 section 5. However equivalent d.c.; voltage tests may be used in lieu of the a.c. voltage specified in A92.2-1969; d.c. voltage tests which are approved by the equipment manufacturer or equivalent entity shall be considered an equivalent test for the purpose of this paragraph (b). <b>1926.453(b)(4)</b> Bursting safety factor. The provisions of the American National Standards Institute standard ANSI A92.2-1969, section 4.9 Bursting Safety Factor shall apply to all critical hydraulic and pneumatic components. Critical components are those in which a failure would result in a free fall or free rotation of the boom. All noncritical components shall have a bursting safety factor of at least 2 to 1. <b>1926.453(b)(5)</b> Welding standards. All welding shall conform to the following standards as applicable: <b>1926.453(b)(5)(i)</b> Standard Qualification Procedure, AWS B3.0-41	n/a						
52		1926.454 - Training requirements.	<b>1926.454(a)</b> The employer shall have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training shall include the following areas, as applicable: <b>1926.454(a)(1)</b> The nature of any electrical hazards, fall hazards and falling object hazards in the work area; <b>1926.454(a)(2)</b> The correct procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used; <b>1926.454(a)(3)</b> The proper use of the scaffold, and the proper handling of materials on the scaffold; <b>1926.454(a)(4)</b> The maximum intended load and the load-carrying capacities of the scaffolds used; and <b>1926.454(a)(5)</b> Any other pertinent requirements of this subpart. <b>1926.454(b)</b> The employer shall have each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold trained by a competent person to recognize any hazards associated with the work in question. The training shall include the following topics, as applicable: <b>1926.454(b)(1)</b> The nature of scaffold hazards; <b>1926.454(b)(2)</b> The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in question; <b>1926.454(b)(3)</b> The design criteria, maximum intended load-carrying capacity and intended use of the scaffold; <b>1926.454(b)(4)</b> Any other pertinent requirements of this subpart. <b>1926.454(c)</b> When the employer has reason to believe that an employee lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, the employer shall retrain each such employee so that the requisite proficiency is regained. Retraining is required in at least the following situations: <b>1926.454(c)(1)</b> Where changes at the worksite present a hazard about which an employee has not been previously trained; or <b>1926.454(c)(2)</b> Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained; <b>1926.454(c)(3)</b> Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.	n/a						
53		1926 Subpart L App A - Scaffold Specifications	This Appendix provides non-mandatory guidelines to assist employers in complying with the requirements of subpart L of this part.	n/a						
54		1926 Subpart L App B - Criteria for Determining the Feasibility of Providing Safe Access and Fall Protection for Scaffold Erectors and Dismantlers	n/a	n/a						
55		1926 Subpart L App C - List of National Consensus Standards.	This Appendix provides non-mandatory guidelines to assist employers in complying with the requirements of subpart L of this part.	n/a						
56		1926 Subpart L App D - List of Training Topics for Scaffold Erectors and Dismantlers.		n/a						
57		1926 Subpart L App E - Drawings and Illustrations.	This Appendix provides drawings of particular types of scaffolds and scaffold components, and graphic illustrations of bracing patterns and tie spacing patterns.	n/a						
58	1926 Subpart M - Fall Protection			.						
59		1926.500 - Scope, application, and definitions applicable to this subpart.	<b>1926.500(a)(1)</b> This subpart sets forth requirements and criteria for fall protection in construction workplaces covered under 29 CFR part 1926. Exception: The provisions of this subpart do not apply when employees are making an inspection, investigation, or assessment of workplace conditions prior to the actual start of construction work or after all construction work has been completed. <b>1926.500(a)(2)</b> Section 1926.501 sets forth those workplaces, conditions, operations, and circumstances for which fall protection shall be provided except as follows: <b>1926.500(a)(2)(i)</b> Requirements relating to fall protection for employees working on scaffolds are provided in subpart L of this part. <b>1926.500(a)(2)(ii)</b> Requirements relating to fall protection for employees working on cranes and derricks are provided in subpart CC of this part. <b>1926.500(a)(2)(iii)</b> Fall protection requirements for employees performing steel erection work (except for towers and tanks) are provided in subpart R of this part. <b>1926.500(a)(2)(iv)</b> Requirements relating to fall protection for employees working on certain types of equipment used in tunneling operations are provided in subpart S of this part. <b>1926.500(a)(2)(v)</b> Requirements relating to fall protection for employees engaged in the erection of tanks and communication and broadcast towers are provided in § 1926.105. <b>1926.500(a)(2)(vi)</b> Subpart V of this part provides requirements relating to fall protection for employees working from aerial lifts or on poles, towers, or similar structures while engaged in the construction of electric transmission or distribution lines or equipment. <b>1926.500(a)(2)(vii)</b> Requirements relating to fall protection for employees working on stairways and ladders are provided in subpart X of this part.	No	Policy states fall protection is required when working at heights, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	x				



## Appendix C - Unfiltered Crosswalk of OSHA Obligation Gaps

	A	B	C	D	E	F	G	H	I	J	K						
1	Occupational Safety & Health						Consolidated Deficiency Groupings										
	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements			Requirement Met by HMC?	Comments				1	2	3	4	5		
		1926.501 - Duty to have fall protection.	<p><b>1926.501(a)(1)</b> This section sets forth requirements for employers to provide fall protection systems. All fall protection required by this section shall conform to the criteria set forth in 1926.502 of this subpart. <b>1926.501(a)(2)</b> The employer shall determine if the walking/working surfaces on which its employees are to work have the strength and structural integrity to support employees safely. Employees shall be allowed to work on those surfaces only when the surfaces have the requisite strength and structural integrity. <b>1926.501(b)</b> <b>1926.501(b)(1)</b> "Unprotected sides and edges." Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems. <b>1926.501(b)(2)</b> "Leading edges." <b>1926.501(b)(2)(i)</b> Each employee who is constructing a leading edge 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems, safety net systems, or personal fall arrest systems. Exception: When the employer can demonstrate that it is infeasible or creates a greater hazard to use these systems, the employer shall develop and implement a fall protection plan which meets the requirements of paragraph (k) of 1926.502. Note: There is a presumption that it is feasible and will not create a greater hazard to implement at least one of the above-listed fall protection systems. Accordingly, the employer has the burden of establishing that it is appropriate to implement a fall protection plan which complies with 1926.502(k) for a particular workplace situation, in lieu of implementing any of those systems. <b>1926.501(b)(2)(ii)</b> Each employee on a walking/working surface 6 feet (1.8 m) or more above a lower level where leading edges are under construction, but who is not engaged in the leading edge work, shall be protected from falling by a guardrail system, safety net system, or personal fall arrest system. If a guardrail system is chosen to provide the fall protection, and a controlled access zone has already been established for leading edge work, the control line may be used in lieu of a guardrail along the edge that parallels the leading edge. <b>1926.501(b)(3)</b> "Hoist areas." Each employee in a hoist area shall be protected from falling 6 feet (1.8 m) or more to lower levels by guardrail systems or personal fall arrest systems. If guardrail systems, [or chain, gate, or guardrail] or portions thereof, are removed to facilitate the hoisting operation (e.g., during landing of materials), and an employee must lean through the access opening or out over the edge of the access opening (to receive or guide equipment and materials, for example), that employee shall be protected from fall hazards by a personal fall arrest system. <b>1926.501(b)(4)</b> "Holes." <b>1926.501(b)(4)(i)</b> Each employee on walking/working surfaces shall be protected from falling through holes (including skylights) more than 6 feet (1.8 m) above lower levels, by personal fall arrest systems, covers, or guardrail systems erected around such holes. <b>1926.501(b)(4)(ii)</b> Each employee on a walking/working surface shall be protected from tripping in or stepping into or through holes (including skylights) by covers. <b>1926.501(b)(4)(iii)</b> Each employee on a walking/working surface shall be protected from objects falling through holes (including skylights) by covers. <b>1926.501(b)(6)</b> "Ramps, runways, and other walkways." Each employee on ramps, runways, and other walkways shall be protected from falling 6 feet (1.8 m) or more to lower levels by guardrail systems. <b>1926.501(b)(7)</b> "Excavations." <b>1926.501(b)(7)(i)</b> Each employee at the edge of an excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, or barricades when the excavations are not readily seen because of plant growth or other visual barrier; <b>1926.501(b)(7)(ii)</b> Each employee at the edge of a well, pit, shaft, and similar excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, barricades, or covers. <b>1926.501(b)(8)</b> "Dangerous equipment." <b>1926.501(b)(8)(i)</b> Each employee less than 6 feet (1.8 m) above dangerous equipment shall be protected from falling into or onto the dangerous equipment by guardrail systems or by equipment guards. <b>1926.501(b)(8)(ii)</b> Each employee 6 feet (1.8 m) or more above dangerous equipment shall be protected from fall hazards by guardrail systems, personal fall arrest systems, or safety net systems. <b>1926.501(b)(14)</b> "Wall openings." Each employee working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet (1.8 m) or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches (1.0 m) above the walking/working surface, shall be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system. <b>1926.501(b)(15)</b> "Walking/working surfaces not otherwise addressed." Except as provided in 1926.500(a)(2) or in 1926.501 (b)(1) through (b)(14), each employee on a walking/working surface 6 feet (1.8 m) or more above lower levels shall be protected from falling by a guardrail system, safety net system, or personal fall arrest system. <b>1926.501(c)</b> "Protection from falling objects." When an employee is exposed to falling objects, the employer shall have each employee wear a hard hat and shall implement one of the following measures: <b>1926.501(c)(1)</b> Erect toeboards, screens, or guardrail systems to prevent objects from falling from higher levels; or, <b>1926.501(c)(2)</b> Erect a canopy structure and keep potential fall objects far enough from the edge of the higher level so that those objects would not go over the edge if they were accidentally displaced; or, <b>1926.501(c)(3)</b> Barricade the area to which objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough away from the edge of a higher level so that those objects would not go over the edge if they were accidentally displaced .</p>			No	Policy states fall protection is required when working at heights, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.				X						
60	1926 Subpart X - Stairways and Ladders	1926.502 - Fall protection systems criteria and practices.															
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72				<p><b>1926.502(a)(1)</b> Fall protection systems required by this part shall comply with the applicable provisions of this section. <b>1926.502(a)(2)</b> Employers shall provide and install all fall protection systems required by this subpart for an employee, and shall comply with all other pertinent requirements of this subpart before that employee begins the work that necessitates the fall protection. <b>1926.502(b)</b> "Guardrail systems." Guardrail systems and their use shall comply with the following provisions: <b>1926.502(b)(1)</b> Top edge height of top rails, or equivalent guardrail system members, shall be 42 inches (1.1 m) plus or minus 3 inches (8 cm) above the walking/working level. When conditions warrant, the height of the top edge may exceed the 45-inch height, provided the guardrail system meets all other criteria of this paragraph. <b>1926.502(b)(2)</b> Midrails, screens, mesh, intermediate vertical members, or equivalent intermediate structural members shall be installed between the top edge of the guardrail system and the walking/working surface when there is no wall or parapet wall at least 21 inches (53 cm) high. <b>1926.502(b)(2)(i)</b> Midrails, when used, shall be installed at a height midway between the top edge of the guardrail system and the walking/working level. <b>1926.502(b)(2)(ii)</b> Screens and mesh, when used, shall extend from the top rail to the walking/working level and along the entire opening between top rail supports. <b>1926.502(b)(2)(iii)</b> Intermediate members (such as balusters), when used between posts, shall be not more than 19 inches (48 cm) apart. <b>1926.502(b)(2)(iv)</b> Other structural members (such as additional midrails and architectural panels) shall be installed such that there are no openings in the guardrail system that are more than 19 inches (.5 m) wide. <b>1926.502(b)(3)</b> Guardrail systems shall be capable of withstanding, without failure, a force of at least 200 pounds (890 N) applied within 2 inches (5.1 cm) of the top edge, in any outward or downward direction, at any point along the top edge. <b>1926.502(b)(4)</b> When the 200 pound (890 N) test load specified in paragraph (b)(3) of this section is applied in a downward direction, the top edge of the guardrail shall not deflect to a height less than 39 inches (1.0 m) above the walking/working level. Guardrail system components selected and constructed in accordance with the Appendix B to subpart M of this part will be deemed to meet this requirement. <b>1926.502(b)(5)</b> Midrails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members shall be capable of withstanding, without failure, a force of at least 150 pounds (666 N) applied in any downward or outward direction at any point along the midrail or other member. <b>1926.502(b)(6)</b> Guardrail systems shall be so surfaced as to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing. <b>1926.502(b)(7)</b> The ends of all top rails and midrails shall not overhang the terminal posts, except where such overhang does not constitute a projection hazard. <b>1926.502(b)(8)</b> Steel banding and plastic banding shall not be used as top rails or midrails. <b>1926.502(b)(9)</b> Top rails and midrails shall be at least one-quarter inch (0.6 cm) nominal diameter or thickness to prevent cuts and lacerations. If wire rope is used for top rails, it shall be flagged at not more than 6-foot intervals with high-visibility material. <b>1926.502(d)</b> "Personal fall arrest systems." Personal fall arrest systems and their use shall comply with the provisions set forth below. Effective January 1, 1998, body belts are not acceptable as part of a personal fall arrest system. Note: The use of a body belt in a positioning device system is acceptable and is regulated under paragraph (e) of this section. <b>1926.502(d)(1)</b> Connectors shall be drop forged, pressed or formed steel, or made of equivalent materials. <b>1926.502(d)(2)</b> Connectors shall have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of the system. <b>1926.502(d)(3)</b> Dee-rings and snaphooks shall have a minimum tensile strength of 5,000 pounds (22.2 kN). <b>1926.502(d)(4)</b> Dee-rings and snaphooks shall be proof-tested to a minimum tensile load of 3,600 pounds (16 kN) without cracking, breaking, or taking permanent deformation. <b>1926.502(d)(5)</b> Snaphooks shall be sized to be compatible with the member to which they are connected to prevent unintentional disengagement of the snaphook by depression of the snaphook keeper by the connected member, or shall be a locking type snaphook designed and used to prevent disengagement of the snaphook by the contact of the snaphook keeper by the connected member. Effective January 1, 1998, only locking type snaphooks shall be used. <b>1926.502(d)(6)</b> Unless the snaphook is a locking type and designed for the following connections, snaphooks shall not be engaged: <b>1926.502(d)(6)(i)</b> directly to webbing, rope or wire rope; <b>1926.502(d)(6)(ii)</b> to each other; <b>1926.502(d)(6)(iii)</b> to a dee-ring to which another snaphook or other connector is attached; <b>1926.502(d)(6)(iv)</b> to a horizontal lifeline; or <b>1926.502(d)(6)(v)</b> to any object which is incompatibly shaped or dimensioned in relation to the snaphook such that unintentional disengagement could occur by the connected object being able to depress the snaphook keeper and release itself. <b>1926.502(d)(7)</b> On suspended scaffolds or similar work platforms with horizontal lifelines which may become vertical lifelines, the devices used to connect to a horizontal lifeline shall be capable of locking in both directions on the lifeline. <b>1926.502(d)(8)</b> Horizontal lifelines shall be designed, installed, and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two. <b>1926.502(d)(9)</b> Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds (22.2 kN). <b>1926.502(d)(10)</b> <b>1926.502(d)(10)(i)</b> Except as provided in paragraph (d)(10)(ii) of this section, when vertical lifelines are used, each employee shall be attached to a separate lifeline. <b>1926.502(d)(19)</b> Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse. <b>1926.502(d)(20)</b> The employer shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves. <b>1926.502(d)(21)</b> Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service. <b>1926.502(d)(22)</b> Body belts shall be at least one and five-eighths (1 5/8) inches (4.1 cm) wide. <b>1926.502(d)(23)</b> Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists except as specified in other subparts of this Part. <b>1926.502(h)</b> "Safety monitoring systems." Safety monitoring systems [See 1926.501(b)(10) and 1926.502(k)] and their use shall comply with the following provisions: <b>1926.502(h)(1)</b> (i) The employer shall designate a competent person to monitor the safety of other employees and the employer shall ensure that the safety monitor complies with the following requirements: <b>1926.502(h)(1)(i)</b> (i) The safety monitor shall be competent to recognize fall hazards; <b>1926.502(h)(1)(ii)</b> The safety monitor shall warn the employee when it appears that the employee is unaware of a fall hazard or is acting in an unsafe manner; <b>1926.502(h)(1)(iii)</b> The safety monitor shall be on the same walking/working surface and within visual sighting distance of the employee being monitored; <b>1926.502(h)(1)(iv)</b> The safety monitor shall be close enough to communicate orally with the employee; and <b>1926.502(h)(1)(v)</b> The safety monitor shall not have other responsibilities which could take the monitor's attention from the monitoring function. <b>1926.502(h)(4)</b> Each employee working in a controlled access zone shall be directed to comply promptly with fall hazard warnings from safety monitors. <b>1926.502(i)</b> "Covers." Covers for holes in floors, roofs, and other walking/working surfaces shall meet the following requirements: <b>1926.502(i)(1)</b> Covers located in roadways and vehicular aisles shall be capable of supporting, without failure, at least twice the maximum axle load of the largest vehicle expected to cross over the cover. <b>1926.502(i)(2)</b> All other covers shall be capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time. <b>1926.502(i)(3)</b> All covers shall be secured when installed so as to prevent accidental displacement by the wind, equipment, or employees. <b>1926.502(i)(4)</b> All covers shall be color coded or they shall be marked with the word "HOLE" or "COVER" to provide warning of the hazard. <b>1926.502(j)</b> "Protection from falling objects." Falling object protection shall comply with the following provisions: <b>1926.502(j)(1)</b> Toeboards, when used as falling object protection, shall be erected along the edge of the overhead walking/working surface for a distance sufficient to protect employees below. <b>1926.502(j)(2)</b> Toeboards shall be capable of withstanding, without failure, a force of at least 50 pounds (222 N) applied in any downward or outward direction at any point along the toeboard. <b>1926.502(j)(3)</b> Toeboards shall be a minimum of 3 1/2 inches (9 cm) in vertical height from their top edge to the level of the walking/working surface. They shall have not more than 1/4 inch (0.6 cm) clearance above the walking/working surface. They shall be solid or have openings not over 1 inch (2.5 cm) in greatest dimension. <b>1926.502(j)(4)</b> Where tools, equipment, or materials are piled higher than the top edge of a</p>			No	Policy states fall protection is required when working at heights, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.				X					
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Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
80			toeboard, paneling or screening shall be erected from the walking/working surface or toeboard to the top of a guardrail system's top rail or midrail, for a distance sufficient to protect employees below. 1926.502(j)(5) Guardrail systems, when used as falling object protection, shall have all openings small enough to prevent passage of potential falling objects. 1926.502(k) "Fall protection plan." This option is available only to employees engaged in leading edge work, precast concrete erection work, or residential construction work (See 1926.501(b)(2), (b)(12), and (b)(13)) who can demonstrate that it is infeasible or it creates a greater hazard to use conventional fall protection equipment. The fall protection plan must conform to the following provisions. 1926.502(k)(1) The fall protection plan shall be prepared by a qualified person and developed specifically for the site where the leading edge work, precast concrete work, or residential construction work is being performed and the plan must be maintained up to date. 1926.502(k)(2) Any changes to the fall protection plan shall be approved by a qualified person. 1926.502(k)(3) A copy of the fall protection plan with all approved changes shall be maintained at the job site. 1926.502(k)(4) The implementation of the fall protection plan shall be under the supervision of a competent person. 1926.502(k)(5) The fall protection plan shall document the reasons why the use of conventional fall protection systems (guardrail systems, personal fall arrest systems, or safety nets systems) are infeasible or why their use would create a greater hazard. 1926.502(k)(6) The fall protection plan shall include a written discussion of other measures that will be taken to reduce or eliminate the fall hazard for workers who cannot be provided with protection from the conventional fall protection systems. For example, the employer shall discuss the extent to which scaffolds, ladders, or vehicle mounted work platforms can be used to provide a safer working surface and thereby reduce the hazard of falling. 1926.502(k)(7) The fall protection plan shall identify each location where conventional fall protection methods cannot be used. These locations shall then be classified as controlled access zones and the employer must comply with the criteria in paragraph (g) of this section. 1926.502(k)(8) Where no other alternative measure has been implemented, the employer shall implement a safety monitoring system in conformance with 1926.502(h). 1926.502(k)(9) The fall protection plan must include a statement which provides the name or other method of identification for each employee who is designated to work in controlled access zones. No other employees may enter controlled access zones. 1926.502(k)(10) In the event an employee falls, or some other related, serious incident occurs, (e.g., a near miss) the employer shall investigate the circumstances of the fall or other incident to determine if the fall protection plan needs to be changed (e.g. new practices, procedures, or training) and shall implement those changes to prevent similar types of falls or incidents.							
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82	1910 Subpart E - Means of Egress									
83		1910 Subpart E App - Exit Routes, Emergency Action Plans, and Fire Prevention Plans.	Nonmandatory guideline to assist employers in complying with the appropriate requirements of subpart E.	n/a	Nonmandatory, however helpful for implementation of individual provisions of the regulation.					
84		1910.34 - Coverage and definitions.	1910.34(a) Every employer is covered. Sections 1910.34 through 1910.39 apply to workplaces in general industry except mobile workplaces such as vehicles or vessels. 1910.34(b) Exits routes are covered. The rules in §§ 1910.34 through 1910.39 cover the minimum requirements for exit routes that employers must provide in their workplace so that employees may evacuate the workplace safely during an emergency. Sections 1910.34 through 1910.39 also cover the minimum requirements for emergency action plans and fire prevention plans.	Partial	Policy states emergency response procedures and evacuation procedures, however policy is too brief/high-level and is silent on many individual provisions of the regulation such as exit routes and written plans.	X				
85		1910.35 - Compliance with alternate exit-route codes.	OSHA will deem an employer demonstrating compliance with the exit-route provisions of NFPA 101, Life Safety Code, 2009 edition, or the exit-route provisions of the International Fire Code, 2009 edition, to be in compliance with the corresponding requirements in §§ 1910.34, 1910.36, and 1910.37 (incorporated by reference, see section § 1910.6).	Partial	Policy states emergency response procedures and evacuation procedures, however policy is too brief/high-level and is silent on many individual provisions of the regulation such as exit routes and written plans.	X				
86		1910.36 - Design and construction requirements for exit routes.	1910.36(a) Basic requirements. Exit routes must meet the following design and construction requirements: 1910.36(a)(1) An exit route must be permanent. Each exit route must be a permanent part of the workplace. 1910.36(a)(2) An exit must be separated by fire resistant materials. Construction materials used to separate an exit from other parts of the workplace must have a one-hour fire resistance-rating if the exit connects three or fewer stories and a two-hour fire resistance-rating if the exit connects four or more stories. 1910.36(a)(3) Openings into an exit must be limited. An exit is permitted to have only those openings necessary to allow access to the exit from occupied areas of the workplace, or to the exit discharge. An opening into an exit must be protected by a self-closing fire door that remains closed or automatically closes in an emergency upon the sounding of a fire alarm or employee alarm system. Each fire door, including its frame and hardware, must be listed or approved by a nationally recognized testing laboratory. Section 1910.155(c)(3)(iv)(A) of this part defines "listed" and § 1910.7 of this part defines a "nationally recognized testing laboratory." 1910.36(b) The number of exit routes must be adequate. 1910.36(b)(1) Two exit routes. At least two exit routes must be available in a workplace to permit prompt evacuation of employees and other building occupants during an emergency, except as allowed in paragraph (b)(3) of this section. The exit routes must be located as far away as practical from each other so that if one exit route is blocked by fire or smoke, employees can evacuate using the second exit route. 1910.36(b)(2) More than two exit routes. More than two exit routes must be available in a workplace if the number of employees, the size of the building, its occupancy, or the arrangement of the workplace is such that all employees would not be able to evacuate safely during an emergency. 1910.36(b)(3) A single exit route. A single exit route is permitted where the number of employees, the size of the building, its occupancy, or the arrangement of the workplace is such that all employees would be able to evacuate safely during an emergency. Note to paragraph (b) of this section: For assistance in determining the number of exit routes necessary for your workplace, consult NFPA 101-2009, Life Safety Code, or IFC- 2009, International Fire Code (incorporated by reference, see § 1910.6). 1910.36(c) Exit discharge. 1910.36(c)(1) Each exit discharge must lead directly outside or to a street, walkway, refuge area, public way, or open space with access to the outside. 1910.36(c)(2) The street, walkway, refuge area, public way, or open space to which an exit discharge leads must be large enough to accommodate the building occupants likely to use the exit route. 1910.36(c)(3) Exit stairs that continue beyond the level on which the exit discharge is located must be interrupted at that level by doors, partitions, or other effective means that clearly indicate the direction of travel leading to the exit discharge. 1910.36(d) An exit door must be unlocked. 1910.36(d)(1) Employees must be able to open an exit route door from the inside at all times without keys, tools, or special knowledge. A device such as a panic bar that locks only from the outside is permitted on exit discharge doors. 1910.36(d)(2) Exit route doors must be free of any device or alarm that could restrict emergency use of the exit route if the device or alarm fails. 1910.36(d)(3) An exit route door may be locked from the inside only in mental, penal, or correctional facilities and then only if supervisory personnel are continuously on duty and the employer has a plan to remove occupants from the facility during an emergency. 1910.36(e) A side-hinged exit door must be used. 1910.36(e)(1) A side-hinged door must be used to connect any room to an exit route. 1910.36(e)(2) The door that connects any room to an exit route must swing out in the direction of exit travel if the room is designed to be occupied by more than 50 people or if the room is a high hazard area ( i.e. , contains contents that are likely to burn with extreme rapidity or explode). 1910.36(f) The capacity of an exit route must be adequate. 1910.36(f)(1) Exit routes must support the maximum permitted occupant load for each floor served. 1910.36(f)(2) The capacity of an exit route may not decrease in the direction of exit route travel to the exit discharge. Note to paragraph (f) of this section: Information regarding the "Occupant load" is located in NFPA 101-2009, Life Safety Code, and in IFC-2009, International Fire Code (incorporated by reference, see § 1910.6). 1910.36(g) An exit route must meet minimum height and width requirements. 1910.36(g)(1) The ceiling of an exit route must be at least seven feet six inches (2.3 m) high. Any projection from the ceiling must not reach a point less than six feet eight inches (2.0 m) from the floor. 1910.36(g)(2) An exit access must be at least 28 inches (71.1 cm) wide at all points. Where there is only one exit access leading to an exit or exit discharge, the width of the exit and exit discharge must be at least equal to the width of the exit access. 1910.36(g)(3) The width of an exit route must be sufficient to accommodate the maximum permitted occupant load of each floor served by the exit route. 1910.36(g)(4) Objects that project into the exit route must not reduce the width of the exit route to less than the minimum width requirements for exit routes. 1910.36(h) An outdoor exit route is permitted. 1910.36(h)(1) The outdoor exit route must have guardrails to protect unenclosed sides if a fall hazard exists; 1910.36(h)(2) The outdoor exit route must be covered if snow or ice is likely to accumulate along the route, unless the employer can demonstrate that any snow or ice accumulation will be removed before it presents a slipping hazard; 1910.36(h)(3) The outdoor exit route must be reasonably straight and have smooth, solid, substantially level walkways; and 1910.36(h)(4) The outdoor exit route must not have a dead-end that is longer than 20 feet (6.2 m).	Partial	Policy states emergency response procedures and evacuation procedures, however policy is too brief/high-level and is silent on many individual provisions of the regulation such as exit routes and written plans.	X				
87		1910.37 - Maintenance, safeguards, and operational features for exit routes.	1910.37(a) The danger to employees must be minimized. 1910.37(a)(1) Exit routes must be kept free of explosive or highly flammable furnishings or other decorations. 1910.37(a)(2) Exit routes must be arranged so that employees will not have to travel toward a high hazard area, unless the path of travel is effectively shielded from the high hazard area by suitable partitions or other physical barriers. 1910.37(a)(3) Exit routes must be free and unobstructed. No materials or equipment may be placed, either permanently or temporarily, within the exit route. The exit access must not go through a room that can be locked, such as a bathroom, to reach an exit or exit discharge, nor may it lead into a dead-end corridor. Stairs or a ramp must be provided where the exit route is not substantially level. 1910.37(a)(4) Safeguards designed to protect employees during an emergency ( e.g. , sprinkler systems, alarm systems, fire doors, exit lighting) must be in proper working order at all times. 1910.37(b) Lighting and marking must be adequate and appropriate. 1910.37(b)(1) Each exit route must be adequately lighted so that an employee with normal vision can see along the exit route. 1910.37(b)(2) Each exit must be clearly visible and marked by a sign reading "Exit." 1910.37(b)(3) Each exit route door must be free of decorations or signs that obscure the visibility of the exit route door. 1910.37(b)(4) If the direction of travel to the exit or exit discharge is not immediately apparent, signs must be posted along the exit access indicating the direction of travel to the nearest exit and exit discharge. Additionally, the line-of-sight to an exit sign must clearly be visible at all times. 1910.37(b)(5) Each doorway or passage along an exit access that could be mistaken for an exit must be marked "Not an Exit" or similar designation, or be identified by a sign indicating its actual use ( e.g. , closet). 1910.37(b)(6) Each exit sign must be illuminated to a surface value of at least five foot-candles (54 lux) by a reliable light source and be distinctive in color. Self-luminous or electroluminescent signs that have a minimum luminance surface value of at least .06 foot lamberts (0.21 cd/m <sup>2</sup> ) are permitted. 1910.37(b)(7) Each exit sign must have the word "Exit" in plainly legible letters not less than six inches (15.2 cm) high, with the principal strokes of the letters in the word "Exit" not less than three-fourths of an inch (1.9 cm) wide. 1910.37(c) The fire retardant properties of paints or solutions must be maintained. Fire retardant paints or solutions must be renewed as often as necessary to maintain their fire retardant properties. 1910.37(d) Exit routes must be maintained during construction, repairs, or alterations. 1910.37(d)(1) During new construction, employees must not occupy a workplace until the exit routes required by this subpart are completed and ready for employee use for the portion of the workplace they occupy. 1910.37(d)(2) During repairs or alterations, employees must not occupy a workplace unless the exit routes required by this subpart are available and existing fire protections are maintained, or until alternate fire protection is furnished that provides an equivalent level of safety. 1910.37(d)(3) Employees must not be exposed to hazards of flammable or explosive substances or equipment used during construction, repairs, or alterations, that are beyond the normal permissible conditions in the workplace, or that would impede exiting the workplace. 1910.37(e) An employee alarm system must be operable. Employers must install and maintain an operable employee alarm system that has a distinctive signal to warn employees of fire or other emergencies, unless employees can promptly see or smell a fire or other hazard in time to provide adequate warning to them. The employee alarm system must comply with § 1910.165.	Partial	Policy states emergency response procedures and evacuation procedures, however policy is too brief/high-level and is silent on many individual provisions of the regulation such as exit routes and written plans.	X			X	
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Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
88		1910.38 - Emergency action plans.	<b>1910.38(a) Application.</b> An employer must have an emergency action plan whenever an OSHA standard in this part requires one. The requirements in this section apply to each such emergency action plan. <b>1910.38(b) Written and oral emergency action plans.</b> An emergency action plan must be in writing, kept in the workplace, and available to employees for review. However, an employer with 10 or fewer employees may communicate the plan orally to employees. <b>1910.38(c) Minimum elements of an emergency action plan.</b> An emergency action plan must include at a minimum: <b>1910.38(c)(1)</b> Procedures for reporting a fire or other emergency; <b>1910.38(c)(2)</b> Procedures for emergency evacuation, including type of evacuation and exit route assignments; <b>1910.38(c)(3)</b> Procedures to be followed by employees who remain to operate critical plant operations before they evacuate; <b>1910.38(c)(4)</b> Procedures to account for all employees after evacuation; <b>1910.38(c)(5)</b> Procedures to be followed by employees performing rescue or medical duties; and <b>1910.38(c)(6)</b> The name or job title of every employee who may be contacted by employees who need more information about the plan or an explanation of their duties under the plan. <b>1910.38(d) Employee alarm system.</b> An employer must have and maintain an employee alarm system. The employee alarm system must use a distinctive signal for each purpose and comply with the requirements in § 1910.165.	Partial	Policy states emergency response procedures and evacuation procedures, however policy is too brief/high-level and is silent on many individual provisions of the regulation such as exit routes and written plans.	X				
89		1910.39 - Fire prevention plans.	<b>1910.39(a) Application.</b> An employer must have a fire prevention plan when an OSHA standard in this part requires one. The requirements in this section apply to each such fire prevention plan. <b>1910.39(b) Written and oral fire prevention plans.</b> A fire prevention plan must be in writing, be kept in the workplace, and be made available to employees for review. However, an employer with 10 or fewer employees may communicate the plan orally to employees. <b>1910.39(c) Minimum elements of a fire prevention plan.</b> A fire prevention plan must include: <b>1910.39(c)(1)</b> A list of all major fire hazards, proper handling and storage procedures for hazardous materials, potential ignition sources and their control, and the type of fire protection equipment necessary to control each major hazard; <b>1910.39(c)(2)</b> Procedures to control accumulations of flammable and combustible waste materials; <b>1910.39(c)(3)</b> Procedures for regular maintenance of safeguards installed on heat-producing equipment to prevent the accidental ignition of combustible material; <b>1910.39(c)(4)</b> The name or job title of employees responsible for maintaining equipment to prevent or control sources of ignition or fires; and <b>1910.39(c)(5)</b> The name or job title of employees responsible for the control of fuel source hazards. <b>1910.39(d) Employee information.</b> An employer must inform employees upon initial assignment to a job of the fire hazards to which they are exposed. An employer must also review with each employee those parts of the fire prevention plan necessary for self-protection.	n/a	Policy states emergency response procedures and evacuation procedures, however policy is too brief/high-level and is silent on many individual provisions of the regulation such as written plans.					
90	1926 Subpart C - General Safety and Health Provisions	1926.34 - Means of Egress	<b>1926.34(a) "General."</b> In every building or structure exits shall be so arranged and maintained as to provide free and unobstructed egress from all parts of the building or structure at all times when it is occupied. No lock or fastening to prevent free escape from the inside of any building shall be installed except in mental, penal, or corrective institutions where supervisory personnel is continually on duty and effective provisions are made to remove occupants in case of fire or other emergency. <b>1926.34(b) "Exit marking."</b> Exits shall be marked by a readily visible sign. Access to exits shall be marked by readily visible signs in all cases where the exit or way to reach it is not immediately visible to the occupant. <b>1926.34(c) "Maintenance and workmanship."</b> Means of egress shall be continually maintained free of all obstructions or impediments to full instant use in the case of fire or other emergency.	n/a						
91	1926 Subpart F - Fire Protection and Prevention			n/a						
92		1926.150 - Fire protection.	<b>1926.150(a)(1)</b> The employer shall be responsible for the development of a fire protection program to be followed throughout all phases of the construction and demolition work, and he shall provide for the firefighting equipment as specified in this subpart. As fire hazards occur, there shall be no delay in providing the necessary equipment. <b>1926.150(a)(2)</b> Access to all available firefighting equipment shall be maintained at all times. <b>1926.150(a)(3)</b> All firefighting equipment, provided by the employer, shall be conspicuously located. <b>1926.150(a)(4)</b> All firefighting equipment shall be periodically inspected and maintained in operating condition. Defective equipment shall be immediately replaced. <b>1926.150(a)(5)</b> As warranted by the project, the employer shall provide a trained and equipped firefighting organization (Fire Brigade) to assure adequate protection to life.	n/a						
93		1926.151 - Fire prevention	<b>1926.151(a)(1)</b> Electrical wiring and equipment for light, heat, or power purposes shall be installed in compliance with the requirements of Subpart K of this part. <b>1926.151(a)(2)</b> Internal combustion engine powered equipment shall be so located that the exhausts are well away from combustible materials. When the exhausts are piped to outside the building under construction, a clearance of at least 6 inches shall be maintained between such piping and combustible materials. <b>1926.151(a)(3)</b> Smoking shall be prohibited at or in the vicinity of operations which constitute a fire hazard, and shall be conspicuously posted: "No Smoking or Open Flame." <b>1926.151(a)(4)</b> Portable battery powered lighting equipment, used in connection with the storage, handling, or use of flammable gases or liquids, shall be of the type approved for the hazardous locations.	n/a						
94		1926.152 - Flammable liquids.	<b>1926.152(a)(1)</b> Only approved containers and portable tanks shall be used for storage and handling of flammable liquids. Approved safety cans or Department of Transportation approved containers shall be used for the handling and use of flammable liquids in quantities of 5 gallons or less, except that this shall not apply to those flammable liquid materials which are highly viscid (extremely hard to pour), which may be used and handled in original shipping containers. For quantities of one gallon or less, the original container may be used, for storage, use and handling of flammable liquids. <b>1926.152(a)(2)</b> Flammable liquids shall not be stored in areas used for exits, stairways, or normally used for the safe passage of people. <b>1926.152(b) "Indoor storage of flammable liquids."</b> <b>1926.152(b)(1)</b> No more than 25 gallons of flammable liquids shall be stored in a room outside of an approved storage cabinet. For storage of liquefied petroleum gas, see 1926.153. <b>1926.152(b)(2)</b> Quantities of flammable liquid in excess of 25 gallons shall be stored in an acceptable or approved cabinet meeting the following requirements: <b>1926.152(b)(2)(i)</b> Acceptable wooden storage cabinets shall be constructed in the following manner, or equivalent: The bottom, sides, and top shall be constructed of an exterior grade of plywood at least 1 inch in thickness, which shall not break down or delaminate under standard fire test conditions. All joints shall be rabbeted and shall be fastened in two directions with flathead wood screws. When more than one door is used, there shall be a rabbeted overlap of not less than 1 inch. Steel hinges shall be mounted in such a manner as to not lose their holding capacity due to loosening or burning out of the screws when subjected to fire. Such cabinets shall be painted inside and out with fire retardant paint. <b>1926.152(b)(2)(ii)</b> Approved metal storage cabinets will be acceptable. <b>1926.152(b)(2)(iii)</b> Cabinets shall be labeled in conspicuous lettering, "Flammable-Keep Away from Open Flames." <b>1926.152(b)(3)</b> Not more than 60 gallons of Category 1, 2 and/or 3 flammable liquids or 120 gallons of Category 4 flammable liquids shall be stored in any one storage cabinet. Not more than three such cabinets may be located in a single storage area. Quantities in excess of this shall be stored in an inside storage room. <b>1926.152(b)(4)(i)</b> Inside storage rooms shall be constructed to meet the required fire-resistive rating for their use. Such construction shall comply with the test specifications set forth in Standard Methods of Fire Test of Building Construction and Material, NFPA 251-1949. <b>1926.152(b)(4)(ii)</b> Where an automatic extinguishing system is provided, the system shall be designed and installed in an approved manner. Openings to other rooms or buildings shall be provided with noncombustible liquid-tight raised sills or ramps at least 4 inches in height, or the floor in the storage area shall be at least 4 inches below the surrounding floor. Openings shall be provided with approved self-closing fire doors. The room shall be liquid-tight where the walls join the floor. A permissible alternate to the sill or ramp is an open-grated trench, inside of the room, which drains to a safe location. Where other portions of the building or other buildings are exposed, windows shall be protected as set forth in the Standard for Fire Doors and Windows, NFPA No. 80-1970, for Class E or F openings. Wood of at least 1-inch nominal thickness may be used for shelving, racks, dunnage, scuffboards, floor overlay, and similar installations. <b>1926.152(b)(4)(iii)</b> Materials which will react with water and create a fire hazard shall not be stored in the same room with flammable liquids.	n/a						
95		1926.153 - Liquefied petroleum gas (LP-Gas).	<b>1926.153(a)(1)</b> Each system shall have containers, valves, connectors, manifold valve assemblies, and regulators of an approved type. <b>1926.153(a)(2)</b> All cylinders shall meet the Department of Transportation specification identification requirements published in 49 CFR Part 178, Shipping Container Specifications. <b>1926.153(a)(3) "Definition."</b> As used in this section, "Containers" - All vessels, such as tanks, cylinders, or drums, used for transportation or storing liquefied petroleum gases.	n/a						
96		1926.154 - Temporary heating devices.	n/a	n/a						
97		1926.155 - Definitions applicable to this subpart.	n/a	n/a						
98		1926.156 - Fixed extinguishing systems, general.	n/a	n/a						
99		1926.157 - Fixed extinguishing systems, gaseous agent.	n/a	n/a						
100		1926.158 - Fire detection systems.	n/a	n/a						
101		1926.159 - Employer alarm systems.	n/a	n/a						
102	1910 Subpart F - Powered Platforms, Manlifts, and Vehicle Mounted Work Platforms									
103		1910.66 - Powered platforms for building maintenance.	n/a	n/a						
104		1910.66 App A - Guidelines (Advisory)	n/a	n/a						
105		1910.66 App B - Exhibits (Advisory)	n/a	n/a						
106		1910.66 App C - [Reserved]	n/a	n/a						
107		1910.66 App D - Existing Installations (Mandatory)	n/a	n/a						

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
108		1910.67 - Vehicle-mounted elevating and rotating work platforms.	<b>1910.67(b)(1)</b> Unless otherwise provided in this section, aerial devices (aerial lifts) acquired on or after July 1, 1975, shall be designed and constructed in conformance with the applicable requirements of the American National Standard for "Vehicle Mounted Elevating and Rotating Work Platforms," ANSI A92.2—1969, including appendix, which is incorporated by reference as specified in §1910.6. Aerial lifts acquired for use before July 1, 1975 which do not meet the requirements of ANSI A92.2—1969, may not be used after July 1, 1976, unless they shall have been modified so as to conform with the applicable design and construction requirements of ANSI A92.2—1969. Aerial devices include the following types of vehicle-mounted aerial devices used to elevate personnel to jobsites above ground: (i) Extensible boom platforms, (ii) aerial ladders, (iii) articulating boom platforms, (iv) vertical towers, and (v) a combination of any of the above. Aerial equipment may be made of metal, wood, fiberglass reinforced plastic (FRP), or other material; may be powered or manually operated; and are deemed to be aerial lifts whether or not they are capable of rotating about a substantially vertical axis. <b>1910.67(b)(2)</b> Aerial lifts may be "field modified" for uses other than those intended by the manufacturer, provided the modification has been certified in writing by the manufacturer or by any other equivalent entity, such as a nationally recognized testing laboratory, to be in conformity with all applicable provisions of ANSI A92.2—1969 and this section, and to be at least as safe as the equipment was before modification. <b>1910.67(b)(4)</b> For operations near overhead electric lines, see §1910.333(c)(3). <b>1910.67(c)</b> <i>Specific requirements</i> — <b>1910.67(c)(1)</b> <i>Ladder trucks and tower truck</i> s. Before the truck is moved for highway travel, aerial ladders shall be secured in the lower traveling position by the locking device above the truck cab, and the manually operated device at the base of the ladder, or by other equally effective means (e.g., cradles which prevent rotation of the ladder in combination with positive acting linear actuators). <b>1910.67(c)(2)</b> <i>Extensible and articulating boom platforms</i> . <b>1910.67(c)(2)(i)</b> Lift controls shall be tested each day prior to use to determine that such controls are in safe working condition. <b>1910.67(c)(2)(ii)</b> Only trained persons shall operate an aerial lift. <b>1910.67(c)(2)(iii)</b> Belting off to an adjacent pole, structure, or equipment while working from an aerial lift shall not be permitted. <b>1910.67(c)(2)(iv)</b> Employees shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position. <b>1910.67(c)(2)(v)</b> A personal fall arrest or travel restraint system that meets the requirements in subpart I of this part shall be worn and attached to the boom or basket when working from an aerial lift. <b>1910.67(c)(2)(vi)</b> Boom and basket load limits specified by the manufacturer shall not be exceeded. <b>1910.67(c)(2)(vii)</b> The brakes shall be set and outriggers, when used, shall be positioned on pads or a solid surface. Wheel chocks shall be installed before using an aerial lift on an incline. <b>1910.67(c)(2)(viii)</b> An aerial lift truck may not be moved when the boom is elevated in a working position with men in the basket, except for equipment which is specifically designed for this type of operation in accordance with the provisions of paragraphs (b)(1) and (b)(2) of this section. <b>1910.67(c)(2)(ix)</b> Articulating boom and extensible boom platforms, primarily designed as personnel carriers, shall have both platform (upper) and lower controls. Upper controls shall be in or beside the platform within easy reach of the operator. Lower controls shall provide for overriding the upper controls. Controls shall be plainly marked as to their function. Lower level controls shall not be operated unless permission has been obtained from the employee in the lift, except in case of emergency.	Partial	Policy states requirements for using mobile equipment on site, however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements. References OSHA 29 CFR 1926 Subpart O.	X					
109		1910.68 - Manlifts.	1910.68(b)(1) Application. This section applies to the construction, maintenance, inspection, and operation of manlifts in relation to accident hazards. Manlifts covered by this section consist of platforms or brackets and accompanying handholds mounted on, or attached to an endless belt, operating vertically in one direction only and being supported by, and driven through pulleys, at the top and bottom. These manlifts are intended for conveyance of persons only. It is not intended that this section cover moving stairways, elevators with enclosed platforms ("Paternoster" elevators), gravity lifts, nor conveyors used only for conveying material. This section applies to manlifts used to carry only personnel trained and authorized by the employer in their use. 1910.68(b)(2) Purpose. The purpose of this section is to provide reasonable safety for life and limb.1910.68(b)(3) Design requirements. All new manlift installations and equipment installed after the effective date of these regulations shall meet the design requirements of the "American National Safety Standard for Manlifts ANSI A90.1-1969", which is incorporated by reference as specified in §1910.6, and the requirements of this section. 1910.68(b)(4) Reference to other codes and subparts. The following codes and subparts of this part are applicable to this section: Safety Code for Mechanical Power Transmission Apparatus, ANSI B15.1-1953 (R 1958); Safety Code for Fixed Ladders, ANSI A14.3-1956; and subparts D, O, and S. The preceding ANSI standards are incorporated by reference as specified in §1910.6. 1910.68(b)(5) Floor openings— 1910.68(b)(5)(i) Allowable size. Floor openings for both the "up" and "down" runs shall be not less than 28 inches nor more than 36 inches in width for a 12-inch belt; not less than 34 inches nor more than 38 inches for a 14-inch belt; and not less than 36 inches nor more than 40 inches for a 16-inch belt and shall extend not less than 24 inches, nor more than 28 inches from the face of the belt. 1910.68(b)(5)(ii) Uniformity. All floor openings for a given manlift shall be uniform in size and shall be approximately circular, and each shall be located vertically above the opening below it. 1910.68(b)(6) Landing— 1910.68(b)(6)(i) Vertical clearance. The clearance between the floor or mounting platform and the lower edge for the conical guard above it required by subparagraph (7) of this paragraph shall not be less than 7 feet 6 inches. Where this clearance cannot be obtained no access to the manlift shall be provided and the manlift runway shall be enclosed where it passes through such floor. 1910.68(b)(6)(ii) Clear landing space. The landing space adjacent to the floor openings shall be free from obstruction and kept clear at all times. This landing space shall be at least 2 feet in width from the edge of the floor opening used for mounting and dismounting. 1910.68(b)(6)(iii) Lighting and landing. Adequate lighting, not less than 5-foot candles, shall be provided at each floor landing at all times when the lift is in operation. 1910.68(b)(6)(iv) Landing surface. The landing surfaces at the entrances and exits to the manlift shall be constructed and maintained as to provide safe footing at all times. 1910.68(b)(6)(v) Emergency landings. Where there is a travel of 50 feet or more between floor landings, one or more emergency landings shall be provided so that there will be a landing (either floor or emergency) for every 25 feet or less of manlift travel. 1910.68(b)(6)(v)(a) Emergency landings shall be accessible from both the "up" and "down" rungs of the manlift and shall give access to the ladder required in subparagraph (12) of this paragraph. 1910.68(b)(6)(v)(b) Emergency landings shall be completely enclosed with a standard railing and toeboard. 1910.68(b)(6)(v)(c) Platforms constructed to give access to bucket elevators or other equipment for the purpose of inspection, lubrication, and repair may also serve as emergency landings under this rule. All such platforms will then be considered part of the emergency landing and shall be provided with standard railings and toeboards. 1910.68(b)(7) Guards on underside of floor openings— 1910.68(b)(7)(i) Fixed type. On the ascending side of the manlift floor openings shall be provided with a bevel guard or cone meeting the following requirements: 1910.68(b)(7)(i)(a) The cone shall make an angle of not less than 45° with the horizontal. An angle of 60° or greater shall be used where ceiling heights permit. 1910.68(b)(7)(i)(b) The lower edge of this guard shall extend at least 42 inches outward from any handhold on the belt. It shall not extend beyond the upper surface of the floor above. 1910.68(b)(7)(i)(c) The cone shall be made of not less than No. 18 U.S. gauge sheet steel or material of equivalent strength or stiffness. The lower edge shall be rolled to a minimum diameter of one-half inch and the interior shall be smooth with no rivets, bolts or screws protruding.1910.68(b)(7)(ii) Floating type. In lieu of the fixed guards specified in subdivision (i) of this subparagraph a floating type safety cone may be used, such floating cones to be mounted on hinges at least 6 inches below the underside of the floor and so constructed as to actuate a limit switch should a force of 2 pounds be applied on the edge of the cone closest to the hinge. The depth of this floating cone need not exceed 12 inches. 1910.68(b)(8) Protection of entrances and exits— 1910.68(b)(8)(i) Guard rail requirement. The entrances and exits at all floor landings affording access to the manlift shall be guarded by a maze (staggered railing) or a handrail equipped with self-closing gates. 1910.68(b)(8)(ii) Construction. The rails shall be standard guardrails with toeboards that meet the requirements in subpart D of this part. 1910.68(b)(8)(iii) Gates. Gates, if used, shall open outward and shall be self-closing. Corners of gates shall be rounded. 1910.68(b)(8)(iv) Maze. Maze or staggered openings shall offer no direct passage between enclosure and outer floor space. 1910.68(b)(8)(v) Except where building layout prevents, entrances at all landings shall be in the same relative position. 1910.68(b)(9) Guards for openings— 1910.68(b)(9)(i) Construction. The floor opening at each landing shall be guarded on sides not used for entrance or exit by a wall, a railing and toeboard or by panels of wire mesh of suitable strength. 1910.68(b)(9)(ii) Height and location. Such rails or guards shall be at least 42 inches in height on the up-running side and 66 inches on the down-running side. 1910.68(b)(10) Bottom arrangement— 1910.68(b)(10)(i) Bottom landing. At the bottom landing the clear area shall be not smaller than the area enclosed by the guardrails on the floors above, and any wall in front of the down-running side of the belt shall be not less than 48 inches from the face of the belt. This space shall not be encroached upon by stairs or ladders. 1910.68(b)(10)(ii) Location of lower pulley. The lower (boot) pulley shall be installed so that it is supported by the lowest landing served. The sides of the pulley support shall be guarded to prevent contact with the pulley or the steps. 1910.68(b)(10)(iii) Mounting platform. A mounting platform shall be provided in front or to one side of the uprun at the lowest landing, unless the floor level is such that the following requirement can be met: The floor or platform shall be at or above the point at which the upper surface of the ascending step completes its turn and assumes a horizontal position. 1910.68(b)(10)(iv) Guardrails. To guard against persons walking under a descending step, the area on the downside of the manlift shall be guarded in accordance with subparagraph (8) of this paragraph. To guard against a person getting between the mounting platform and an ascending step, the area between the belt and the platform shall be protected by a guardrail. 1910.68(b)(11) Top arrangements— 1910.68(b)(11)(i) Clearance from floor. A top clearance shall be provided of at least 11 feet above the top terminal landing. This clearance shall be maintained from a plane through each face of the belt to a vertical cylindrical plane having a diameter 2 feet greater than the diameter of the floor opening, extending upward from the top floor to the ceiling on the up-running side of the belt. No encroachment of structural or machine supporting members within this space will be permitted. 1910.68(b)(11)(ii) Pulley clearance. 1910.68(b)(11)(ii)(a) There shall be a clearance of at least 5 feet between the center of the head pulley shaft and any ceiling obstruction. 1910.68(b)(11)(ii)(b) The center of the head pulley shaft shall be not less than 6 feet above the top terminal landing. 1910.68(b)(11)(iii) Emergency grab rail. An emergency grab bar or rail and platform shall be provided at the head pulley when the distance to the head pulley is over 6 feet above the top landing, otherwise only a grab bar or rail is to be provided to permit the rider to swing free should the emergency stops become inoperative. 1910.68(b)(12) Emergency exit ladder. A fixed metal ladder accessible from both the "up" and "down" run of the manlift shall be provided for the entire travel of the manlift. Such ladders shall meet the requirements in subpart D of this part. 1910.68(b)(13) Superstructure bracing. Manlift rails shall be secured in such a manner as to avoid spreading, vibration, and misalignment. 1910.68(b)(14) Illumination— 1910.68(b)(14)(i) General. Both runs of the manlift shall be illuminated at all times when the lift is in operation. An intensity of not less than 1-foot candle shall be maintained at all points. (However, see subparagraph (6)(iii) of this paragraph for illumination requirements at landings.) 1910.68(b)(14)(ii) Control of illumination. Lighting of manlift runways shall be by means of circuits permanently tied in to the building circuits (no switches), or shall be controlled by switches at each landing. Where separate switches are provided at each landing, any switch shall turn on all lights necessary to illuminate the entire runway. 1910.68(b)(15) Weather protection. The entire manlift and its driving mechanism shall be protected from the weather at all times. 1910.68(c) Mechanical requirements— 1910.68(c)(1) Machines, general— 1910.68(c)(1)(i) Brakes. Brakes provided for stopping and holding a manlift shall be inherently self-engaging, by requiring power or force from an external source to cause disengagement. The brake shall be electrically released, and shall be applied to the motor shaft for direct-connected units or to the input shaft for belt-driven units. The brake shall be capable of stopping and holding the manlift when the descending side is loaded with 250 lb on each step. 1910.68(c)(1)(ii) Belt. 1910.68(c)(1)(iii)(a) The belts shall be of hard-woven canvas, rubber-coated canvas, leather, or other material meeting the strength requirements of paragraph (b)(3) of this section and having a coefficient of friction such that when used in conjunction with an adequate tension device it will meet the brake test specified in subdivision (i) of this subparagraph. 1910.68(c)(1)(iii)(b) The width of the belt shall be not less than 12 inches for a travel not exceeding 100 feet, not less than 14 inches for a travel greater than 100 feet but not exceeding 150 feet and 16 inches for a travel exceeding 150 feet. 1910.68(c)(1)(iii)(c) A belt that has become torn while in use on a manlift shall not be spliced and put back in service. 1910.68(c)(2) Speed— 1910.68(c)(2)(i) Maximum speed. No manlift designed for a speed in excess of 80 feet per minute shall be installed. 1910.68(e) Periodic inspection— 1910.68(e)(1) Frequency. All manlifts shall be inspected by a competent designated person at intervals of not more than 30 days. Limit switches shall be checked weekly. Manlifts found to be unsafe shall not be operated until properly repaired. 1910.68(e)(3) Inspection record. A certification record shall be kept of each inspection which includes the date of the inspection, the signature of the person who performed the inspection and the serial number, or other identifier, of the manlift which was inspected. This record of inspection shall be made available to the Assistant Secretary of Labor or a duly authorized representative. 1910.23(b)(1) Ladder rungs, steps, and cleats are parallel, level, and uniformly spaced when the ladder is in position for use;	Partial	Policy states requirements for using mobile equipment on site, however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements. References OSHA 29 CFR 1926 Subpart O.	X					
110											
111	1910 Subpart G - Occupational Health and Environmental Control										
112		1910.94 - Ventilation.	<b>1910.94(a)(2)(i)</b> Abrasives and the surface coatings on the materials blasted are shattered and pulverized during blasting operations and the dust formed will contain particles of respirable size. The composition and toxicity of the dust from these sources shall be considered in making an evaluation of the potential health hazards <b>1910.94(a)(2)(ii)</b> The concentration of respirable dust or fume in the breathing zone of the abrasive-blasting operator or any other worker shall be kept below the levels specified in 1910.1000.	n/a							
113		1910.95 - Occupational noise exposure.	<b>1910.95(a)</b> Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in Table G-16 when measured on the A scale of a standard sound level meter at slow response. When noise levels are determined by octave band analysis, the equivalent A-weighted sound level may be determined as follows: Equivalent sound level contours. Octave band sound pressure levels may be converted to the equivalent A-weighted sound level by plotting them on this graph and noting the A-weighted sound level corresponding to the point of highest penetration into the sound level contours. This equivalent A-weighted sound level, which may differ from the actual A-weighted sound level of the noise, is used to determine exposure limits from Table 1.G-16.	n/a							
114		1910.95 - Occupational noise exposure.	<b>1910.95(a)</b> Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in Table G-16 when measured on the A scale of a standard sound level meter at slow response. When noise levels are determined by octave band analysis, the equivalent A-weighted sound level may be determined as follows: Equivalent sound level contours. Octave band sound pressure levels may be converted to the equivalent A-weighted sound level by plotting them on this graph and noting the A-weighted sound level corresponding to the point of highest penetration into the sound level contours. This equivalent A-weighted sound level, which may differ from the actual A-weighted sound level of the noise, is used to determine exposure limits from Table 1.G-16.	Partial	Policy requires hearing protection in high noise areas, however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements and a written Hearing Conservation program.	X					
115		1910.95 App A - Noise exposure computation	This Appendix is Mandatory	n/a							
116		1910.95 App B - Methods for estimating the adequacy of hearing protector attenuation	This Appendix is Mandatory	n/a							
117		1910.95 App C - Audiometric measuring instruments	This Appendix is Mandatory	n/a							
118		1910.95 App D - Audiometric test rooms	This Appendix is Mandatory	n/a							
119		1910.95 App E - Acoustic calibration of audiometers	This Appendix is Mandatory	n/a							

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
120		1910.95 App F - Calculations and application of age corrections to audiograms	This Appendix is Non-Mandatory	n/a						
121		1910.95 App G - Monitoring noise levels non-mandatory informational appendix	This appendix provides information to help employers comply with the noise monitoring obligations that are part of the hearing conservation amendment.	n/a						
122		1910.95 App H - Availability of referenced documents	These criteria are intended to be mandatory when so indicated in the applicable paragraphs of 1910.95 and appendices.	n/a						
123		1910.95 App I - Definitions	definitions	n/a						
124		1910.97 - Nonionizing radiation.	1910.97(a)(1)(i) The term "electromagnetic radiation" is restricted to that portion of the spectrum commonly defined as the radio frequency region, which for the purpose of this specification shall include the microwave frequency region.	n/a						
125	1926 Subpart D - Occupational Health and Environmental Controls									
126		1926.50 - Medical services and first aid.	1926.50(a) The employer shall ensure the availability of medical personnel for advice and consultation on matters of occupational health. 1926.50(b) Provisions shall be made prior to commencement of the project for prompt medical attention in case of serious injury. 1926.50(c) In the absence of an infirmary, clinic, hospital, or physician, that is reasonably accessible in terms of time and distance to the worksite, which is available for the treatment of injured employees, a person who has a valid certificate in first-aid training from the U.S. Bureau of Mines, the American Red Cross, or equivalent training that can be verified by documentary evidence, shall be available at the worksite to render first aid.	Partial	Policy states some guidelines for first aid, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
127		1926.50 App A - Medical services and first aid.	First aid supplies are required to be easily accessible under paragraph Sec. 1926.50(d)(1). An example of the minimal contents of a generic first aid kit is described in American National Standard (ANSI) Z308.1-1978 "Minimum Requirements for Industrial Unit-Type First-aid Kits". The contents of the kit listed in the ANSI standard should be adequate for small work sites. When larger operations or multiple operations are being conducted at the same location, employers should determine the need for additional first aid kits at the worksite, additional types of first aid equipment and supplies and additional quantities and types of supplies and equipment in the first aid kits. In a similar fashion, employers who have unique or changing first-aid needs in their workplace may need to enhance their first-aid kits. The employer can use the OSHA 300 log, OSHA 301 log, or other reports to identify these unique problems. Consultation from the local fire/rescue department, appropriate medical professional, or local emergency room may be helpful to employers in these circumstances. By assessing the specific needs of their workplace, employers can ensure that reasonably anticipated supplies are available. Employers should assess the specific needs of their worksite periodically and augment the first aid kit appropriately. If it is reasonably anticipated employees will be exposed to blood or other potentially infectious materials while using first-aid supplies, employers should provide personal protective equipment (PPE). Appropriate PPE includes gloves, gowns, face shields, masks and eye protection (see "Occupational Exposure to Blood borne Pathogens", 29 CFR 1910.1030(d)(3)) (56 FR 64175).	n/a						
128		1926.51 - Sanitation.	See below 1910.141/1926.51	n/a						
129		1926.52 - Occupational noise exposure.	Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in Table D-2 of this section when measured on the A-scale of a standard sound level meter at slow response. 1926.52(b) When employees are subjected to sound levels exceeding those listed in Table D-2 of this section, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of the table, personal protective equipment as required in Subpart E, shall be provided and used to reduce sound levels within the level of the table. 1926.52(c) If the variations in noise level involve maxima at intervals of 1 second or less, it is to be considered continuous.	n/a						
130		1926.53 - Ionizing radiation.	1926.53(a) In construction and related activities involving the use of sources of ionizing radiation, the pertinent provisions of the Nuclear Regulatory Commission Standards for Protection Against Radiation (10 CFR Part 20), relating to protection against occupational radiation exposure, shall apply. 1926.53(b) Any activity which involves the use of radioactive materials or X-rays, whether or not under license from the Nuclear Regulatory Commission, shall be performed by competent persons specially trained in the proper and safe operation of such equipment. In the case of materials used under Commission license, only persons actually licensed, or competent persons under direction and supervision of the licensee, shall perform such work.	n/a						
131		1926.54 - Nonionizing radiation.	1926.54(a) Only qualified and trained employees shall be assigned to install, adjust, and operate laser equipment. 1926.54(b) Proof of qualification of the laser equipment operator shall be available and in possession of the operator at all times. 1926.54(c) Employees, when working in areas in which a potential exposure to direct or reflected laser light greater than 0.005 watts (5 milliwatts) exists, shall be provided with antilaser eye protection devices as specified in Subpart E of this part. 1926.54(d) Areas in which lasers are used shall be posted with standard laser warning placards. 1926.54(e) Beam shutters or caps shall be utilized, or the laser turned off, when laser transmission is not actually required. When the laser is left unattended for a substantial period of time, such as during lunch hour, overnight, or at change of shifts, the laser shall be turned off. 1926.54(f) Only mechanical or electronic means shall be used as a detector for guiding the internal alignment of the laser. 1926.54(g) The laser beam shall not be directed at employees. 1926.54(h) When it is raining or snowing, or when there is dust or fog in the air, the operation of laser systems shall be prohibited where practicable; in any event, employees shall be kept out of range of the area of source and target during such weather conditions. 1926.54(i) Laser equipment shall bear a label to indicate maximum output. 1926.54(j) Employees shall not be exposed to light intensities above: 1926.54(j)(1) Direct staring: 1 micro-watt per square centimeter; 1926.54(j)(2) Incidental observing: 1 milliwatt per square centimeter; 1926.54(j)(3) Diffused reflected light: 2 1/2 watts per square centimeter. 1926.54(k) Laser unit in operation should be set up above the heads of the employees when possible. 1926.54(l) Employees shall not be exposed to microwave power densities in excess of 10 milliwatts per square centimeter.	n/a						
132		1926.55 - Gases, vapors, fumes, dusts, and mists.	1926.55(a) Exposure of employees to inhalation, ingestion, skin absorption, or contact with any material or substance at a concentration above those specified in the "Threshold Limit Values of Airborne Contaminants for 1970" of the American Conference of Governmental Industrial Hygienists, shall be avoided. See appendix A to this section. 1926.55(b) To achieve compliance with paragraph (a) of this section, administrative or engineering controls must first be implemented whenever feasible. When such controls are not feasible to achieve full compliance, protective equipment or other protective measures shall be used to keep the exposure of employees to air contaminants within the limits prescribed in this section. Any equipment and technical measures used for this purpose must first be approved for each particular use by a competent industrial hygienist or other technically qualified person. Whenever respirators are used, their use shall comply with §1926.1031. 1926.55(c) Paragraphs (a) and (b) of this section do not apply to the exposure of employees to airborne asbestos, tremolite, anthophyllite, or actinolite dust. Whenever any employee is exposed to airborne asbestos, tremolite, anthophyllite, or actinolite dust, the requirements of §1910.1101 or §1926.58 of this title shall apply. 1926.55(d) Paragraphs (a) and (b) of this section do not apply to the exposure of employees to formaldehyde. Whenever any employee is exposed to formaldehyde, the requirements of §1910.1048 of this title shall apply.	n/a						
133		1926.55 App A - Gases, vapors, fumes, dusts and mists.	Table	n/a						
134		1926.56 - Illumination.	1926.56(a) General. Construction areas, ramps, runways, corridors, offices, shops, and storage areas shall be lighted to not less than the minimum illumination intensities listed in Table D-3 while any work is in progress: 1926.56(b) Other areas. For areas or operations not covered above, refer to the American National Standard A11.1-1965, R1970, Practice for Industrial Lighting, for recommended values of illumination.	n/a						

Appendix C - Unfiltered  
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	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
135		1926.57 - Ventilation.	1926.57(a) "General." Whenever hazardous substances such as dusts, fumes, mists, vapors, or gases exist or are produced in the course of construction work, their concentrations shall not exceed the limits specified in 1926.55(a). When ventilation is used as an engineering control method, the system shall be installed and operated according to the requirements of this section.	n/a						
136		1926.58 - [Reserved]	n/a	n/a						
137		1926.59 - Hazard Communication.		n/a						
138		1926.60 - Methylenedianiline.	n/a	n/a						
139		1926.60 App A - Substance Data Sheet, for 4-METHYLENEDIANILINE	n/a	n/a						
140		1926.60 App B - Substance Technical Guidelines, MDA	n/a	n/a						
141		1926.60 App C - Medical Surveillance Guidelines for MDA	n/a	n/a						
142		1926.60 App D - Sampling and Analytical Methods for MDA Monitoring and Measurement Procedures	n/a	n/a						
143		1926.60 App E - Qualitative and Quantitative Fit Testing Procedures.	n/a	n/a						
144		1926.61 - Retention of DOT markings, placards and labels.	Note: The requirements applicable to construction work under this section are identical to those set forth at 1910.1201 of this chapter.	n/a						
145		1926.62 - Lead	1926.62(a) Scope. This section applies to all construction work where an employee may be occupationally exposed to lead. All construction work excluded from coverage in the general industry standard for lead by 29 CFR 1910.1025(a)(2) is covered by this standard. Construction work is defined as work for construction, alteration and/or repair, including painting and decorating. It includes but is not limited to the following:1926.62(a)(1) Demolition or salvage of structures where lead or materials containing lead are present1926.62(a)(2) Removal or encapsulation of materials containing lead;1926.62(a)(3) New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead;1926.62(a)(4) Installation of products containing lead;1926.62(a)(5) Lead contamination/emergency cleanup;1926.62(a)(6) Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed, and1926.62(a)(7) Maintenance operations associated with the construction activities described in this paragraph.	n/a						
146		1926.62 App A - Substance Data Sheet for Occupational Exposure to Lead		n/a						
147		1926.62 App B - Employee Standard Summary		n/a						
148		1926.62 App C - Medical Surveillance Guidelines		n/a						
149		1926.62 App D - Qualitative and Quantitative Fit Test Protocols		n/a						
150		1926.64 - Process safety management of highly hazardous chemicals.	n/a	n/a						
151		1926.64 App A - List of Highly Hazardous Chemicals, Toxics and Reactives (Mandatory)	n/a	n/a						
152		1926.64 App B - Block Flow Diagram and Simplified Process Flow Diagram (Nonmandatory)	n/a	n/a						
153		1926.64 App C - Compliance Guidelines and Recommendations for Process Safety Management (Nonmandatory)	n/a	n/a						
154		1926.64 App D - Sources of Further Information (Nonmandatory)	n/a	n/a						
155		1926.65 - Hazardous waste operations and emergency response.	1926.65(a) Scope, application, and definitions — 1926.65(a)(1) Scope. This section covers the following operations, unless the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility for employee exposure to safety or health hazards: 1926.65(a)(1)(i) Clean-up operations required by a governmental body, whether Federal, state, local or other involving hazardous substances that are conducted at uncontrolled hazardous waste sites (including, but not limited to, the EPA's National Priority Site List (NPL), state priority site list, or sites recommended for the EPA NPL, and initial investigations of government identified sites which are conducted before the presence or absence of hazardous substances has been ascertained;1926.65(a)(1)(ii) Corrective actions involving clean-up operations at sites covered by the Resource Conservation and Recovery Act of 1976 (RCRA) as amended (42 U.S.C. 6901 et seq.);1926.65(a)(1)(iii) Voluntary clean-up operations at sites recognized by Federal, state, local or other governmental bodies as uncontrolled hazardous waste sites;1926.65(a)(1)(iv) Operations involving hazardous wastes that are conducted at treatment, storage, and disposal (TSD) facilities regulated by 40 CFR parts 264 and 265 pursuant to RCRA; or by agencies under agreement with U.S.E.P.A. to implement RCRA regulations; and1926.65(a)(1)(v) Emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard;1926.65(a)(2) Application . 1926.65(a)(2)(i) All requirements of part 1910 and part 1926 of title 29 of the Code of Federal Regulations apply pursuant to their terms to hazardous waste and emergency response operations whether covered by this section or not. If there is a conflict or overlap, the provision more protective of employee safety and health shall apply without regard to 29 CFR 1926.20(c)1926.65(a)(2)(ii) Hazardous substance clean-up operations within the scope of paragraphs (a)(1)(i) through (a)(1)(iii) of this section must comply with all paragraphs of this section except paragraphs (p) and (q)1926.65(a)(2)(iii) Operations within the scope of paragraph (a)(1)(iv) of this section must comply only with the requirements of paragraph (p) of this section. Notes and Exceptions:1926.65(a)(2)(iii)(A) All provisions of paragraph (p) of this section cover any treatment, storage or disposal (TSD) operation regulated by 40 CFR parts 264 and 265 or by state law authorized under RCRA, and required to have a permit or interim status from EPA pursuant to 40 CFR 270.1 or from a state agency pursuant to RCRA. 1926.65(a)(2)(iii)(B) Employers who are not required to have a permit or interim status because they are conditionally exempt small quantity generators under 40 CFR 261.5 or are generators who qualify under 40 CFR 262.34 for exemptions from regulation under 40 CFR parts 264, 265 and 270 ("excepted employers") are not covered by paragraphs (p)(1) through (p)(7) of this section. Excepted employers who are required by the EPA or state agency to have their employees engage in emergency response or who direct their employees to engage in emergency response are covered by paragraph (p)(8) of this section, and cannot be exempted by (p)(8)(i) of this section. Excepted employers who are not required to have employees engage in emergency response, who direct their employees to evacuate in the case of such emergencies and who meet the requirements of paragraph (p)(8)(i) of this section are exempt from the balance of paragraph (p)(8) of this section1926.65(a)(2)(iii)(C) If an area is used primarily for treatment, storage or disposal, any emergency response operations in that area shall comply with paragraph (p)(8) of this section. In other areas not used primarily for treatment, storage, or disposal, any emergency response operations shall comply with paragraph (q) of this section. Compliance with the requirements of paragraph (q) of this section shall be deemed to be in compliance with the requirements of paragraph (p)(8) of this section1926.65(a)(2)(iv) Emergency response operations for releases of, or substantial threats of releases of, hazardous substances which are not covered by paragraphs (a)(1)(i) through (a)(1)(iv) of this section must only comply with the requirements of paragraph (q) of this section.	n/a						
156		1926.65 App A - Personal Protective Equipment Test Methods	Note: The following appendices serve as non-mandatory guidelines to assist employees and employers in complying with the appropriate requirements of this section. However 1926.65(g) makes mandatory in certain circumstances the use of Level A and Level B PPE protection.	n/a						
157		1926.65 App B - General Description and Discussion of the Levels of Protection and Protective Gear	This appendix sets forth information about personal protective equipment (PPE) protection levels which may be used to assist employers in complying with the PPE requirements of this section.	n/a						
158		1926.65 App C - Compliance Guidelines	Compliance Guidelines	n/a						
159		1926.65 App D - References	References	n/a						
160		1926.65 App E - Training Curriculum Guidelines - Non-mandatory		n/a						
161		1926.66 - Criteria for design and construction of spray booths.	n/a	n/a						
162	1910 Subpart H - Hazardous Materials									



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1	Occupational Safety & Health					Consolidated Deficiency Groupings				
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163		1910.101 - Compressed gases (general requirements).	<b>1910.101(a)</b> "Inspection of compressed gas cylinders." Each employer shall determine that compressed gas cylinders under his control are in a safe condition to the extent that this can be determined by visual inspection. Visual and other inspections shall be conducted as prescribed in the Hazardous Materials Regulations of the Department of Transportation (49 CFR parts 171-179 and 14 CFR part 103). Where those regulations are not applicable, visual and other inspections shall be conducted in accordance with Compressed Gas Association Pamphlets C-6-1968 and C-8-1962, which is incorporated by reference as specified in Sec. 1910.6. <b>1910.101(b)</b> "Compressed gases." The in-plant handling, storage, and utilization of all compressed gases in cylinders, portable tanks, rail tankcars, or motor vehicle cargo tanks shall be in accordance with Compressed Gas Association Pamphlet P-1-1965, which is incorporated by reference as specified in Sec. 1910.6. <b>1910.101(c)</b> "Safety relief devices for compressed gas containers." Compressed gas cylinders, portable tanks, and cargo tanks shall have pressure relief devices installed and maintained in accordance with Compressed Gas Association Pamphlets S-1.1-1963 and 1965 addenda and S-1.2-1963, which is incorporated by reference as specified in Sec. 1910.6.	Partial	Policy states some guidelines for work with compressed gas/air, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
164		1910.102 - Acetylene.	<b>1910.102(a)</b> Cylinders. Employers must ensure that the in-plant transfer, handling, storage, and use of acetylene in cylinders comply with the provisions of CGA Pamphlet G-1-2009 ("Acetylene") (incorporated by reference, see § 1910.6).	Partial	Policy states some guidelines for work with compressed gas/air, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
165		1910.103 - Hydrogen.	<b>1910.103(a)(1)(i)</b> Gaseous hydrogen system is one in which the hydrogen is delivered, stored and discharged in the gaseous form to consumer's piping. The system includes stationary or movable containers, pressure regulators, safety relief devices, manifolds, interconnecting piping and controls. The system terminates at the point where hydrogen at service pressure first enters the consumer's distribution piping.	n/a						
166		1910.104 - Oxygen.	<b>1910.104(a)</b> "Scope." This section applies to the installation of bulk oxygen systems on industrial and institutional consumer premises. This section does not apply to oxygen manufacturing plants or other establishments operated by the oxygen supplier or his agent for the purpose of storing oxygen and refilling portable containers, trailers, mobile supply trucks, or tank cars, nor to systems having capacities less than those stated in paragraph (b) (1) of this section.	n/a						
167		1910.105 - Nitrous oxide.	n/a	n/a						
168		1910.106 - Flammable liquids.	<b>1910.106(d)(1)(i)</b> "General." This paragraph shall apply only to the storage of flammable liquids in drums or other containers (including flammable aerosols) not exceeding 60 gallons individual capacity and those portable tanks not exceeding 660 gallons individual capacity. <b>1910.106(d)(1)(ii)</b> "Exceptions." This paragraph shall not apply to the following: <b>1910.106(d)(1)(ii)(a)</b> Storage of containers in bulk plants, service stations, refineries, chemical plants, and distilleries; <b>1910.106(d)(1)(ii)(b)</b> Category 1, 2, or 3 flammable liquids in the fuel tanks of a motor vehicle, aircraft, boat, or portable or stationary engine; <b>1910.106(d)(1)(ii)(c)</b> flammable paints, oils, varnishes, and similar mixtures used for painting or maintenance when not kept for a period in excess of 30 days; <b>1910.106(d)(1)(ii)(d)</b> Beverages when packaged in individual containers not exceeding 1 gallon in size. <b>1910.106(d)(2)</b> "Design, construction, and capacity of containers" - <b>1910.106(d)(2)(i)</b> "General." Only approved containers and portable tanks shall be used. Metal containers and portable tanks meeting the requirements of and containing products authorized by chapter I, title 49 of the Code of Federal Regulations (regulations issued by the Hazardous Materials Regulations Board, Department of Transportation), shall be deemed to be acceptable. <b>1910.106(d)(2)(ii)</b> "Emergency venting." Each portable tank shall be provided with one or more devices installed in the top with sufficient emergency venting capacity to limit internal pressure under fire exposure conditions to 10 p.s.i.g., or 30 percent of the bursting pressure of the tank, whichever is greater. The total venting capacity shall be not less than that specified in paragraphs (b)(2)(v) (c) or (e) of this section. At least one pressure-activated vent having a minimum capacity of 6,000 cubic feet of free air (14.7 p.s.i.a. and 60 deg. F.) shall be used. It shall be set to open at not less than 5 p.s.i.g. If fusible vents are used, they shall be actuated by elements that operate at a temperature not exceeding 300 deg. F. <b>1910.106(d)(2)(iii) Size</b> . Flammable liquid containers shall be in accordance with Table H-12, except that glass or plastic containers of no more than 1-gallon capacity may be used for a Category 1 or 2 flammable liquid if: <b>1910.106(d)(2)(iii)(a)(1)</b> Such liquid either would be rendered unfit for its intended use by contact with metal or would excessively corrode a metal container so as to create a leakage hazard; and <b>1910.106(d)(2)(iii)(a)(2)</b> The user's process either would require more than 1 pint of a Category 1 flammable liquid or more than 1 quart of a Category 2 flammable liquid of a single assay lot to be used at one time, or would require the maintenance of an analytical standard liquid of a quality which is not met by the specified standards of liquids available, and the quantity of the analytical standard liquid required to be used in any one control process exceeds one-sixteenth the capacity of the container allowed under Table H-12 for the category of liquid;	Partial	Policy states some guidelines for work with flammable liquids, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
169		1910.107 - Spray finishing using flammable and combustible materials.	n/a	n/a						
170		1910.108 - [Reserved]	n/a	n/a						
171		1910.109 - Explosives and blasting agents.	n/a	n/a						
172		1910.110 - Storage and handling of liquefied petroleum gases.	<b>1910.110(b)(1)</b> Odorizing gases. <b>1910.110(b)(1)(i)</b> All liquefied petroleum gases shall be effectively odorized by an approved agent of such character as to indicate positively, by distinct odor, the presence of gas down to concentration in air of not over one-fifth the lower limit of flammability. Odorization, however, is not required if harmful in the use of further processing of the liquefied petroleum gas, or if odorization will serve no useful purpose as a warning agent in such use or further processing. <b>1910.110(b)(1)(ii)</b> The odorization requirement of paragraph (b)(1)(i) of this section shall be considered to be met by the use of 1.0 pounds of ethyl mercaptan, 1.0 pounds of thiophane or 1.4 pounds of amyl mercaptan per 10,000 gallons of LP-Gas. However, this listing of odorants and quantities shall not exclude the use of other odorants that meet the odorization requirements of paragraph (b)(1)(i) of this section. <b>1910.110(b)(2)</b> Approval of equipment and systems. <b>1910.110(b)(2)(i)</b> Each system utilizing DOT containers in accordance with 49 CFR Part 178 shall have its container valves, connectors, manifold valve assemblies, and regulators approved. <b>1910.110(b)(2)(ii)</b> Each system for domestic or commercial use utilizing containers of 2,000 gallons or less water capacity, other than those constructed in accordance with 49 CFR Part 178, shall consist of a container assembly and one or more regulators, and may include other parts. The system as a unit or the container assembly as a unit, and the regulator or regulators, shall be individually listed. <b>1910.110(b)(2)(iii)</b> In systems utilizing containers of over 2,000 gallons water capacity, each regulator, container valve, excess flow valve, gaging device, and relief valve installed on or at the container, shall have its correctness as to design, construction, and performance determined by listing by a nationally recognized testing laboratory. Refer to 1910.7 for definition of nationally recognized testing laboratory. <b>1910.110(b)(3)</b> Requirements for construction and original test of containers. <b>1910.110(b)(3)(i)</b> Containers used with systems embodied in paragraphs (d), (e), (g), and (h) of this section, except as provided in paragraphs (e)(3)(iii) and (g)(2)(i) of this section, shall be designed, constructed, and tested in accordance with the Rules for Construction of Unfired Pressure Vessels, section VIII, Division 1, American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, 1968 edition, which is incorporated by reference as specified in Sec. 1910.6. <b>1910.110(b)(3)(ii)</b> Containers constructed according to the 1949 and earlier editions of the ASME Code do not have to comply with paragraphs U-2 through U-10 and U-19 thereof. Containers constructed according to paragraph U-70 in the 1949 and earlier editions are not authorized. <b>1910.110(b)(3)(iii)</b> Containers designed, constructed, and tested prior to July 1, 1961, according to the Code for Unfired Pressure Vessels for Petroleum Liquids and Gases, 1951 edition with 1954 Addenda, of the American Petroleum Institute and the American Society of Mechanical Engineers, which is incorporated by reference as specified in Sec. 1910.6, shall be considered in conformance. Containers constructed according to API-ASME Code do not have to comply with section I or with appendix to section I. Paragraphs W-601 to W-606 inclusive in the 1943 and earlier editions do not apply. <b>1910.110(b)(3)(iv)</b> The provisions of paragraph (b)(3)(i) of this section shall not be construed as prohibiting the continued use or reinstallation of containers constructed and maintained in accordance with the standard for the Storage and Handling of Liquefied Petroleum Gases NFPA No. 58 in effect at the time of fabrication. <b>1910.110(b)(3)(v)</b> Containers used with systems embodied in paragraph (b), (d)(3)(iii), and (f) of this section, shall be constructed, tested, and stamped in accordance with DOT specifications effective at the date of their manufacture.	Partial	Policy states some guidelines for work with liquefied petroleum gas, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
173		1910.111 - Storage and handling of anhydrous ammonia.	n/a	n/a						
174		1910.112 - [Reserved]	n/a	n/a						
175		1910.113 - [Reserved]	n/a	n/a						
176		1910.119 - Process safety management of highly hazardous chemicals.	n/a	n/a						
177		1910.119 App A - List of Highly Hazardous Chemicals, Toxics and Reactives (Mandatory).	n/a	n/a						
178		1910.119 App B - Block Flow Diagram and Simplified Process Flow Diagram (Nonmandatory).	n/a	n/a						
179		1910.119 App C - Compliance Guidelines and Recommendations for Process Safety Management (Nonmandatory).	n/a	n/a						
180		1910.119 App D - Sources of Further Information (Nonmandatory).	n/a	n/a						
181		1910.120 - Hazardous waste operations and emergency response.	<b>1910.120(a)(1) Scope</b> . This section covers the following operations, unless the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility for employee exposure to safety or health hazards: <b>1910.120(a)(1)(i)</b> Clean-up operations required by a governmental body, whether Federal, state local or other involving hazardous substances that are conducted at uncontrolled hazardous waste sites (including, but not limited to, the EPA's National Priority Site List (NPL), state priority site lists, sites recommended for the EPA NPL, and initial investigations of government identified sites which are conducted before the presence or absence of hazardous substances has been ascertained); <b>1910.120(a)(1)(ii)</b> Corrective actions involving clean-up operations at sites covered by the Resource Conservation and Recovery Act of 1976 (RCRA) as amended (42 U.S.C. 6901 et seq.); <b>1910.120(a)(1)(iii)</b> Voluntary clean-up operations at sites recognized by Federal, state, local or other governmental bodies as uncontrolled hazardous waste sites; <b>1910.120(a)(1)(iv)</b> Operations involving hazardous waste that are conducted at treatment, storage, disposal (TSD) facilities regulated by 40 CFR Parts 264 and 265 pursuant to RCRA; or by agencies under agreement with U.S.E.P.A. to implement RCRA regulations; and <b>1910.120(a)(1)(v)</b> Emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard.	Partial	Policy states some guidelines for work around hazardous waste clean up, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
182		1910.120 App A - Personal protective equipment test methods.	This appendix sets forth the non-mandatory examples of tests which may be used to evaluate compliance with paragraphs 1910.120(g)(4) (ii) and (iii). Other tests and other challenge agents may be used to evaluate compliance.	Partial	Policy states some guidelines for work around hazardous waste clean up, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
183		1910.120 App B - General description and discussion of the levels of protection and protective gear.	This appendix sets forth information about personal protective equipment (PPE) protection levels which may be used to assist employers in complying with the PPE requirements of this section.	Partial	Policy states some guidelines for work around hazardous waste clean up, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
184		1910.120 App C - Compliance guidelines.	Compliance Guidelines	Partial	Policy states some guidelines for work around hazardous waste clean up, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				

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185		1910.120 App D - References.	References	Partial	Policy states some guidelines for work around hazardous waste clean up, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
186		1910.120 App E - Training Curriculum Guidelines - (Non-mandatory)		Partial	Policy states some guidelines for work around hazardous waste clean up, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
187		1910.121 - Reserved	n/a	n/a						
188		1910.122 - Table of contents	n/a	n/a						
189		1910.123 - Dipping and coating operations: Coverage and definitions	n/a	n/a						
190		1910.124 - General requirements for dipping and coating operations	n/a	n/a						
191		1910.125 - Additional requirements for dipping and coating operations that use flammable liquids or liquids with flashpoints greater than 199.4 °F (93 °C).	n/a	n/a						
192		1910.126 - Additional requirements for special dipping and coating operations	n/a	n/a						
193	1910 Subpart I - Personal Protective Equipment									
194		1910.132 - General requirements.	1910.132(a) Application. Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact. 1910.132(b) Employee-owned equipment. Where employees provide their own protective equipment, the employer shall be responsible to assure its adequacy, including proper maintenance, and sanitation of such equipment. 1910.132(c) Design. All personal protective equipment shall be of safe design and construction for the work to be performed. 1910.132(d) Hazard assessment and equipment selection. 1910.132(d)(1) The employer shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE). If such hazards are present, or likely to be present, the employer shall: 1910.132(d)(1)(i) Select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment; 1910.132(d)(1)(ii) Communicate selection decisions to each affected employee; and, 1910.132(d)(1)(iii) Select PPE that properly fits each affected employee. Note: Non-mandatory appendix B contains an example of procedures that would comply with the requirement for a hazard assessment. 1910.132(d)(2) The employer shall verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated; the person certifying that the evaluation has been performed; the date(s) of the hazard assessment; and, which identifies the document as a certification of hazard assessment. 1910.132(e) Defective and damaged equipment. Defective or damaged personal protective equipment shall not be used.	Partial	Policy states guidelines for selection and use of PPE, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X				
195		1910.133 - Eye and face protection.	1910.133(a)(1) The employer shall ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation. 1910.133(a)(2) The employer shall ensure that each affected employee uses eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors (e.g. clip-on or slide-on side shields) meeting the pertinent requirements of this section are acceptable. 1910.133(a)(3) The employer shall ensure that each affected employee who wears prescription lenses while engaged in operations that involve eye hazards wears eye protection that incorporates the prescription in its design, or wears eye protection that can be worn over the prescription lenses without disturbing the proper position of the prescription lenses or the protective lenses. 1910.133(a)(4) Eye and face PPE shall be distinctly marked to facilitate identification of the manufacturer. 1910.133(b) Criteria for protective eye and face protection. 1910.133(b)(1) Protective eye and face protection devices must comply with any of the following consensus standards: 1910.133(b)(1)(i) ANSI/ISEA Z87.1-2010, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1910.6; 1910.133(b)(1)(ii) ANSI Z87.1-2003, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1910.6; or 1910.133(b)(1)(iii) ANSI Z87.1-1989 (R-1998), Practice for Occupational and Educational Eye and Face Protection, incorporated by reference in § 1910.6; 1910.133(b)(2) Protective eye and face protection devices that the employer demonstrates are at least as effective as protective eye and face protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.	Partial	Policy states guidelines for selection and use of PPE, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X				
196		1910.134 - Respiratory Protection.	1910.134(a)(1) In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to this section. 1910.134(a)(2) A respirator shall be provided to each employee when such equipment is necessary to protect the health of such employee. The employer shall provide the respirators which are applicable and suitable for the purpose intended. The employer shall be responsible for the establishment and maintenance of a respiratory protection program, which shall include the requirements outlined in paragraph (c) of this section. The program shall cover each employee required by this section to use a respirator. 1910.134(c)Respiratory protection program. This paragraph requires the employer to develop and implement a written respiratory protection program with required worksite-specific procedures and elements for required respirator use. The program must be administered by a suitably trained program administrator. In addition, certain program elements may be required for voluntary use to prevent potential hazards associated with the use of the respirator. 1910.134(c)(1) In any workplace where respirators are necessary to protect the health of the employee or whenever respirators are required by the employer, the employer shall establish and implement a written respiratory protection program with worksite-specific procedures. The program shall be updated as necessary to reflect those changes in workplace conditions that affect respirator use. The employer shall include in the program the following provisions of this section, as applicable: 1910.134(c)(1)(i) Procedures for selecting respirators for use in the workplace; 1910.134(c)(1)(ii) Medical evaluations of employees required to use respirators; 1910.134(c)(1)(iii) Fit testing procedures for tight-fitting respirators; 1910.134(c)(1)(iv) Procedures for proper use of respirators in routine and reasonably foreseeable emergency situations; 1910.134(c)(1)(v) Procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding, and otherwise maintaining respirators; 1910.134(c)(1)(vi) Procedures to ensure adequate air quality, quantity, and flow of breathing air for atmosphere-supplying respirators;	Partial	Currently the respiratory protection program is in abeyance. Policy will need more information on many individual provisions of the regulation if it will be continued.	X				
197		1910.134 App A - Fit Testing Procedures (Mandatory).	Part I. OSHA-Accepted Fit Test Protocols (Mandatory)	No	Currently the respiratory protection program is in abeyance. Policy will need more information on many individual provisions of the regulation if it will be continued.	X				
198		1910.134 App B-1 - User Seal Check Procedures (Mandatory).	Appendix B-1 to § 1910.134: User Seal Check Procedures (Mandatory) The individual who uses a tight-fitting respirator is to perform a user seal check to ensure that an adequate seal is achieved each time the respirator is put on. Either the positive and negative pressure checks listed in this appendix, or the respirator manufacturer's recommended user seal check method shall be used. User seal checks are not substitutes for qualitative or quantitative fit tests.	Partial	Currently the respiratory protection program is in abeyance. Policy will need more information on many individual provisions of the regulation if it will be continued.	X				
199		1910.134 App B-2 - Respirator Cleaning Procedures (Mandatory).	Appendix B-2 to § 1910.134: Respirator Cleaning Procedures (Mandatory) These procedures are provided for employer use when cleaning respirators. They are general in nature, and the employer as an alternative may use the cleaning recommendations provided by the manufacturer of the respirators used by their employees, provided such procedures are as effective as those listed here in Appendix B- 2. Equivalent effectiveness simply means that the procedures used must accomplish the objectives set forth in Appendix B-2, i.e., must ensure that the respirator is properly cleaned and disinfected in a manner that prevents damage to the respirator and does not cause harm to the user.	Partial	Currently the respiratory protection program is in abeyance. Policy will need more information on many individual provisions of the regulation if it will be continued.	X				
200		1910.134 App C - OSHA Respirator Medical Evaluation Questionnaire (Mandatory).	Appendix C to Sec. 1910.134: OSHA Respirator Medical Evaluation Questionnaire (Mandatory)	No	Currently the respiratory protection program is in abeyance. Policy will need more information on many individual provisions of the regulation if it will be continued.	X				
201		1910.134 App D - (Mandatory) Information for Employees Using Respirators When not Required Under Standard.	n/a	Partial	Currently the respiratory protection program is in abeyance. Policy will need more information on many individual provisions of the regulation if it will be continued. Is there a voluntary use policy for respirators?	X				
202		1910.135 - Head protection.	1910.135(b) Criteria for head protection. 1910.135 (b)(1) Criteria for head protection. (1) Head protection must comply with any of the following consensus standards: 1910.135(b)(1)(i) American National Standards Institute (ANSI) Z89.1-2009, "American National Standard for Industrial Head Protection," incorporated by reference in Sec. 1910.6; 1910.135(b)(1)(ii) American National Standards Institute (ANSI) Z89.1-2003, "American National Standard for Industrial Head Protection," incorporated by reference in Sec. 1910.6; or 1910.135(b)(1)(iii) American National Standards Institute (ANSI) Z89.1-1997, "American National Standard for Personnel Protection--Protective Headwear for Industrial Workers--Requirements," incorporated by reference in Sec. 1910.6. 1910.135(b)(2) Head protection devices that the employer demonstrates are at least as effective as head protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.	Partial	Policy states guidelines for selection and use of PPE, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X				

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
203		1910.136 - Foot protection.	1910.136(a) General requirements. The employer shall ensure that each affected employee uses protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, or when the use of protective footwear will protect the affected employee from an electrical hazard, such as a static-discharge or electric-shock hazard, that remains after the employer takes other necessary protective measures. 1910.136(b) Criteria for protective footwear. 1910.136(b)(1) Protective footwear must comply with any of the following consensus standards: 1910.136(b)(1)(i) ASTM F-2412-2005, "Standard Test Methods for Foot Protection," and ASTM F-2413-2005, "Standard Specification for Performance Requirements for Protective Footwear," which are incorporated by reference in § 1910.6; 1910.136(b)(1)(ii) ANSI Z41-1999, "American National Standard for Personal Protection -- Protective Footwear," which is incorporated by reference in § 1910.6; or 1910.136(b)(1)(iii) ANSI Z41-1991, "American National Standard for Personal Protection -- Protective Footwear," which is incorporated by reference in § 1910.6. 1910.136(b)(2) Protective footwear that the employer demonstrates is at least as effective as protective footwear that is constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section.	Partial	Policy states guidelines for selection and use of PPE, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X				
204		1910.137 - Electrical Protective Equipment.	1910.137(a) Design requirements for specific types of electrical protective equipment . Rubber insulating blankets, rubber insulating matting, rubber insulating covers, rubber insulating line hose, rubber insulating gloves, and rubber insulating sleeves shall meet the following requirements: 1910.137(a)(1) Manufacture and marking of rubber insulating equipment. 1910.137(a)(1)(i) Blankets, gloves, and sleeves shall be produced by a seamless process. 1910.137(a)(1)(ii) Each item shall be clearly marked as follows: 1910.137(a)(1)(ii)(A) Class 00 equipment shall be marked Class 00. 1910.137(a)(1)(ii)(B) Class 0 equipment shall be marked Class 0. 1910.137(a)(1)(ii)(C) Class 1 equipment shall be marked Class 1. 1910.137(a)(1)(ii)(D) Class 2 equipment shall be marked Class 2. 1910.137(a)(1)(ii)(E) Class 3 equipment shall be marked Class 3. 1910.137(a)(1)(ii)(F) Class 4 equipment shall be marked Class 4 1910.137(a)(1)(ii)(G) Nonozone-resistant equipment shall be marked Type I. 1910.137(a)(1)(ii)(H) Ozone-resistant equipment shall be marked Type II. 1910.137(a)(1)(ii)(I) Other relevant markings, such as the manufacturer's identification and the size of the equipment, may also be provided. 1910.137(a)(1)(iii) Markings shall be nonconducting and shall be applied in such a manner as not to impair the insulating qualities of the equipment. 1910.137(a)(1)(iv) Markings on gloves shall be confined to the cuff portion of the glove.	Partial	Policy states guidelines for selection and use of PPE, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X				
205		1910.138 - Hand Protection.	1910.138(a) General requirements. Employers shall select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes. 1910.138(b) Selection. Employers shall base the selection of the appropriate hand protection on an evaluation of the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use, and the hazards and potential hazards identified.	Partial	Policy states guidelines for selection and use of PPE, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X				
206		1910.139 - Reserved.	n/a	n/a	Policy states guidelines for use of fall protection, however the policy is too brief/high-level and is silent on some individual provisions of the regulation. References OSHA 29 CFR 1926 subpart M					
207		1910.140 - Personal fall protection systems.	From the HASP "Except where more stringent requirements may exist, fall protection shall be in accordance with OSHA 29 CFR 1926 Subpart M."	Partial	Policy states guidelines for use of fall protection, however the policy is too brief/high-level and is silent on some individual provisions of the regulation. References OSHA 29 CFR 1926 subpart M	X				
208		1910 Subpart I App A - References for further information (Non-mandatory)	The documents in Appendix A provide information which may be helpful in understanding and implementing the standards in Subpart I.	n/a	Policy states guidelines for selection and use of PPE, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.					
209		1910 Subpart I App B - Non-mandatory Compliance Guidelines for Hazard Assessment and Personal Protective Equipment Selection.	This Appendix is intended to provide compliance assistance for employers and employees in implementing requirements for a hazard assessment and the selection of personal protective equipment.	n/a	Policy states guidelines for selection and use of PPE, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.					
210		1910 Subpart I App C - Personal Fall Protection Systems Non-Mandatory Guidelines.	From the HASP "Except where more stringent requirements may exist, fall protection shall be in accordance with OSHA29 CFR 1926 Subpart M"	n/a	Policy states guidelines for selection and use of PPE, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.					
211		1910 Subpart I App D - Test Methods and Procedures for Personal Fall Protection Systems Non-Mandatory Guidelines.	From the HASP "Except where more stringent requirements may exist, fall protection shall be in accordance with OSHA29 CFR 1926 Subpart M"	n/a	Policy states guidelines for use of fall protection, however the policy is too brief/high-level and is silent on some individual provisions of the regulation. References OSHA 29 CFR 1926 subpart M					
212	1926 Subpart E - Personal Protective and Life Saving Equipment			n/a						
213		1926.95 - Criteria for personal protective equipment.	1926.95(a) "Application." Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact. 1926.95(b) "Employee-owned equipment." Where employees provide their own protective equipment, the employer shall be responsible to assure its adequacy, including proper maintenance, and sanitation of such equipment. 1926.95(c) "Design." All personal protective equipment shall be of safe design and construction for the work to be performed.1926.95(d) Payment for protective equipment.1926.95(d)(1) Except as provided by paragraphs (d)(2) through (d)(6) of this section, the protective equipment, including personal protective equipment (PPE), used to comply with this part, shall be provided by the employer at no cost to employees.1926.95(d)(2) The employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, provided that the employer permits such items to be worn off the job-site. 1926.95(d)(3) When the employer provides metatarsal guards and allows the employee, at his or her request, to use shoes or boots with built-in metatarsal protection, the employer is not required to reimburse the employee for the shoes or boots. 1926.95(d)(4) The employer is not required to pay for: 1926.95(d)(4)(i) Everyday clothing, such as long-sleeve shirts, long pants, street shoes, and normal work boots; or1926.95(d)(4)(ii) Ordinary clothing, skin creams, or other items, used solely for protection from weather, such as winter coats, jackets, gloves, parkas, rubber boots, hats, raincoats, ordinary sunglasses, and sunscreen. 1926.95(d)(5) The employer must pay for replacement PPE, except when the employee has lost or intentionally damaged the PPE.1926.95(d)(6) Where an employee provides adequate protective equipment he or she owns pursuant to paragraph (b) of this section, the employer may allow the employee to use it and is not required to reimburse the employee for that equipment. The employer shall not require an employee to provide or pay for his or her own PPE, unless the PPE is excepted by paragraphs (d)(2) through (d)(5) of this section.1926.95(d)(7) This section shall become effective on February 13, 2008. Employers must implement the PPE payment requirements no later than May 15, 2008. Note to § 1926.95(d): When the provisions of another OSHA standard specify whether or not the employer must pay for specific equipment, the payment provisions of that standard shall prevail.	n/a						
214		1926.96 - Occupational foot protection.	Safety-toe footwear for employees shall meet the requirements and specifications in American National Standard for Men's Safety-Toe Footwear, Z41.1-1967.	n/a						
215		1926.97 - Electrical protective equipment.	1926.97(a) Design requirements for specific types of electrical protective equipment. Rubber insulating blankets, rubber insulating matting, rubber insulating covers, rubber insulating line hose, rubber insulating gloves, and rubber insulating sleeves shall meet the following requirements: 1926.97(a)(1) Manufacture and marking of rubber insulating equipment. 1926.97(a)(1)(i) Blankets, gloves, and sleeves shall be produced by a seamless process. 1926.97(a)(1)(ii) Each item shall be clearly marked as follows: 1926.97(a)(1)(ii) 1926.97(a)(1)(ii)(A) Class 00 equipment shall be marked Class 00. 1926.97(a)(1)(ii)(B) Class 0 equipment shall be marked Class 0. 1926.97(a)(1)(ii)(C) Class 1 equipment shall be marked Class 1. 1926.97(a)(1)(ii)(D) Class 2 equipment shall be marked Class 2. 1926.97(a)(1)(ii)(E) Class 3 equipment shall be marked Class 3. 1926.97(a)(1)(ii)(F) Class 4 equipment shall be marked Class 4. 1926.97(a)(1)(ii)(G) Nonozone-resistant equipment shall be marked Type I. 1926.97(a)(1)(ii)(H) Ozone-resistant equipment shall be marked Type II. 1926.97(a)(1)(ii)(I) Other relevant markings, such as the manufacturer's identification and the size of the equipment, may also be provided. 1926.97(a)(1)(iii) Markings shall be nonconducting and shall be applied in such a manner as not to impair the insulating qualities of the equipment. 1926.97(a)(1)(iv) Markings on gloves shall be confined to the cuff portion of the glove. 1926.97(a)(2) Electrical requirements. 1926.97(a)(2)(i) Equipment shall be capable of withstanding the ac proof-test voltage specified in Table E-1 or the dc proof-test voltage specified in Table E-2. 1926.97(a)(2)(i)(A) The proof test shall reliably indicate that the equipment can withstand the voltage involved. 1926.97(a)(2)(i)(B) The test voltage shall be applied continuously for 3 minutes for equipment other than matting and shall be applied continuously for 1 minute for matting. 1926.97(a)(2)(i)(C) Gloves shall also be capable of separately withstanding the ac proof-test voltage specified in Table E-1 after a 16-hour water soak. (See the note following paragraph (a)(3)(ii)(B) of this section.) 1926.97(a)(2)(ii) When the ac proof test is used on gloves, the 60-hertz proof-test current may not exceed the values specified in Table E-1 at any time during the test period. 1926.97(a)(2)(ii)(A) If the ac proof test is made at a frequency other than 60 hertz, the permissible proof-test current shall be computed from the direct ratio of the frequencies. 1926.97(a)(2)(ii)(B) For the test, gloves (right side out) shall be filled with tap water and immersed in water to a depth that is in accordance with Table E-3. Water shall be added to or removed from the glove, as necessary, so that the water level is the same inside and outside the glove. 1926.97(a)(2)(ii)(C) After the 16-hour water soak specified in paragraph (a)(2)(i)(C) of this section, the 60-hertz proof-test current may not exceed the values given in Table E-1 by more than 2 milliamperes. 1926.97(a)(2)(iii) Equipment that has been subjected to a minimum breakdown voltage test may not be used for electrical protection. (See the note following paragraph (a)(3)(ii)(B) of this section.) 1926.97(a)(2)(iv) Material used for Type II insulating equipment shall be capable of withstanding an ozone test, with no visible effects. The ozone test shall reliably indicate that the material will resist ozone exposure in actual use. Any visible signs of ozone deterioration of the material, such as checking, cracking, breaks, or pitting, is evidence of failure to meet the requirements for ozone resistant material. (See the note following paragraph (a)(3)(ii)(B) of this section.) 1926.97(a)(3) Workmanship and finish. 1926.97(a)(3)(i) Equipment shall be free of physical irregularities that can adversely affect the insulating properties of the equipment and that can be detected by the tests or inspections required under this section. 1926.97(a)(3)(ii) Surface irregularities that may be present on all rubber goods (because of imperfections on forms or molds or because of inherent difficulties in the manufacturing process) and that may appear as indentations, protuberances, or imbedded foreign material are acceptable under the following conditions: 1926.97(a)(3)(ii)(A) The indentation or protuberance blends into a smooth slope when the material is stretched. 1926.97(a)(3)(ii)(B) Foreign material remains in place when the insulating material is folded and stretches with the insulating material surrounding it. Note to paragraph (a): Rubber insulating equipment meeting the following national consensus standards is deemed to be in compliance with the performance requirements of paragraph (a) of this section: American Society for Testing and Materials (ASTM) D120-09, Standard Specification for Rubber Insulating Gloves. ASTM D178-01 (2010), Standard Specification for Rubber Insulating Matting. ASTM D1048-12, Standard Specification for Rubber Insulating Blankets. ASTM D1049-98 (2010), Standard Specification for Rubber Insulating Covers. ASTM D1050-05 (2011), Standard Specification for Rubber Insulating Line Hose. ASTM D1051-08, Standard Specification for Rubber Insulating Sleeves. The preceding standards also contain specifications for conducting the various tests required in paragraph (a) of this section. For example, the ac and dc proof tests, the breakdown test, the water-soak procedure, and the ozone test mentioned in this paragraph are described in detail in these ASTM standards.	n/a	HASP states that common situations are described for general site conditions, that electrical work is to be subbed out to Mag Electric					

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
216		1926.98 - [Reserved]	n/a	n/a						
217		1926.99 - [Reserved]	n/a	n/a						
218		1926.100 - Head protection.	1926.100(b) Criteria for head protection. 1926.100(b)(1) The employer must provide each employee with head protection that meets the specifications contained in any of the following consensus standards: 1926.100(b)(1)(i) American National Standards Institute (ANSI) Z89.1-2009, "American National Standard for Industrial Head Protection," incorporated by reference in §1926.6; 1926.100(b)(1)(ii) American National Standards Institute (ANSI) Z89.1-2003, "American National Standard for Industrial Head Protection," incorporated by reference in §1926.6; or 1926.100(b)(1)(iii) American National Standards Institute (ANSI) Z89.1-1997, "American National Standard for Personnel Protection-Protective Headwear for Industrial Workers-Requirements," incorporated by reference in §1926.6. 1926.100(b)(2) The employer must ensure that the head protection provided for each employee exposed to high-voltage electric shock and burns also meets the specifications contained in Section 9.7 ("Electrical Insulation") of any of the consensus standards identified in paragraph (b)(1) of this section.1926.100(b)(3) OSHA will deem any head protection device that the employer demonstrates is at least as effective as a head protection device constructed in accordance with one of the consensus standards identified in paragraph (b)(1) of this section to be in compliance with the requirements of this section.	n/a						
219		1926.101 - Hearing protection.	<b>1926.101(a)</b> Wherever it is not feasible to reduce the noise levels or duration of exposures to those specified in Table D-2, Permissible Noise Exposures, in 1926.52, ear protective devices shall be provided and used <b>1926.101(b)</b> Ear protective devices inserted in the ear shall be fitted or determined individually by competent persons <b>1926.101(c)</b> Plain cotton is not an acceptable protective device.	n/a						
220		1926.102 - Eye and face protection.	1926.102(a)(1) The employer shall ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation. 1926.102(a)(2) The employer shall ensure that each affected employee uses eye protection that provides side protection when there is a hazard from flying objects. Detachable side protectors (e.g. clip-on or slide-on side shields) meeting the pertinent requirements of this section are acceptable. 1926.102(a)(3) The employer shall ensure that each affected employee who wears prescription lenses while engaged in operations that involve eye hazards wears eye protection that incorporates the prescription in its design, or wears eye protection that can be worn over the prescription lenses without disturbing the proper position of the prescription lenses or the protective lenses. 1926.102(a)(4) Eye and face PPE shall be distinctly marked to facilitate identification of the manufacturer. 1926.102(a)(5) Protectors shall meet the following minimum requirements: 1926.102(a)(5)(i) They shall provide adequate protection against the particular hazards for which they are designed. 1926.102(a)(5)(ii) They shall be reasonably comfortable when worn under the designated conditions. 1926.102(a)(5)(iii) They shall fit snugly and shall not unduly interfere with the movements of the wearer. 1926.102(a)(5)(iv) They shall be durable. 1926.102(a)(5)(v) They shall be capable of being disinfected. 1926.102(a)(5)(vi) They shall be easily cleanable. 1926.102(b) Criteria for protective eye and face protection. 1926.102(b)(1) Protective eye and face protection devices must comply with any of the following consensus standards: 1926.102(b)(1)(i) ANSI/ISEA Z87.1-2010, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1926.6; 1926.102(b)(1)(ii) ANSI Z87.1-2003, Occupational and Educational Personal Eye and Face Protection Devices, incorporated by reference in § 1926.6; or 1926.102(b)(1)(iii) ANSI Z87.1-1989 (R-1998), Practice for Occupational and Educational Eye and Face Protection, incorporated by reference in § 1926.6; 1926.102(b)(2) Protective eye and face protection devices that the employer demonstrates are at least as effective as protective eye and face protection devices that are constructed in accordance with one of the above consensus standards will be deemed to be in compliance with the requirements of this section. 1926.102(c) Protection against radiant energy - 1926.102(c)(1) Selection of shade numbers for welding filter. Table E-1 shall be used as a guide for the selection of the proper shade numbers of filter lenses or plates used in welding. Shades more dense than those listed may be used to suit the individual's needs.	n/a						
221		1926.103 - Respiratory protection.	Note: The requirements applicable to construction work under this section are identical to those set forth at 29 CFR 1910.134 of this chapter							
222		1926.104 - Safety belts, lifelines, and lanyards.	<b>1926.104(a)</b> Lifelines, safety belts, and lanyards shall be used only for employee safeguarding. Any lifeline, safety belt, or lanyard actually subjected to in-service loading, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for employee safeguarding. <b>1926.104(b)</b> Lifelines shall be secured above the point of operation to an anchorage or structural member capable of supporting a minimum dead weight of 5,400 pounds <b>1926.104(c)</b> Lifelines used on rock-scaling operations, or in areas where the lifeline may be subjected to cutting or abrasion, shall be a minimum of 7/8-inch wire core manila rope. For all other lifeline applications, a minimum of 3/4-inch manila or equivalent, with a minimum breaking strength of 5,400 pounds, shall be used <b>1926.104(d)</b> Safety belt lanyard shall be a minimum of 1/2-inch nylon, or equivalent, with a maximum length to provide for a fall of no greater than 6 feet. The rope shall have a nominal breaking strength of 5,400 pounds <b>1926.104(e)</b> All safety belt and lanyard hardware shall be drop forged or pressed steel, cadmium plated in accordance with type 1, Class B plating specified in Federal Specification QQ-P-416. Surface shall be smooth and free of sharp edges <b>1926.104(f)</b> All safety belt and lanyard hardware, except rivets, shall be capable of withstanding a tensile loading of 4,000 pounds without cracking, breaking, or taking a permanent deformation.	n/a						
223		1926.105 - Safety nets.	<b>1926.105(a)</b> Safety nets shall be provided when workplaces are more than 25 feet above the ground or water surface, or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines, or safety belts is impractical <b>1926.105(b)</b> Where safety net protection is required by this part, operations shall not be undertaken until the net is in place and has been tested <b>1926.105(c)</b> <b>1926.105(c)(1)</b> Nets shall extend 8 feet beyond the edge of the work surface where employees are exposed and shall be installed as close under the work surface as practical but in no case more than 25 feet below such work surface. Nets shall be hung with sufficient clearance to prevent user's contact with the surfaces or structures below. Such clearances shall be determined by impact load testing <b>1926.105(c)(2)</b> It is intended that only one level of nets be required for bridge construction. <b>1926.105(d)</b> The mesh size of nets shall not exceed 6 inches by 6 inches. All new nets shall meet accepted performance standards of 17,500 foot-pounds minimum impact resistance as determined and certified by the manufacturers, and shall bear a label of proof test. Edge ropes shall provide a minimum breaking strength of 5,000 pounds <b>1926.105(e)</b> Forged steel safety hooks or shackles shall be used to fasten the net to its supports <b>1926.105(f)</b> Connections between net panels shall develop the full strength of the net.	n/a						
224		1926.106 - Working over or near water.	<b>1926.106(a)</b> Employees working over or near water, where the danger of drowning exists, shall be provided with U.S. Coast Guard-approved life jacket or buoyant work vests. <b>1926.106(b)</b> Prior to and after each use, the buoyant work vests or life preservers shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used. <b>1926.106(c)</b> Ring buoys with at least 90 feet of line shall be provided and readily available for emergency rescue operations. Distance between ring buoys shall not exceed 200 feet. <b>1926.106(d)</b> At least one lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water.	Partial	Policy states procedures for working around water including use of a Coast Guard approved life vest, however policy is too brief/high-level and is silent on many individual provisions of the regulation including specific device inspections requirements.	X				
225	1910 Subpart J - General Environmental Controls			n/a						

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
226		1910.141 - Sanitation.	<p><b>1910.141(a)(3)</b> Housekeeping. <b>1910.141(a)(3)(i)</b> All places of employment shall be kept clean to the extent that the nature of the work allows. <b>1910.141(a)(3)(ii)</b> The floor of every workroom shall be maintained, so far as practicable, in a dry condition. Where wet processes are used, drainage shall be maintained and false floors, platforms, mats, or other dry standing places shall be provided, where practicable, or appropriate waterproof footwear shall be provided. <b>1910.141(a)(3)(iii)</b> To facilitate cleaning, every floor, working place, and passageway shall be kept free from protruding nails, splinters, loose boards, and unnecessary holes and openings. <b>1910.141(a)(4)</b> Waste disposal. <b>1910.141(a)(4)(i)</b> Any receptacle used for putrescible solid or liquid waste or refuse shall be so constructed that it does not leak and may be thoroughly cleaned and maintained in a sanitary condition. Such a receptacle shall be equipped with a solid tight-fitting cover, unless it can be maintained in a sanitary condition without a cover. This requirement does not prohibit the use of receptacles which are designed to permit the maintenance of a sanitary condition without regard to the aforementioned requirements. <b>1910.141(a)(4)(ii)</b> All sweepings, solid or liquid wastes, refuse, and garbage shall be removed in such a manner as to avoid creating a menace to health and as often as necessary or appropriate to maintain the place of employment in a sanitary condition. <b>1910.141(a)(5)</b> Vermin control. Every enclosed workplace shall be so constructed, equipped, and maintained, so far as reasonably practicable, as to prevent the entrance or harborage of rodents, insects, and other vermin. A continuing and effective extermination program shall be instituted where their presence is detected. <b>1910.141(b)</b> Water supply. <b>1910.141(b)(1)</b> Potable water. <b>1910.141(b)(1)(i)</b> Potable water shall be provided in all places of employment, for drinking, washing of the person, cooking, washing of foods, washing of cooking or eating utensils, washing of food preparation or processing premises, and personal service rooms. <b>1910.141(b)(1)(iii)</b> Portable drinking water dispensers shall be designed, constructed, and serviced so that sanitary conditions are maintained, shall be capable of being closed, and shall be equipped with a tap. <b>1910.141(b)(1)(v)</b> Open containers such as barrels, pails, or tanks for drinking water from which the water must be dipped or poured, whether or not they are fitted with a cover, are prohibited. <b>1910.141(b)(1)(vi)</b> A common drinking cup and other common utensils are prohibited. <b>1910.141(b)(2)</b> Nonpotable water. <b>1910.141(b)(2)(i)</b> Outlets for nonpotable water, such as water for industrial or firefighting purposes, shall be posted or otherwise marked in a manner that will indicate clearly that the water is unsafe and is not to be used for drinking, washing of the person, cooking, washing of food, washing of cooking or eating utensils, washing of food preparation or processing premises, or personal service rooms, or for washing clothes. <b>1910.141(b)(2)(ii)</b> Construction of nonpotable water systems or systems carrying any other nonpotable substance shall be such as to prevent backflow or backsiphonage into a potable water system. <b>1910.141(b)(2)(iii)</b> Nonpotable water shall not be used for washing any portion of the person, cooking or eating utensils, or clothing. Nonpotable water may be used for cleaning work premises, other than food processing and preparation premises and personal service rooms: Provided, That this nonpotable water does not contain concentrations of chemicals, fecal coliform, or other substances which could create unsanitary conditions or be harmful to employees. <b>1910.141(c)</b> Toilet facilities. <b>1910.141(c)(1)</b> General. <b>1910.141(c)(1)(i)</b> Except as otherwise indicated in this paragraph (c)(1)(i), toilet facilities, in toilet rooms separate for each sex, shall be provided in all places of employment in accordance with table J-1 of this section. The number of facilities to be provided for each sex shall be based on the number of employees of that sex for whom the facilities are furnished. Where toilet rooms will be occupied by no more than one person at a time, can be locked from the inside, and contain at least one water closet, separate toilet rooms for each sex need not be provided. Where such single-occupancy rooms have more than one toilet facility, only one such facility in each toilet room shall be counted for the purpose of table J-1. <b>1910.141(c)(1)(ii)</b> The requirements of paragraph (c)(1)(i) of this section do not apply to mobile crews or to normally unattended work locations so long as employees working at these locations have transportation immediately available to nearby toilet facilities which meet the other requirements of this subparagraph. <b>1910.141(c)(1)(iii)</b> The sewage disposal method shall not endanger the health of employees. <b>1910.141(c)(2)</b> Construction of toilet rooms. <b>1910.141(c)(2)(i)</b> Each water closet shall occupy a separate compartment with a door and walls or partitions between fixtures sufficiently high to assure privacy. <b>1910.141(d)</b> Washing facilities. <b>1910.141(d)(1)</b> General. Washing facilities shall be maintained in a sanitary condition. <b>1910.141(d)(2)</b> Lavatories. <b>1910.141(d)(2)(i)</b> Lavatories shall be made available in all places of employment. The requirements of this subdivision do not apply to mobile crews or to normally unattended work locations if employees working at these locations have transportation readily available to nearby washing facilities which meet the other requirements of this paragraph. <b>1910.141(d)(2)(ii)</b> Each lavatory shall be provided with hot and cold running water, or tepid running water. <b>1910.141(d)(2)(iii)</b> Hand soap or similar cleansing agents shall be provided. <b>1910.141(d)(2)(iv)</b> Individual hand towels or sections thereof, of cloth or paper, air blowers or clean individual sections of continuous cloth toweling, convenient to the lavatories, shall be provided. <b>1910.141(d)(3)</b> Showers. <b>1910.141(d)(3)(i)</b> Whenever showers are required by a particular standard, the showers shall be provided in accordance with paragraphs (d)(3)(ii) through (v) of this section. <b>1910.141(d)(3)(ii)</b> One shower shall be provided for each 10 employees of each sex, or numerical fraction thereof, who are required to shower during the same shift. <b>1910.141(d)(3)(iii)</b> Body soap or other appropriate cleansing agents convenient to the showers shall be provided as specified in paragraph (d)(2)(iii) of this section. <b>1910.141(d)(3)(iv)</b> Showers shall be provided with hot and cold water feeding a common discharge line. <b>1910.141(d)(3)(v)</b> Employees who use showers shall be provided with individual clean towels. <b>1910.141(e)</b> Change rooms. Whenever employees are required by a particular standard to wear protective clothing because of the possibility of contamination with toxic materials, change rooms equipped with storage facilities for street clothes and separate storage facilities for the protective clothing shall be provided. <b>1910.141(f)</b> Clothes drying facilities. Where working clothes are provided by the employer and become wet or are washed between shifts, provision shall be made to insure that such clothing is dry before reuse. <b>1910.141(g)</b> Consumption of food and beverages on the premises. <b>1910.141(g)(1)</b> Application. This paragraph shall apply only where employees are permitted to consume food or beverages, or both, on the premises. <b>1910.141(g)(2)</b> Eating and drinking areas. No employee shall be allowed to consume food or beverages in a toilet room nor in any area exposed to a toxic material. <b>1910.141(g)(3)</b> Waste disposal containers. Receptacles constructed of smooth, corrosion resistant, easily cleanable, or disposable materials, shall be provided and used for the disposal of waste food. The number, size, and location of such receptacles shall encourage their use and not result in overfilling. They shall be emptied not less frequently than once each working day, unless unused, and shall be maintained in a clean and sanitary condition. Receptacles shall be provided with a solid tight-fitting cover unless sanitary conditions can be maintained without use of a cover. <b>1910.141(g)(4)</b> Sanitary storage. No food or beverages shall be stored in toilet rooms or in an area exposed to a toxic material. <b>1910.141(h)</b> Food handling. All employee food service facilities and operations shall be carried out in accordance with sound hygienic principles. In all places of employment where all or part of the food service is provided, the food dispensed shall be wholesome, free from spoilage, and shall be processed, prepared, handled, and stored in such a manner as to be protected against contamination.</p>	Partial	Policy requires a clean an orderly work environment however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X					
227											
228		1926.51 - Sanitation.	<p><b>1926.51(a)(1)</b> An adequate supply of potable water shall be provided in all places of employment. <b>1926.51(a)(2)</b> Portable containers used to dispense drinking water shall be capable of being tightly closed, and equipped with a tap. Water shall not be dipped from containers. <b>1926.51(a)(3)</b> Any container used to distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purpose. <b>1926.51(a)(4)</b> The common drinking cup is prohibited. <b>1926.51(a)(5)</b> Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided. <b>1926.51(a)(6)</b> <i>Potable water</i> means water that meets the standards for drinking purposes of the State or local authority having jurisdiction, or water that meets the quality standards prescribed by the U.S. Environmental Protection Agency's National Primary Drinking Water Regulations (40 CFR part 141). <b>1926.51(b)</b> <i>Nonpotable water</i>. <b>1926.51(b)(1)</b> Outlets for nonpotable water, such as water for industrial or firefighting purposes only, shall be identified by signs meeting the requirements of Subpart G of this part, to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes. <b>1926.51(b)(2)</b> There shall be no cross-connection, open or potential, between a system furnishing potable water and a system furnishing nonpotable water. <b>1926.51(c)</b> "Toilets at construction jobsites." Table D-1 <b>1926.51(c)(2)</b> Under temporary field conditions, provisions shall be made to assure not less than one toilet facility is available. <b>1926.51(c)(3)</b> Job sites, not provided with a sanitary sewer, shall be provided with one of the following toilet facilities unless prohibited by local codes: <b>1926.51(c)(3)(i)</b> Privies (where their use will not contaminate ground or surface water); <b>1926.51(c)(3)(ii)</b> Chemical toilets; <b>1926.51(c)(3)(iii)</b> Recirculating toilets; <b>1926.51(c)(3)(iv)</b> Combustion toilets. <b>1926.51(c)(4)</b> The requirements of this paragraph (c) for sanitation facilities shall not apply to mobile crews having transportation readily available to nearby toilet facilities. <b>1926.51(d)</b> <i>Food handling</i>. <b>1926.51(d)(1)</b> All employees' food service facilities and operations shall meet the applicable laws, ordinances, and regulations of the jurisdictions in which they are located. <b>1926.51(d)(2)</b> All employee food service facilities and operations shall be carried out in accordance with sound hygienic principles. In all places of employment where all or part of the food service is provided, the food dispensed shall be wholesome, free from spoilage, and shall be processed, prepared, handled, and stored in such a manner as to be protected against contamination. <b>1926.51(e)</b> <i>Temporary sleeping quarters</i>. When temporary sleeping quarters are provided, they shall be heated, ventilated, and lighted. <b>1926.51(f)</b> <i>Washing facilities</i>. <b>1926.51(f)(1)</b> The employer shall provide adequate washing facilities for employees engaged in the application of paints, coating, herbicides, or insecticides, or in other operations where contaminants may be harmful to the employees. Such facilities shall be in near proximity to the worksite and shall be so equipped as to enable employees to remove such substances. <b>1926.51(f)(2)</b> <i>General</i>. Washing facilities shall be maintained in a sanitary condition. <b>1926.51(f)(3)</b> <i>Lavatories</i>. <b>1926.51(f)(3)(i)</b> Lavatories shall be made available in all places of employment. The requirements of this subdivision do not apply to mobile crews or to normally unattended work locations if employees working at these locations have transportation readily available to nearby washing facilities which meet the other requirements of this paragraph. <b>1926.51(f)(3)(ii)</b> Each lavatory shall be provided with hot and cold running water, or tepid running water. <b>1926.51(f)(3)(iii)</b> Hand soap or similar cleansing agents shall be provided. <b>1926.51(f)(3)(iv)</b> Individual hand towels or sections thereof, of cloth or paper, air blowers or clean individual sections of continuous cloth toweling, convenient to the lavatories, shall be provided. <b>1926.51(f)(4)</b> <i>Showers</i>. <b>1926.51(f)(4)(i)</b> Whenever showers are required by a particular standard, the showers shall be provided in accordance with paragraphs (f)(4)(ii) through (v) of this section. <b>1926.51(f)(4)(ii)</b> One shower shall be provided for each 10 employees of each sex, or numerical fraction thereof, who are required to shower during the same shift. <b>1926.51(f)(4)(iii)</b> Body soap or other appropriate cleansing agents convenient to the showers shall be provided as specified in paragraph (f)(3)(iii) of this section. <b>1926.51(f)(4)(iv)</b> Showers shall be provided with hot and cold water feeding a common discharge line. <b>1926.51(f)(4)(v)</b> Employees who use showers shall be provided with individual clean towels. <b>1926.51(g)</b> <i>Eating and drinking areas</i>. No employee shall be allowed to consume food or beverages in a toilet room nor in any area exposed to a toxic material. <b>1926.51(h)</b> <i>Vermin control</i>. Every enclosed workplace shall be so constructed, equipped, and maintained, so far as reasonably practicable, as to prevent the entrance or harborage of rodents, insects, and other vermin. A continuing and effective extermination program shall be instituted where their presence is detected. <b>1926.51(i)</b> <i>Change rooms</i>. Whenever employees are required by a particular standard to wear protective clothing because of the possibility of contamination with toxic materials, change rooms equipped with storage facilities for street clothes and separate storage facilities for the protective clothing shall be provided.</p>	Partial	Policy requires a clean an orderly work environment however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X					
229		1910.142 - Temporary labor camps.	n/a	n/a							
230		1910.143 - Nonwater carriage disposal systems. [Reserved]	n/a	n/a							
231		1910.144 - Safety color code for marking physical hazards.	Color identification - <b>1910.144(a)(1)</b> Red. Red shall be the basic color for the identification of: <b>1910.144(a)(1)(i)</b> Fire protection equipment and apparatus. [Reserved] <b>1910.144(a)(1)(ii)</b> Danger. Safety cans or other portable containers of flammable liquids having a flash point at or below 80° F, table containers of flammable liquids (open cup tester), excluding shipping containers, shall be painted red with some additional clearly visible identification either in the form of a yellow band around the can or the name of the contents conspicuously stenciled or painted on the can in yellow. Red lights shall be provided at barricades and at temporary obstructions. Danger signs shall be painted red. <b>1910.144(a)(1)(iii)</b> Stop. Emergency stop bars on hazardous machines such as rubber mills, wire blocks, flat work ironers, etc., shall be red. Stop buttons or electrical switches which letters or other markings appear, used for emergency stopping of machinery shall be red. <b>1910.144(a)(3)</b> Yellow. Yellow shall be the basic color for designating caution and for marking physical hazards such as: Striking against, stumbling, falling, tripping, and "caught in between."	No	Not covered in any policy/procedure.	X					



Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
232		1910.145 - Specifications for accident prevention signs and tags.	1910.145(a)(1) These specifications apply to the design, application, and use of signs or symbols (as included in paragraphs (c) through (e) of this section) that indicate and, insofar as possible, define specific hazards that could harm workers or the public, or both, or to property damage. These specifications are intended to cover all safety signs except those designed for streets, highways, and railroads. These specifications do not apply to plant bulletin boards or to safety posters. 1910.145(a)(2) All new signs and replacements of old signs shall be in accordance with these specifications. 1910.145(c) Classification of signs according to use - 1910.145(c)(1) Danger signs. 1910.145(c)(1)(i) here shall be no variation in the type of design of signs posted to warn of specific dangers and radiation hazards. 1910.145(c)(1)(ii) All employees shall be instructed that danger signs indicate immediate danger and that special precautions are necessary.1910.145(c)(2) Caution signs. 1910.145(c)(2)(i) Caution signs shall be used only to warn against potential hazards or to caution against unsafe practices. 1910.145(c)(2)(ii) All employees shall be instructed that caution signs indicate a possible hazard against which proper precaution should be taken. 1910.145(c)(3) Safety instruction signs. Safety instruction signs shall be used where there is a need for general instructions and suggestions relative to safety measures. 1910.145(d) Sign design - 1910.145(d)(1) Design features. All signs shall be furnished with rounded or blunt corners and shall be free from sharp edges, burrs, splinters, or other sharp projections. The ends or heads of bolts or other fastening devices shall be located in such a way that they do not constitute a hazard. 1910.145(d)(2) Danger signs . The colors red, black, and white shall be those of opaque glossy samples as specified in Table 1, "Fundamental Specification of Safety Colors for CIE Standard Source "C," " of ANSI Z53.1-1967 or in Table 1, "Specification of the Safety Colors for CIE Illuminant C and the CIE 1931, 2° Standard Observer," of ANSI Z535.1-2006(R2011), incorporated by reference in § 1910.6. 1910.145(d)(6) Safety instruction signs . The standard color of the background shall be white; and the panel, green with white letters. Any letters used against the white background shall be black. The colors shall be those of opaque glossy samples as specified in Table 1 of ANSI Z53.1-1967 or in Table 1 of ANSI Z535.1-2006(R2011), incorporated by reference in § 1910.6. 1910.145(d)(10) Slow-moving vehicle emblem. This emblem (see fig. J-7) consists of a fluorescent yellow-orange triangle with a dark red reflective border. The yellow-orange fluorescent triangle is a highly visible color for daylight exposure. The reflective border defines the shape of the fluorescent color in daylight and creates a hollow red triangle in the path of motor vehicle headlights at night. The emblem is intended as a unique identification for, and it shall be used only on, vehicles which by design move slowly (25 m.p.h. or less) on the public roads. The emblem is not a clearance marker for wide machinery nor is it intended to replace required lighting or marking of slow-moving vehicles. Neither the color film pattern and its dimensions nor the backing shall be altered to permit use of advertising or other markings. The material, location, mounting, etc., of the emblem shall be in accordance with the American Society of Agricultural Engineers Emblem for Identifying Slow-Moving Vehicles, ASAE R276, 1967, or ASAE S276.2 (ANSI B114.1-1971), which are incorporated by reference as specified in Sec. 1910.6. 1910.145(e)(4) Biological hazard signs. The biological hazard warning shall be used to signify the actual or potential presence of a biohazard and to identify equipment, containers, rooms, materials, experimental animals, or combinations thereof, which contain, or are contaminated with, viable hazardous agents. For the purpose of this subparagraph the term "biological hazard," or "biohazard," shall include only those infectious agents presenting a risk or potential risk to the well-being of man. 1910.145(f)(2) Definitions. "Biological hazard" or "BIOHAZARD" means those infectious agents presenting a risk of death, injury or illness to employees. "Major message" means that portion of a tag's inscription that is more specific than the signal word and that indicates the specific hazardous condition or the instruction to be communicated to the employee. Examples include: "High Voltage," "Close Clearance," "Do Not Start," or "Do Not Use" or a corresponding pictograph used with a written text or alone. "Pictograph" means a pictorial representation used to identify a hazardous condition or to convey a safety instruction. "Signal word" means that portion of a tag's inscription that contains the word or words that are intended to capture the employee's immediate attention. "Tag" means a device usually made of card, paper, pasteboard, plastic or other material used to identify a hazardous condition. 1910.145(f)(3) Use. Tags shall be used as a means to prevent accidental injury or illness to employees who are exposed to hazardous or potentially hazardous conditions, equipment or operations which are out of the ordinary, unexpected or not readily apparent. Tags shall be used until such time as the identified hazard is eliminated or the hazardous operation is completed. Tags need not be used where signs, guarding or other positive means of protection are being used. 1910.145(f)(4) General tag criteria. All required tags shall meet the following criteria: 1910.145(f)(4)(i) Tags shall contain a signal word and a major message. 1910.145(f)(4)(i)(A) The signal word shall be either "Danger," "Caution," or "Biological Hazard," "BIOHAZARD," or the biological hazard symbol. 1910.145(f)(4)(i)(B) The major message shall indicate the specific hazardous condition or the instruction to be communicated to the employee. 1910.145(f)(4)(ii) The signal word shall be readable at a minimum distance of five feet (1.52 m) or such greater distance as warranted by the hazard. 1910.145(f)(4)(iii) The tag's major message shall be presented in either pictographs, written text or both. 1910.145(f)(4)(iv) The signal word and the major message shall be understandable to all employees who may be exposed to the identified hazard. 1910.145(f)(4)(v) All employees shall be informed as to the meaning of the various tags used throughout the workplace and what special precautions are necessary. 1910.145(f)(4)(vi) Tags shall be affixed as close as safely possible to their respective hazards by a positive means such as string, wire, or adhesive that prevents their loss or unintentional removal. 1910.145(f)(5) Danger tags. Danger tags shall be used in major hazard situations where an immediate hazard presents a threat of death or serious injury to employees. Danger tags shall be used only in these situations. 1910.145(f)(6) Caution tags. Caution tags shall be used in minor hazard situations where a non-immediate or potential hazard or unsafe practice presents a lesser threat of employee injury. Caution tags shall be used only in these situations. 1910.145(f)(7) Warning tags. Warning tags may be used to represent a hazard level between "Caution" and "Danger," instead of the required "Caution" tag, provided that they have a signal word of "Warning," an appropriate major message, and otherwise meet the general tag criteria of paragraph (f)(4) of this section. 1910.145(f)(8) Biological hazard tags. 1910.145(f)(8)(i) Biological hazard tags shall be used to identify the actual or potential presence of a biological hazard and to identify equipment, containers, rooms, experimental animals, or combinations thereof, that contain or are contaminated with hazardous biological agents. 1910.145(f)(9) Other tags. Other tags may be used in addition to those required by this paragraph (f), or in other situations where this paragraph (f) does not require tags, provided that they do not detract from the impact or visibility of the signal word and major message of any required tag.	No	Not covered in any policy/procedure.	X					
236	1910.146 - Permit-required confined spaces		1910.146(a) Scope and application. This section contains requirements for practices and procedures to protect employees in general industry from the hazards of entry into permit-required confined spaces. This section does not apply to agriculture, to construction, or to shipyard employment (Parts 1928, 1926, and 1915 of this chapter, respectively). "Permit-required confined space (permit space)" means a confined space that has one or more of the following characteristics: (1) Contains or has a potential to contain a hazardous atmosphere; (2) Contains a material that has the potential for engulfing an entrant; (3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or (4) Contains any other recognized serious safety or health hazard. "Permit-required confined space program (permit space program)" means the employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.	Partial	Policy states guidelines for work in confined spaces, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X			X		
237		1910.146 App A - Permit-required Confined Space Decision Flow Chart	Appendix A to §1910.146 -- Permit-Required Confined Space Decision Flow Chart	No	Policy states guidelines for work in confined spaces, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X					
238		1910.146 App B - Procedures for Atmospheric Testing.	Atmospheric testing is required for two distinct purposes: evaluation of the hazards of the permit space and verification that acceptable entry conditions for entry into that space exist. (1) Evaluation testing. The atmosphere of a confined space should be analyzed using equipment of sufficient sensitivity and specificity to identify and evaluate any hazardous atmospheres that may exist or arise, so that appropriate permit entry procedures can be developed and acceptable entry conditions stipulated for that space. Evaluation and interpretation of these data, and development of the entry procedure, should be done by, or reviewed by, a technically qualified professional (e.g., OSHA consultation service, or certified industrial hygienist, registered safety engineer, certified safety professional, certified marine chemist, etc.) based on evaluation of all serious hazards. (2) Verification testing. The atmosphere of a permit space which may contain a hazardous atmosphere should be tested for residues of all contaminants identified by evaluation testing using permit specified equipment to determine that residual concentrations at the time of testing and entry are within the range of acceptable entry conditions. Results of testing (i.e., actual concentration, etc.) should be recorded on the permit in the space provided adjacent to the stipulated acceptable entry condition. (3) Duration of testing. Measurement of values for each atmospheric parameter should be made for at least the minimum response time of the test instrument specified by the manufacturer. (4) Testing stratified atmospheres. When monitoring for entries involving a descent into atmospheres that may be stratified, the atmospheric envelope should be tested a distance of approximately 4 feet (1.22 m) in the direction of travel and to each side. If a sampling probe is used, the entrant's rate of progress should be slowed to accommodate the sampling speed and detector response. (5) Order of testing. A test for oxygen is performed first because most combustible gas meters are oxygen dependent and will not provide reliable readings in an oxygen deficient atmosphere. Combustible gases are tested for next because the threat of fire or explosion is both more immediate and more life threatening, in most cases, than exposure to toxic gases and vapors. If tests for toxic gases and vapors are necessary, they are performed last.	Partial	Policy states guidelines for work in confined spaces, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X					
239		1910.146 App C - Examples of Permit-required Confined Space Programs	Permits. Confined Space Entry Permit. All spaces shall be considered permit-required confined spaces until the pre-entry procedures demonstrate otherwise. Any employee required or permitted to pre-check or enter a permit-required confined space shall have successfully completed, as a minimum, the training as required by the following sections of these procedures. A written copy of operating and rescue procedures as required by these procedures shall be at the work site for the duration of the job. The Confined Space Entry Permit must be completed before approval can be given to enter a permit-required confined space. This permit verifies completion of items listed below. This permit shall be kept at the job site for the duration of the job. If circumstances cause an interruption in the work or a change in the alarm conditions for which entry was approved, a new Confined Space Entry Permit must be completed.	No	Policy states guidelines for work in confined spaces, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X					
240		1910.146 App D - Confined Space Pre-Entry Check List	Appendix D to §1910.146 -- Sample Permits	No	Policy states guidelines for work in confined spaces, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X					
241		1910.146 App E - Sewer System Entry.	n/a	n/a							
242		1910.146 App F - Non-Mandatory Appendix F -- Rescue Team or Rescue Service Evaluation Criteria	(1) This appendix provides guidance to employers in choosing an appropriate rescue service. It contains criteria that may be used to evaluate the capabilities both of prospective and current rescue teams. Before a rescue team can be trained or chosen, however, a satisfactory permit program, including an analysis of all permit-required confined spaces to identify all potential hazards in those spaces, must be completed. OSHA believes that compliance with all the provisions of §1910.146 will enable employers to conduct permit space operations without recourse to rescue services in nearly all cases. However, experience indicates that circumstances will arise where entrants will need to be rescued from permit spaces. It is therefore important for employers to select rescue services or teams, either on-site or off-site, that are equipped and capable of minimizing harm to both entrants and rescuers if the need arises. (2) For all rescue teams or services, the employer's evaluation should consist of two components: an initial evaluation, in which employers decide whether a potential rescue service or team is adequately trained and equipped to perform permit space rescues of the kind needed at the facility and whether such rescuers can respond in a timely manner, and a performance evaluation, in which employers measure the performance of the team or service during an actual or practice rescue. For example, based on the initial evaluation, an employer may determine that maintaining an on-site rescue team will be more expensive than obtaining the services of an off-site team, without being significantly more effective, and decide to hire a rescue service. During a performance evaluation, the employer could decide, after observing the rescue service perform a practice rescue, that the service's training or preparedness was not adequate to effect a timely or effective rescue at his or her facility and decide to select another rescue service, or to form an internal rescue team	No	Policy states guidelines for work in confined spaces, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X					
243	1926 Subpart AA - Confined Spaces in Construction			n/a							
244		1926.1200 - [Reserved]	n/a	n/a							

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
245		1926.1201 - Scope.	<b>1926.1201(a)</b> This standard sets forth requirements for practices and procedures to protect employees engaged in construction activities at a worksite with one or more confined spaces, subject to the exceptions in paragraph (b) of this section. <b>Note to paragraph (a).</b> Examples of locations where confined spaces may occur include, but are not limited to, the following: Bins; boilers; pits (such as elevator, escalator, pump, valve or other equipment); manholes (such as sewer, storm drain, electrical, communication, or other utility); tanks (such as fuel, chemical, water, or other liquid, solid or gas); incinerators; scrubbers; concrete pier columns; sewers; transformer vaults; heating, ventilation, and air-conditioning (HVAC) ducts; storm drains; water mains; precast concrete and other pre-formed manhole units; drilled shafts; enclosed beams; vessels; digesters; lift stations; cesspools; silos; air receivers; sludge gates; air preheaters; step up transformers; turbines; chillers; bag houses; and/or mixers/reactors. <b>1926.1201(b) Exceptions.</b> This standard does not apply to: <b>1926.1201(b)(1)</b> Construction work regulated by subpart P of this part (Excavations). <b>1926.1201(b)(2)</b> Construction work regulated by subpart S of this part (Underground Construction, Caissons, Cofferdams and Compressed Air). <b>1926.1201(b)(3)</b> Construction work regulated by subpart Y of this part (Diving). <b>1926.1201(c)</b> Where this standard applies and there is a provision that addresses a confined space hazard in another applicable OSHA standard, the employer must comply with both that requirement and the applicable provisions of this standard.	n/a						
246		1926.1203 - General requirements.	<b>1926.1203(a)</b> Before it begins work at a worksite, each employer must ensure that a competent person identifies all confined spaces in which one or more of the employees it directs may work, and identifies each space that is a permit space, through consideration and evaluation of the elements of that space, including testing as necessary. <b>1926.1203(b)</b> If the workplace contains one or more permit spaces, the employer who identifies, or who receives notice of, a permit space must: <b>1926.1203(b)(1)</b> Inform exposed employees by posting danger signs or by any other equally effective means, of the existence and location of, and the danger posed by, each permit space; and <b>Note to paragraph (b)(1).</b> A sign reading "DANGER-PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" or using other similar language would satisfy the requirement for a sign. <b>1926.1203(d)</b> If any employer decides that employees it directs will enter a permit space, that employer must have a written permit space program that complies with § 1926.1204 implemented at the construction site. The written program must be made available prior to and during entry operations for inspection by employees and their authorized representatives. <b>1926.1203(e)</b> An employer may use the alternate procedures specified in paragraph (e)(2) of this section for entering a permit space only under the conditions set forth in paragraph (e)(1) of this section. <b>1926.1203(e)(1)</b> An employer whose employees enter a permit space need not comply with §§ 1926.1204 through 1206 and §§ 1926.1208 through 1211, provided that all of the following conditions are met: <b>1926.1203(e)(1)(i)</b> The employer can demonstrate that all physical hazards in the space are eliminated or isolated through engineering controls so that the only hazard posed by the permit space is an actual or potential hazardous atmosphere. <b>1926.1203(e)(1)(ii)</b> The employer can demonstrate that continuous forced air ventilation alone is sufficient to maintain that permit space safe for entry, and that in the event the ventilation system stops working, entrants can exit the space safely. <b>1926.1203(e)(1)(iii)</b> The employer develops monitoring and inspection data that supports the demonstrations required by paragraphs (e)(1)(i) and (ii) of this section. <b>1926.1203(e)(1)(iv)</b> If an initial entry of the permit space is necessary to obtain the data required by paragraph (e)(1)(iii) of this section, the entry is performed in compliance with §§ 1926.1204 through 1926.1211. <b>1926.1203(e)(1)(v)</b> The determinations and supporting data required by paragraphs (e)(1)(i), (ii), and (iii) of this section are documented by the employer and are made available to each employee who enters the permit space under the terms of paragraph (e) of this section or to that employee's authorized representative; <b>1926.1203(e)(2)(i)</b> Before an employee enters the space, the internal atmosphere must be tested, with a calibrated direct-reading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order. Any employee who enters the space, or that employee's authorized representative, must be provided an opportunity to observe the pre-entry testing required by this paragraph. <b>1926.1203(e)(2)(iv)</b> No hazardous atmosphere is permitted within the space whenever any employee is inside the space. <b>1926.1203(e)(2)(v)</b> Continuous forced air ventilation must be used, as follows: <b>1926.1203(e)(2)(v)(A)</b> An employee must not enter the space until the forced air ventilation has eliminated any hazardous atmosphere. <b>1926.1203(e)(2)(v)(B)</b> The forced air ventilation must be so directed as to ventilate the immediate areas where an employee is or will be present within the space and must continue until all employees have left the space; <b>1926.1203(e)(2)(v)(C)</b> The air supply for the forced air ventilation must be from a clean source and must not increase the hazards in the space; <b>1926.1203(e)(2)(vi)</b> The atmosphere within the space must be continuously monitored unless the entry employer can demonstrate that equipment for continuous monitoring is not commercially available or periodic monitoring is sufficient. If continuous monitoring is used, the employer must ensure that the monitoring equipment has an alarm that will notify all entrants if a specified atmospheric threshold is achieved, or that an employee will check the monitor with sufficient frequency to ensure that entrants have adequate time to escape. If continuous monitoring is not used, periodic monitoring is required. All monitoring must ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere. Any employee who enters the space, or that employee's authorized representative, must be provided with an opportunity to observe the testing required by this paragraph (e)(2)(vi).	n/a						
247		1926.1204 - Permit-required confined space program.	<b>1926.1204(a)</b> Implement the measures necessary to prevent unauthorized entry. <b>1926.1204(b)</b> Identify and evaluate the hazards of permit spaces before employees enter them. <b>1926.1204(c)</b> Develop and implement the means, procedures, and practices necessary for safe permit space entry operations, including, but not limited to, the following: <b>1926.1204(c)(1)</b> Specifying acceptable entry conditions; <b>1926.1204(c)(2)</b> Providing each authorized entrant or that employee's authorized representative with the opportunity to observe any monitoring or testing of permit spaces; <b>1926.1204(c)(3)</b> Isolating the permit space and physical hazard(s) within the space; <b>1926.1204(c)(4)</b> Purging, inerting, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards;	n/a						
248		1926.1205 - Permitting process.	<b>1926.1205(a)</b> Before entry is authorized, each entry employer must document the completion of measures required by § 1926.1204(c) by preparing an entry permit. <b>1926.1205(b)</b> Before entry begins, the entry supervisor identified on the permit must sign the entry permit to authorize entry. <b>1926.1205(c)</b> The completed permit must be made available at the time of entry to all authorized entrants or their authorized representatives, by posting it at the entry portal or by any other equally effective means, so that the entrants can confirm that pre-entry preparations have been completed. <b>1926.1205(d)</b> The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit in accordance with § 1926.1206. <b>1926.1205(e)</b> The entry supervisor must terminate entry and take the following action when any of the following apply: <b>1926.1205(e)(1)</b> Cancel the entry permit when the entry operations covered by the entry permit have been completed; <b>1926.1205(e)(2)</b> Suspend or cancel the entry permit and fully reassess the space before allowing reentry when a condition that is not allowed under the entry permit arises in or near the permit space and that condition is temporary in nature and does not change the configuration of the space or create any new hazards within it; or <b>1926.1205(e)(3)</b> Cancel the entry permit when a condition that is not allowed under the entry permit arises in or near the permit space and that condition is not covered by paragraph (e)(2) of this section. <b>1926.1205(f)</b> The entry employer must retain each canceled entry permit for at least 1 year to facilitate the review of the permit-required confined space program required by § 1926.1204(n). Any problems encountered during an entry operation must be noted on the pertinent permit so that appropriate revisions to the permit space program can be made.	n/a						
249		1926.1206 - Entry permit.	The entry permit that documents compliance with this section and authorizes entry to a permit space must identify: <b>1926.1206(a)</b> The permit space to be entered; <b>1926.1206(b)</b> The purpose of the entry; <b>1926.1206(c)</b> The date and the authorized duration of the entry permit; <b>1926.1206(d)</b> The authorized entrants within the permit space, by name or by such other means (for example, through the use of rosters or tracking systems) as will enable the attendant to determine quickly and accurately, for the duration of the permit, which authorized entrants are inside the permit space; <b>Note to paragraph (d).</b> This requirement may be met by inserting a reference on the entry permit as to the means used, such as a roster or tracking system, to keep track of the authorized entrants within the permit space; <b>1926.1206(e)</b> Means of detecting an increase in atmospheric hazard levels in the event the ventilation system stops working; <b>1926.1206(f)</b> Each person, by name, currently serving as an attendant; <b>1926.1206(g)</b> The individual, by name, currently serving as entry supervisor, and the signature or initials of each entry supervisor who authorizes entry; <b>1926.1206(h)</b> The hazards of the permit space to be entered; <b>1926.1206(i)</b> The measures used to isolate the permit space and to eliminate or control permit space hazards before entry; <b>Note to paragraph (i).</b> Those measures can include, but are not limited to, the lockout or tagging of equipment and procedures for purging, inerting, ventilating, and flushing permit spaces; <b>1926.1206(j)</b> The acceptable entry conditions; <b>1926.1206(k)</b> The results of tests and monitoring performed under § 1926.1204(e), accompanied by the names or initials of the testers and by an indication of when the tests were performed; <b>1926.1206(l)</b> The rescue and emergency services that can be summoned and the means (such as the equipment to use and the numbers to call) for summoning those services; <b>1926.1206(m)</b> The communication procedures used by authorized entrants and attendants to maintain contact during the entry; <b>1926.1206(n)</b> Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment, to be provided for compliance with this standard; <b>1926.1206(o)</b> Any other information necessary, given the circumstances of the particular confined space, to ensure employee safety; and <b>1926.1206(o)</b> Any additional permits, such as for hot work, that have been issued to authorize work in the permit space.	n/a						
250		1926.1207 - Training.		n/a						
251		1926.1208 - Duties of authorized entrants.	The entry employer must ensure that all authorized entrants: <b>1926.1208(a)</b> Are familiar with and understand the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure; <b>1926.1208(b)</b> Properly use equipment as required by §1926.1204(d); <b>1926.1208(c)</b> Communicate with the attendant as necessary to enable the attendant to assess entrant status and to enable the attendant to alert entrants of the need to evacuate the space as required by §1926.1209( <b>1926.1208(d)</b> Alert the attendant whenever: <b>1926.1208(d)(1)</b> There is any warning sign or symptom of exposure to a dangerous situation; or <b>1926.1208(d)(2)</b> The entrant detects a prohibited condition; and <b>1926.1208(e)</b> Exit from the permit space as quickly as possible whenever: <b>1926.1208(e)(1)</b> An order to evacuate is given by the attendant or the entry supervisor; <b>1926.1208(e)(2)</b> There is any warning sign or symptom of exposure to a dangerous situation; <b>1926.1208(e)(3)</b> The entrant detects a prohibited condition; or <b>1926.1208(e)(4)</b> An evacuation alarm is activated.	n/a						

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
252		1926.1209 - Duties of attendants.	The entry employer must ensure that each attendant: <b>1926.1209(a)</b> Is familiar with and understands the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure; <b>1926.1209(b)</b> Is aware of possible behavioral effects of hazard exposure in authorized entrants; <b>1926.1209(c)</b> Continuously maintains an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants under § 1926.1206(d) accurately identifies who is in the permit space; <b>1926.1209(d)</b> Remains outside the permit space during entry operations until relieved by another attendant; <b>Note to paragraph (d).</b> Once an attendant has been relieved by another attendant, the relieved attendant may enter a permit space to attempt a rescue when the employer's permit space program allows attendant entry for rescue and the attendant has been trained and equipped for rescue operations as required by § 1926.1211(a); <b>1926.1209(e)</b> Communicates with authorized entrants as necessary to assess entrant status and to alert entrants of the need to evacuate the space under § 1926.1208(e); <b>1926.1209(f)</b> Assesses activities and conditions inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions: <b>1926.1209(f)(1)</b> If there is a prohibited condition; <b>1926.1209(f)(2)</b> If the behavioral effects of hazard exposure are apparent in an authorized entrant; <b>1926.1209(f)(3)</b> If there is a situation outside the space that could endanger the authorized entrants; or <b>1926.1209(f)(4)</b> If the attendant cannot effectively and safely perform all the duties required under this section; <b>1926.1209(g)</b> Summons rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards; <b>1926.1209(h)</b> Takes the following actions when unauthorized persons approach or enter a permit space while entry is underway: <b>1926.1209(h)(1)</b> Warns the unauthorized persons that they must stay away from the permit space; <b>1926.1209(h)(2)</b> Advises the unauthorized persons that they must exit immediately if they have entered the permit space; and <b>1926.1209(h)(3)</b> Informs the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space; <b>1926.1209(i)</b> Performs non-entry rescues as specified by the employer's rescue procedure; and <b>1926.1209(j)</b> Performs no duties that might interfere with the attendant's primary duty to assess and protect the authorized entrants.	n/a							
253		1926.1210 - Duties of entry supervisors.	The entry employer must ensure that each entry supervisor: <b>1926.1210(a)</b> Is familiar with and understands the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure; <b>1926.1210(b)</b> Verifies, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to be made; <b>1926.1210(c)</b> Terminates the entry and cancels or suspends the permit as required by § 1926.1205(c); <b>1926.1210(d)</b> Verifies that rescue services are available and that the means for summoning them are operable, and that the employer will be notified as soon as the services become unavailable; <b>1926.1210(e)</b> Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations; and <b>1926.1210(f)</b> Determines, whenever responsibility for a permit space entry operation is transferred, and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.	n/a							
254		1926.1211 - Rescue and emergency services.	<b>1926.1211(a)</b> An employer who designates rescue and emergency services, pursuant to § 1926.1204(i), must: <b>1926.1211(a)(1)</b> Evaluate a prospective rescuer's ability to respond to a rescue summons in a timely manner, considering the hazard(s) identified in the permit space; <b>Note to paragraph (a)(1).</b> What will be considered timely will vary according to the specific hazards involved in each entry. For example, § 1926.103 (Respiratory protection) requires that employers provide a standby person or persons capable of immediate action to rescue employee(s) wearing respiratory protection while in work areas defined as IDLH atmospheres. <b>1926.1211(a)(2)</b> Evaluate a prospective rescue service's ability, in terms of proficiency with rescue-related tasks and equipment, to function appropriately while rescuing entrants from the particular permit space or types of permit spaces identified; <b>1926.1211(a)(3)</b> Select a rescue team or service from those evaluated that: <b>1926.1211(a)(3)(i)</b> Has the capability to reach the victim(s) within a time frame that is appropriate for the permit space hazard(s) identified; <b>1926.1211(a)(3)(ii)</b> Is equipped for, and proficient in, performing the needed rescue services; <b>1926.1211(a)(3)(iii)</b> Agrees to notify the employer immediately in the event that the rescue service becomes unavailable; <b>1926.1211(a)(4)</b> Inform each rescue team or service of the hazards they may confront when called on to perform rescue at the site; and <b>1926.1211(a)(5)</b> Provide the rescue team or service selected with access to all permit spaces from which rescue may be necessary so that the rescue team or service can develop appropriate rescue plans and practice rescue operations; <b>1926.1211(b)</b> An employer whose employees have been designated to provide permit space rescue and/or emergency services must take the following measures and provide all equipment and training at no cost to those employees: <b>1926.1211(b)(1)</b> Provide each affected employee with the personal protective equipment (PPE) needed to conduct permit space rescues safely and train each affected employee so the employee is proficient in the use of that PPE; <b>1926.1211(c)</b> Non-entry rescue is required unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant. The employer must designate an entry rescue service whenever non-entry rescue is not selected. Whenever non-entry rescue is selected, the entry employer must ensure that retrieval systems or methods are used whenever an authorized entrant enters a permit space, and must confirm, prior to entry, that emergency assistance would be available in the event that non-entry rescue fails. Retrieval systems must meet the following requirements: <b>1926.1211(c)(1)</b> Each authorized entrant must use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, above the entrant's head, or at another point which the employer can establish presents a profile small enough for the successful removal of the entrant. Wristlets or anklets may be used in lieu of the chest or full body harness if the employer can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets or anklets is the safest and most effective alternative; <b>1926.1211(c)(2)</b> The other end of the retrieval line must be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device must be available to retrieve personnel from vertical type permit spaces more than 5 feet (1.52 meters) deep; <b>1926.1211(c)(3)</b> Equipment that is unsuitable for retrieval must not be used, including, but not limited to, retrieval lines that have a reasonable probability of becoming entangled with the retrieval lines used by other authorized entrants, or retrieval lines that will not work due to the internal configuration of the permit space; <b>1926.1211(d)</b> If an injured entrant is exposed to a substance for which a Safety Data Sheet (SDS) or other similar written information is required to be kept at the worksite, that SDS or written information must be made available to the medical facility treating the exposed entrant.	n/a							
255		1926.1212 - Employee participation.	<b>1926.1212(a)</b> Employers must consult with affected employees and their authorized representatives on the development and implementation of all aspects of the permit space program required by § 1926.1204; <b>1926.1212(b)</b> Employers must make available to each affected employee and his/her authorized representatives all information required to be developed by this standard	n/a							
256		1926.1213 - Provision of documents to Secretary.	For each document required to be retained in this standard, the retaining employer must make the document available on request to the Secretary of Labor or the Secretary's designee.	n/a							
257	1910.147 - The control of hazardous energy (lockout/tagout).		<b>1910.147(a)(1)(i)</b> This standard covers the servicing and maintenance of machines and equipment in which the unexpected energization or start up of the machines or equipment, or release of stored energy, could harm employees. This standard establishes minimum performance requirements for the control of such hazardous energy. <b>1910.147(a)(2)(i)</b> This standard applies to the control of energy during servicing and/or maintenance of machines and equipment. <b>1910.147(a)(2)(ii)</b> Normal production operations are not covered by this standard (See Subpart O of this Part). Servicing and/or maintenance which takes place during normal production operations is covered by this standard only if: <b>1910.147(a)(2)(ii)(A)</b> An employee is required to remove or bypass a guard or other safety device; or <b>1910.147(a)(2)(ii)(B)</b> An employee is required to place any part of his or her body into an area on a machine or piece of equipment where work is actually performed upon the material being processed (point of operation) or where an associated danger zone exists during a machine operating cycle. Note: Exception to paragraph (a)(2)(ii): Minor tool changes and adjustments, and other minor servicing activities, which take place during normal production operations, are not covered by this standard if they are routine, repetitive, and integral to the use of the equipment for production, provided that the work is performed using alternative measures which provide effective protection (See Subpart O of this Part). <b>1910.147(a)(3)(i)</b> This section requires employers to establish a program and utilize procedures for affixing appropriate lockout devices or tagout devices to energy isolating devices, and to otherwise disable machines or equipment to prevent unexpected energization, start up or release of stored energy in order to prevent injury to employees. <b>1910.147(a)(3)(ii)</b> When other standards in this part require the use of lockout or tagout, they shall be used and supplemented by the procedural and training requirements of this section. <b>1910.147(c)(2)</b> Lockout/tagout. <b>1910.147(c)(2)(i)</b> If an energy isolating device is not capable of being locked out, the employer's energy control program under paragraph (c)(1) of this section shall utilize a tagout system. <b>1910.147(c)(2)(ii)</b> If an energy isolating device is capable of being locked out, the employer shall conduct a periodic inspection of the energy control procedure at least annually to ensure that the procedure and the requirements of this standard are being followed. <b>1910.147(c)(6)(i)(A)</b> The periodic inspection shall be performed by an authorized employee other than the one(s) utilizing the energy control procedure being inspected. <b>1910.147(c)(6)(i)(B)</b> The periodic inspection shall be conducted to correct any deviations or inadequacies identified. <b>1910.147(c)(6)(i)(C)</b> Where lockout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized employee, of that employee's responsibilities under the energy control procedure being inspected. <b>1910.147(c)(6)(i)(D)</b> Where tagout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized and affected employee, of that employee's responsibilities under the energy control procedure being inspected, and the elements set forth in paragraph (c)(7)(ii) of this section. <b>1910.147(c)(6)(ii)</b> The employer shall certify that the periodic inspections have been performed. The certification shall identify the machine or equipment on which the energy control procedure was being utilized, the date of the inspection, the employees included in the inspection, and the person performing the inspection.	Partial	Policy states guidelines for work around hazardous energy and Lock out tag out procedures, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	x					
258			<b>1910.147(a)(3)(ii)</b> When other standards in this part require the use of lockout or tagout, they shall be used and supplemented by the procedural and training requirements of this section. <b>1910.147(c)(2)</b> Lockout/tagout. <b>1910.147(c)(2)(i)</b> If an energy isolating device is not capable of being locked out, the employer's energy control program under paragraph (c)(1) of this section shall utilize a tagout system. <b>1910.147(c)(2)(ii)</b> If an energy isolating device is capable of being locked out, the employer's energy control program under paragraph (c)(1) of this section shall utilize lockout, unless the employer can demonstrate that the utilization of a tagout system will provide full employee protection as set forth in paragraph (c)(3) of this section. <b>1910.147(c)(6)</b> Periodic inspection. <b>1910.147(c)(6)(i)</b> The employer shall conduct a periodic inspection of the energy control procedure at least annually to ensure that the procedure and the requirements of this standard are being followed. <b>1910.147(c)(6)(i)(A)</b> The periodic inspection shall be performed by an authorized employee other than the one(s) utilizing the energy control procedure being inspected. <b>1910.147(c)(6)(i)(B)</b> The periodic inspection shall be conducted to correct any deviations or inadequacies identified. <b>1910.147(c)(6)(i)(C)</b> Where lockout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized employee, of that employee's responsibilities under the energy control procedure being inspected. <b>1910.147(c)(6)(i)(D)</b> Where tagout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized and affected employee, of that employee's responsibilities under the energy control procedure being inspected, and the elements set forth in paragraph (c)(7)(ii) of this section. <b>1910.147(c)(6)(ii)</b> The employer shall certify that the periodic inspections have been performed. The certification shall identify the machine or equipment on which the energy control procedure was being utilized, the date of the inspection, the employees included in the inspection, and the person performing the inspection.	Partial	Policy states guidelines for work around hazardous energy and Lock out tag out procedures, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	x					

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1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
259		1910.147 App A - Typical minimal lockout procedures	General The following simple lockout procedure is provided to assist employers in developing their procedures so they meet the requirements of this standard. When the energy isolating devices are not lockable, tagout may be used, provided the employer complies with the provisions of the standard which require additional training and more rigorous periodic inspections. When tagout is used and the energy isolating devices are lockable, the employer must provide full employee protection (see paragraph (c)(3)) and additional training and more rigorous periodic inspections are required. For more complex systems, more comprehensive procedures may need to be developed, documented, and utilized. Purpose This procedure establishes the minimum requirements for the lockout of energy isolating devices whenever maintenance or servicing is done on machines or equipment. It shall be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources and locked out before employees perform any servicing or maintenance where the unexpected energization or start-up of the machine or equipment or release of stored energy could cause injury. Compliance With This Program All employees are required to comply with the restrictions and limitations imposed upon them during the use of lockout. The authorized employees are required to perform the lockout in accordance with this procedure. All employees, upon observing a machine or piece of equipment which is locked out to perform servicing or maintenance shall not attempt to start, energize, or use that machine or equipment. Sequence of Lockout (1) Notify all affected employees that servicing or maintenance is required on a machine or equipment and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance. (2) The authorized employee shall refer to the company procedure to identify the type and magnitude of the energy that the machine or equipment utilizes, shall understand the hazards of the energy, and shall know the methods to control the energy. (3) If the machine or equipment is operating, shut it down by the normal stopping procedure (depress the stop button, open switch, close valve, etc.). (4) De-activate the energy isolating device(s) so that the machine or equipment is isolated from the energy source(s). (5) Lock out the energy isolating device(s) with assigned individual lock(s). (6) Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc. (7) Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate. (8) The machine or equipment is now locked out. Restoring Equipment to Service . When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, the following steps shall be taken. (1) Check the machine or equipment and the immediate area around the machine to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact. (2) Check the work area to ensure that all employees have been safely positioned or removed from the area. (3) Verify that the controls are in neutral. (4) Remove the lockout devices and reenergize the machine or equipment. Note: The removal of some forms of blocking may require reenergization of the machine before safe removal.	Partial	Policy states guidelines for work around hazardous energy and Lock out tag out procedures, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X					
260	1910 Subpart K - Medical and First Aid										
261		1910.151 - Medical services and first aid.	1910.151(a) The employer shall ensure the ready availability of medical personnel for advice and consultation on matters of plant health. 1910.151(b) In the absence of an infirmary, clinic, or hospital in near proximity to the workplace which is used for the treatment of all injured employees, a person or persons shall be adequately trained to render first aid. Adequate first aid supplies shall be readily available. 1910.151(c) Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.	Partial	Policy states some guidelines for first aid, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.	X					
262		1910.151 App A - Appendix A to § 1910.151 -- First aid kits (Non-Mandatory)	First aid supplies are required to be readily available under paragraph § 1910.151(b). An example of the minimal contents of a generic first aid kit is described in American National Standard (ANSI) Z308.1-1998 "Minimum Requirements for Workplace First-aid Kits." The contents of the kit listed in the ANSI standard should be adequate for small worksites. When larger operations or multiple operations are being conducted at the same location, employers should determine the need for additional first aid kits at the worksite, additional types of first aid equipment and supplies and additional quantities and types of supplies and equipment in the first aid kits. In a similar fashion, employers who have unique or changing first-aid needs in their workplace may need to enhance their first-aid kits. The employer can use the OSHA 300 log, OSHA 301 log, or other reports to identify these unique problems. Consultation from the local fire/rescue department, appropriate medical professional, or local emergency room may be helpful to employers in these circumstances. By assessing the specific needs of their workplace, employers can ensure that reasonably anticipated supplies are available. Employers should assess the specific needs of their worksite periodically and augment the first aid kit appropriately. If it is reasonably anticipated that employees will be exposed to blood or other potentially infectious materials while using first aid supplies, employers are required to provide appropriate personal protective equipment (PPE) in compliance with the provisions of the Occupational Exposure to Blood borne Pathogens standard, § 1910.1030(d)(3) (56 FR 64175). This standard lists appropriate PPE for this type of exposure, such as gloves, gowns, face shields, masks, and eye protection.	n/a	Policy states some guidelines for first aid, however the policy is too brief/high-level and is silent on many individual provisions of the regulation.						
263		1910.152 - [Reserved]	n/a	n/a							
264	1910 Subpart L - Fire Protection										
265		1910.155 - Scope, application and definitions applicable to this subpart.	1910.155(a) Scope. This subpart contains requirements for fire brigades, and all portable and fixed fire suppression equipment, fire detection systems, and fire or employee alarm systems installed to meet the fire protection requirements of 29 CFR Part 1910.	Partial	Policy is too brief/high-level and is silent on many individual provisions of the regulation.	X					
266		1910.156 - Fire brigades.	1910.156(a)(1) Scope. This section contains requirements for the organization, training, and personal protective equipment of fire brigades whenever they are established by an employer.1910.156(a)(2) Application. The requirements of this section apply to fire brigades, industrial fire departments and private or contractual type fire departments. Personal protective equipment requirements apply only to members of fire brigades performing interior structural fire fighting. The requirements of this section do not apply to airport crash rescue or forest fire fighting operations.	n/a							
267		1910.157 - Portable fire extinguishers.	1910.157(a) Scope and application. The requirements of this section apply to the placement, use, maintenance, and testing of portable fire extinguishers provided for the use of employees. Paragraph (d) of this section does not apply to extinguishers provided for employee use on the outside of workplace buildings or structures. Where extinguishers are provided but are not intended for employee use and the employer has an emergency action plan and a fire prevention plan that meet the requirements of 29 CFR 1910.38 and 29 CFR 1910.39 respectively, then only the requirements of paragraphs (e) and (f) of this section apply. 1910.157(d)(1) Portable fire extinguishers shall be provided for employee use and selected and distributed based on the classes of anticipated workplace fires and on the size and degree of hazard which would affect their use. 1910.157(e) Inspection, maintenance and testing. 1910.157(e)(1) The employer shall be responsible for the inspection, maintenance and testing of all portable fire extinguishers in the workplace.	Partial	Policy is too brief/high-level and is silent on many individual provisions of the regulation.	X					
268		1910.158 - Standpipe and hose systems.	n/a	n/a							
269		1910.159 - Automatic sprinkler systems.	n/a	n/a							
270		1910.160 - Fixed extinguishing systems, general.	n/a	n/a							
271		1910.161 - Fixed extinguishing systems, dry chemical.	n/a	n/a							
272		1910.162 - Fixed extinguishing systems, gaseous agent.	n/a	n/a							
273		1910.163 - Fixed extinguishing systems, water spray and foam.	n/a	n/a							
274		1910.164 - Fire detection systems.	Scope and application. This section applies to all automatic fire detection systems installed to meet the requirements of a particular OSHA standard. 1910.164(b) Installation and restoration. 1910.164(b)(1) The employer shall assure that all devices and equipment constructed and installed to comply with this standard are approved for the purpose for which they are intended. 1910.164(b)(2) The employer shall restore all fire detection systems and components to normal operating condition as promptly as possible after each test or alarm. Spare detection devices and components which are normally destroyed in the process of detecting fires shall be available on the premises or from a local supplier in sufficient quantities and locations for prompt restoration of the system. 1910.164(c) Maintenance and testing. 1910.164(c)(1) The employer shall maintain all systems in an operable condition except during repairs or maintenance. 1910.164(c)(2) The employer shall assure that fire detectors and fire detection systems are tested and adjusted as often as needed to maintain proper reliability and operating condition except that factory calibrated detectors need not be adjusted after installation. 1910.164(c)(3) The employer shall assure that pneumatic and hydraulic operated detection systems installed after January 1, 1981, are equipped with supervised systems. 1910.164(c)(4) The employer shall assure that the servicing, maintenance and testing of fire detection systems, including cleaning and necessary sensitivity adjustments are performed by a trained person knowledgeable in the operations and functions of the system. 1910.164(c)(5) The employer shall also assure that fire detectors that need to be cleaned of dirt, dust, or other particulates in order to be fully operational are cleaned at regular periodic intervals. 1910.164(d) Protection of fire detectors. 1910.164(d)(1) The employer shall assure that fire detection equipment installed outdoors or in the presence of corrosive atmospheres be protected from corrosion. The employer shall provide a canopy, hood, or other suitable protection for detection equipment requiring protection from the weather. 1910.164(d)(2) The employer shall locate or otherwise protect detection equipment so that it is protected from mechanical or physical impact which might render it inoperable. 1910.164(d)(3) The employer shall assure that detectors are supported independently of their attachment to wires or tubing. 1910.164(e) Response time. 1910.164(e)(1) The employer shall assure that fire detection systems installed for the purpose of actuating fire extinguishment or suppression systems shall be designed to operate in time to control or extinguish a fire. 1910.164(e)(2) The employer shall assure that fire detection systems installed for the purpose of employee alarm and evacuation be designed and installed to provide a warning for emergency action and safe escape of employees. 1910.164(e)(3) The employer shall not delay alarms or devices initiated by fire detector actuation for more than 30 seconds unless such delay is necessary for the immediate safety of employees. When such delay is necessary, it shall be addressed in an emergency action plan meeting the requirements of 1910.38. 1910.164(f) Number, location and spacing of detecting devices. The employer shall assure that the number, spacing and location of fire detectors is based upon design data obtained from field experience, or tests, engineering surveys, the manufacturer's recommendations, or a recognized testing laboratory listing.	Partial	Policy is too brief/high-level and is silent on many individual provisions of the regulation.	X					



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275		1910.165 - Employee alarm systems.	<b>1910.165(b) General requirements.</b> <b>1910.165(b)(1)</b> The employee alarm system shall provide warning for necessary emergency action as called for in the emergency action plan, or for reaction time for safe escape of employees from the workplace or the immediate work area, or both. <b>1910.165(b)(2)</b> The employee alarm shall be capable of being perceived above ambient noise or light levels by all employees in the affected portions of the workplace. Tactile devices may be used to alert those employees who would not otherwise be able to recognize the audible or visual alarm. <b>1910.165(b)(3)</b> The employee alarm shall be distinctive and recognizable as a signal to evacuate the work area or to perform actions designated under the emergency action plan. <b>1910.165(b)(4)</b> The employer shall explain to each employee the preferred means of reporting emergencies, such as manual pull box alarms, public address systems, radio or telephones. The employer shall post emergency telephone numbers near telephones, or employee notice boards, and other conspicuous locations when telephones serve as a means of reporting emergencies. Where a communication system also serves as the employee alarm system, all emergency messages shall have priority over all non-emergency messages. <b>1910.165(b)(5)</b> The employer shall establish procedures for sounding emergency alarms in the workplace. For those employers with 10 or fewer employees in a particular workplace, direct voice communication is an acceptable procedure for sounding the alarm provided all employees can hear the alarm. Such workplaces need not have a back-up system. <b>1910.165(c) Installation and restoration.</b> <b>1910.165(c)(1)</b> The employer shall assure that all devices, components, combinations of devices or systems constructed and installed to comply with this standard are approved. Steam whistles, air horns, strobe lights or similar lighting devices, or tactile devices meeting the requirements of this section are considered to meet this requirement for approval. <b>1910.165(c)(2)</b> The employer shall assure that all employee alarm systems are restored to normal operating condition as promptly as possible after each test or alarm. Spare alarm devices and components subject to wear or destruction shall be available in sufficient quantities and locations for prompt restoration of the system. <b>1910.165(d) Maintenance and testing</b> <b>1910.165(d)(1)</b> The employer shall assure that all employee alarm systems are maintained in operating condition except when undergoing repairs or maintenance. <b>1910.165(d)(2)</b> The employer shall assure that a test of the reliability and adequacy of non-supervised employee alarm systems is made every two months. A different actuation device shall be used in each test of a multi-actuation device system so that no individual device is used for two consecutive tests. <b>1910.165(d)(3)</b> The employer shall maintain or replace power supplies as often as is necessary to assure a fully operational condition. Back-up means of alarm, such as employee runners or telephones, shall be provided when systems are out of service. <b>1910.165(d)(4)</b> The employer shall assure that employee alarm circuitry installed after January 1, 1981, which is capable of being supervised is supervised and that it will provide positive notification to assigned personnel whenever a deficiency exists in the system. The employer shall assure that all supervised employee alarm systems are tested at least annually for reliability and adequacy. <b>1910.165(d)(5)</b> The employer shall assure that the servicing, maintenance and testing of employee alarms are done by persons trained in the designed operation and functions necessary for reliable and safe operation of the system. <b>1910.165(e)</b> Manual operation. The employer shall assure that manually operated actuation devices for use in conjunction with employee alarms are unobstructed, conspicuous and readily accessible.	Partial	Policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
276		1910 Subpart L App A - Fire Protection	The following appendix to Subpart L serve as nonmandatory guidelines to assist employers in complying with the appropriate requirements of Subpart L.	Partial	Policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
277		1910 Subpart L App B - National Consensus Standards	The following appendix to Subpart L serve as nonmandatory guidelines to assist employers in complying with the appropriate requirements of Subpart L.	Partial	Policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
278		1910 Subpart L App C - Fire Protection references for further information	The following appendix to Subpart L serve as nonmandatory guidelines to assist employers in complying with the appropriate requirements of Subpart L.	Partial	Policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
279		1910 Subpart L App D - Availability of publications incorporated by reference in section 1910.156 fire brigades	The following appendix to Subpart L serve as nonmandatory guidelines to assist employers in complying with the appropriate requirements of Subpart L.	n/a						
280		1910 Subpart L App E - Test methods for protective clothing	The following appendix to Subpart L serve as nonmandatory guidelines to assist employers in complying with the appropriate requirements of Subpart L.	n/a						
281	1910 Subpart M - Compressed Gas and Compressed Air Equipment			n/a						
282		1910.166 - [Reserved]	n/a	n/a						
283		1910.167 - [Reserved]	n/a	n/a						
284		1910.168 - [Reserved]	n/a	n/a						
285		1910.169 - Air receivers.	<b>1910.169(a)(1)</b> Application. This section applies to compressed air receivers, and other equipment used in providing and utilizing compressed air for performing operations such as cleaning, drilling, hoisting, and chipping. On the other hand, however, this section does not deal with the special problems created by using compressed air to convey materials nor the problems created when men work in compressed air as in tunnels and caissons. This section is not intended to apply to compressed air machinery and equipment used on transportation vehicles such as steam railroad cars, electric railway cars, and automotive equipment. <b>1910.169(a)(2)</b> New and existing equipment. <b>1910.169(a)(2)(i)</b> All new air receivers installed after the effective date of these regulations shall be constructed in accordance with the 1968 edition of the A.S.M.E. Boiler and Pressure Vessel Code Section VIII, which is incorporated by reference as specified in Sec. 1910.61 <b>1910.169(a)(2)(ii)</b> All safety valves used shall be constructed, installed, and maintained in accordance with the A.S.M.E. Boiler and Pressure Vessel Code, Section VIII Edition 1968 <b>1910.169(b)</b> Installation and equipment requirements - <b>1910.169(b)(1)</b> Installation. Air receivers shall be so installed that all drains, handholes, and manholes therein are easily accessible. Under no circumstances shall an air receiver be buried underground or located in an inaccessible place. <b>1910.169(b)(2)</b> Drains and traps. A drain pipe and valve shall be installed at the lowest point of every air receiver to provide for the removal of accumulated oil and water. Adequate automatic traps may be installed in addition to drain valves. The drain valve on the air receiver shall be opened and the receiver completely drained frequently and at such intervals as to prevent the accumulation of excessive amounts of liquid in the receiver. <b>1910.169(b)(3)</b> Gauges and valves. <b>1910.169(b)(3)(i)</b> Every air receiver shall be equipped with an indicating pressure gauge (so located as to be readily visible) and with one or more spring-loaded safety valves. The total relieving capacity of such safety valves shall be such as to prevent pressure in the receiver from exceeding the maximum allowable working pressure of the receiver by more than 10 percent. <b>1910.169(b)(3)(ii)</b> No valve of any type shall be placed between the air receiver and its safety valve or valves. <b>1910.169(b)(3)(iii)</b> Safety appliances, such as safety valves, indicating devices and controlling devices, shall be constructed, located, and installed so that they cannot be readily rendered inoperative by any means, including the elements. <b>1910.169(b)(3)(iv)</b> All safety valves shall be tested frequently and at regular intervals to determine whether they are in good operating condition.	n/a						
286	1910 Subpart N - Materials Handling and Storage									
287		1910.176 - Handling materials - general.	<b>1910.176(a)</b> Use of mechanical equipment. Where mechanical handling equipment is used, sufficient safe clearances shall be allowed for aisles, at loading docks, through doorways and wherever turns or passage must be made. Aisles and passageways shall be kept clear and in good repair, with no obstruction across or in aisles that could create a hazard. Permanent aisles and passageways shall be appropriately marked. <b>1910.176(b)</b> Secure storage. Storage of material shall not create a hazard. Bags, containers, bundles, etc., stored in tiers shall be stacked, blocked, interlocked and limited in height so that they are stable and secure against sliding or collapse. <b>1910.176(c)</b> Housekeeping. Storage areas shall be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage. Vegetation control will be exercised when necessary. <b>1910.176(e)</b> Clearance limits. Clearance signs to warn of clearance limits shall be provided. <b>1910.176(f)</b> Rolling railroad cars. Deraill and/or bumper blocks shall be provided on spur railroad tracks where a rolling car could contact other cars being worked, enter a building, work or traffic area. <b>1910.176(g)</b> Guarding. Covers and/or guard- rails shall be provided to protect personnel from the hazards of open pits, tanks, vats, ditches, etc.	Partial	Policy states guidelines for material handling work, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X				
288		1910.177 - Servicing multi-piece and single piece rim wheels.	<b>1910.177(a)(1)</b> This section applies to the servicing of multi-piece and single piece rim wheels used on large vehicles such as trucks, tractors, trailers, buses and off-road machines. It does not apply to the servicing of rim wheels used on automobiles, or on pickup trucks and vans utilizing automobile tires or truck tires designated "LT". <b>1910.177(a)(2)</b> This section does not apply to employers and places of employment regulated under the Longshoring Standards, 29 CFR part 1918; Construction Safety Standards, 29 CFR part 1926; or Agriculture Standards, 29 CFR part 1928. <b>1910.177(a)(3)</b> All provisions of this section apply to the servicing of both single piece rim wheels and multi-piece rim wheels unless designated otherwise.	n/a						
289		1910.177 App A - Trajectory	FIGURES 1, 2, and 3 - WARNING	n/a						
290		1910.177 App B - Ordering Information for the OSHA Charts	The information on the OSHA charts is available on three posters, or in a manual containing the three charts, entitled "Demounting and Mounting Procedures for Tubeless Truck and Bus Tires," "Demounting and Mounting Procedures for Tube-Type Truck and Bus Tires," and "Multi-piece Rim Matching Chart." Interested parties can download and print both the manuals and posters from OSHA's Web site at http://www.osha.gov/publications (and type "tire chart" in the search field). However, when used by the employer at a worksite to provide information to employees, the printed posters must be, at a minimum, 2 feet wide and 3 feet long. Copies of the manual also are available from the Occupational Safety and Health Administration (OSHA Office of Publications, Room N-3101, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210; telephone: (202) 693-1888; or fax: (202) 693-2498).	n/a						



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1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
		1910.178 - Powered industrial trucks.	<b>1910.178(a)(1)</b> This section contains safety requirements relating to fire protection, design, maintenance, and use of fork trucks, tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines. This section does not apply to compressed air or nonflammable compressed gas-operated industrial trucks, nor to farm vehicles, nor to vehicles intended primarily for earth moving or over-the-road hauling. <b>1910.178(a)(2)</b> All new powered industrial trucks acquired and used by an employer shall meet the design and construction requirements for powered industrial trucks established in the "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969", which is incorporated by reference as specified in §1910.6, except for vehicles intended primarily for earth moving or over-the-road hauling. <b>1910.178(a)(3)</b> Approved trucks shall bear a label or some other identifying mark indicating approval by the testing laboratory. See paragraph (a)(7) of this section and paragraph 405 of "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969", which is incorporated by reference in paragraph (a)(2) of this section and which provides that if the powered industrial truck is accepted by a nationally recognized testing laboratory it should be so marked. <b>1910.178(a)(4)</b> Modifications and additions which affect capacity and safe operation shall not be performed by the customer or user without manufacturers prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly. <b>1910.178(a)(5)</b> If the truck is equipped with front-end attachments other than factory installed attachments, the user shall request that the truck be marked to identify the attachments and show the approximate weight of the truck and attachment combination at maximum elevation with load laterally centered. <b>1910.178(a)(6)</b> The user shall see that all nameplates and markings are in place and are maintained in a legible condition. <b>1910.178(a)(7)</b> As used in this section, the term, approved truck or approved industrial truck means a truck that is listed or approved for fire safety purposes for the intended use by a nationally recognized testing laboratory, using nationally recognized testing standards. Refer to §1910.155(c)(3)(iv)(A) for definition of listed, and to §1910.7 for definition of nationally recognized testing laboratory. 1910.178(c)(2)(i) Power-operated industrial trucks shall not be used in atmospheres containing hazardous concentration of acetylene, butadiene, ethylene oxide, hydrogen (or gases or vapors equivalent in hazard to hydrogen, such as manufactured gas), propylene oxide, acetaldehyde, cyclopropane, diethyl ether, ethylene, isoprene, or unsymmetrical dimethyl hydrazine (UDMH). 1910.178(c)(2)(ii)(a) Power-operated industrial trucks shall not be used in atmospheres containing hazardous concentrations of metal dust, including aluminum, magnesium, and their commercial alloys, other metals of similarly hazardous characteristics, or in atmospheres containing carbon black, coal or coke dust except approved power-operated industrial trucks designated as EX may be used in such atmospheres. 1910.178(c)(2)(ii)(b) In atmospheres where dust of magnesium, aluminum or aluminum bronze may be present, fuses, switches, motor controllers, and circuit breakers of trucks shall have enclosures specifically approved for such locations. 1910.178(c)(2)(iii) Only approved power-operated industrial trucks designated as EX may be used in atmospheres containing acetone, acrylonitrile, alcohol, ammonia, benzene, benzol, butane, ethylene dichloride, gasoline, hexane, lacquer solvent vapors, naphtha, natural gas, propane, propylene, styrene, vinyl acetate, vinyl chloride, or xylenes in quantities sufficient to produce explosive or ignitable mixtures and where such concentrations of these gases or vapors exist continuously, intermittently or periodically under normal operating conditions or may exist frequently because of repair, maintenance operations, leakage, breakdown or faulty operation of equipment.	Partial	Policy states guidelines for material handling work, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X				
291										
292		1910.178 App A - Powered industrial trucks.	Appendix A -- Stability of Powered Industrial Trucks (Non-mandatory Appendix to Paragraph (I) of This Section)	No	Policy states guidelines for material handling work, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.	X				
293		1910.179 - Overhead and gantry cranes.	<b>1910.179(b)(1) Application.</b> This section applies to overhead and gantry cranes, including semigantry, cantilever gantry, wall cranes, storage bridge cranes, and others having the same fundamental characteristics. These cranes are grouped because they all have trolleys and similar travel characteristics. <b>1910.179(b)(2) New and existing equipment.</b> All new overhead and gantry cranes constructed and installed on or after August 31, 1971, shall meet the design specifications of the American National Standard Safety Code for Overhead and Gantry Cranes, ANSI B30.2.0-1967, which is incorporated by reference as specified in §1910.6. <b>1910.179(b)(3) Modifications.</b> Cranes may be modified and rerated provided such modifications and the supporting structure are checked thoroughly for the new rated load by a qualified engineer or the equipment manufacturer. The crane shall be tested in accordance with paragraph (k)(2) of this section. New rated load shall be displayed in accordance with subparagraph (5) of this paragraph. <b>1910.179(b)(4) Wind indicators and rail clamps.</b> Outdoor storage bridges shall be provided with automatic rail clamps. A wind-indicating device shall be provided which will give a visible or audible alarm to the bridge operator at a predetermined wind velocity. If the clamps act on the rail heads, any beads or weld flash on the rail heads shall be ground off. <b>1910.179(b)(5) Rated load marking.</b> The rated load of the crane shall be plainly marked on each side of the crane, and if the crane has more than one hoisting unit, each hoist shall have its rated load marked on it or its load block and this marking shall be clearly legible from the ground or floor. <b>1910.179(b)(6) Clearance from obstruction.</b> <b>1910.179(b)(6)(i)</b> Minimum clearance of 3 inches overhead and 2 inches laterally shall be provided and maintained between crane and obstructions in conformity with Crane Manufacturers Association of America, Inc., Specification No. 61, which is incorporated by reference as specified in §1910.6 (formerly the Electric Overhead Crane Institute, Inc). <b>1910.179(b)(6)(ii)</b> Where passageways or walkways are provided obstructions shall not be placed so that safety of personnel will be jeopardized by movements of the crane. <b>1910.179(b)(7) Clearance between parallel cranes.</b> If the runways of two cranes are parallel, and there are no intervening walls or structure, there shall be adequate clearance provided and maintained between the two bridges. <b>1910.179(b)(8) Designated personnel</b> -Only designated personnel shall be permitted to operate a crane covered by this section.	n/a						
294		1910.180 - Crawler locomotive and truck cranes.	<b>1910.180(b)(1)</b> "Application." This section applies to crawler cranes, locomotive cranes, wheel mounted cranes of both truck and self-propelled wheel type, and any variations thereof which retain the same fundamental characteristics. This section includes only cranes of the above types, which are basically powered by internal combustion engines or electric motors and which utilize drums and ropes. Cranes designed for railway and automobile wreck clearances are excepted. The requirements of this section are applicable only to machines when used as lifting cranes. <b>1910.180(b)(2)</b> "New and existing equipment." All new crawler, locomotive, and truck cranes constructed and utilized on or after August 31, 1971, shall meet the design specifications of the American National Standard Safety Code for Crawler, Locomotive, and Truck Cranes, ANSI B30.5-1968, which is incorporated by reference as specified in Sec. 1910.6. Crawler, locomotive, and truck cranes constructed prior to August 31, 1971, should be modified to conform to those design specifications by February 15, 1972, unless it can be shown that the crane cannot feasibly or economically be altered and that the crane substantially complies with the requirements of this section. <b>1910.180(b)(3)</b> "Designated personnel." Only designated personnel shall be permitted to operate a crane covered by this section. 1910.180(d)(4) "Periodic inspection." Complete inspections of the crane shall be performed at intervals as generally defined in paragraph (d)(2)(ii) of this section depending upon its activity, severity of service, and environment, or as specifically indicated below. These inspections shall include the requirements of paragraph (d)(3) of this section and in addition, items such as the following. Any deficiencies such as listed shall be carefully examined and determination made as to whether they constitute a safety hazard:	n/a						
295		1910.181 - Derricks.	n/a	n/a						
296		1910.183 - Helicopters.	n/a	n/a						
297		1910.184 - Slings.	<b>1910.184(a) Scope.</b> This section applies to slings used in conjunction with other material handling equipment for the movement of material by hoisting, in employments covered by this part. The types of slings covered are those made from alloy steel chain, wire rope, metal mesh, natural or synthetic fiber rope (conventional three strand construction), and synthetic web (nylon, polyester, and polypropylene). 1910.184(c) Safe operating practices. Whenever any sling is used, the following practices shall be observed: 1910.184(c)(1) Slings that are damaged or defective shall not be used. 1910.184(c)(2) Slings shall not be shortened with knots or bolts or other makeshift devices. 1910.184(c)(3) Sling legs shall not be kinked. 1910.184(c)(4) Slings shall not be loaded in excess of their rated capacities. 1910.184(c)(5) Slings used in a basket hitch shall have the loads balanced to prevent slippage. 1910.184(c)(6) Slings shall be securely attached to their loads. 1910.184(c)(7) Slings shall be padded or protected from the sharp edges of their loads. 1910.184(c)(8) Suspended loads shall be kept clear of all obstructions. 1910.184(c)(9) All employees shall be kept clear of loads about to be lifted and of suspended loads. 1910.184(c)(10) Hands or fingers shall not be placed between the sling and its load while the sling is being tightened around the load. 1910.184(c)(11) Shock loading is prohibited. 1910.184(c)(12) A sling shall not be pulled from under a load when the load is resting on the sling. 1910.184(c)(13) Employers must not load a sling in excess of its recommended safe working load as prescribed by the sling manufacturer on the identification markings permanently affixed to the sling. 1910.184(c)(14) Employers must not use slings without affixed and legible identification markings. 1910.184(d) Inspections. Each day before being used, the sling and all fastenings and attachments shall be inspected for damage or defects by a competent person designated by the employer. Additional inspections shall be performed during sling use, where service conditions warrant. Damaged or defective slings shall be immediately removed from service. 1910.184(e) Alloy steel chain slings 1910.184(e)(1) Sling identification. Alloy steel chain slings shall have permanently affixed durable identification stating size, grade, rated capacity, and reach. 1910.184(e)(2) Attachments. 1910.184(e)(2)(i) Hooks, rings, oblong links, pear shaped links, welded or mechanical coupling links or other attachments shall have a rated capacity at least equal to that of the alloy steel chain with which they are used or the sling shall not be used in excess of the rated capacity of the weakest component. 1910.184(e)(2)(ii) Makeshift links or fasteners formed from bolts or rods, or other such attachments, shall not be used. 1910.184(e)(3) Inspections. 1910.184(e)(3)(i) In addition to the inspection required by paragraph (d) of this section, a thorough periodic inspection of alloy steel chain slings in use shall be made on a regular basis, to be determined on the basis of (A) frequency of sling use; (B) severity of service conditions; (C) nature of lifts being made; and (D) experience gained on the service life of slings used in similar circumstances. Such inspections shall in no event be at intervals greater than once every 12 months. 1910.184(e)(3)(ii) The employer shall make and maintain a record of the most recent month in which each alloy steel chain sling was thoroughly inspected, and shall make such record available for examination. 1910.184(e)(3)(iii) The thorough inspection of alloy steel chain slings shall be performed by a competent person designated by the employer, and shall include a thorough inspection for wear, defective welds, deformation and increase in length. Where such defects or deterioration are present, the sling shall be immediately removed from service. 1910.184(e)(4) Proof testing. The employer shall ensure that before use, each new, repaired, or reconditioned alloy steel chain sling, including all welded components in the sling assembly, shall be proof tested by the sling manufacturer or equivalent entity, in accordance with paragraph 5.2 of the American Society of Testing and Materials Specification A391-65, which is incorporated by reference as specified in §1910.6 (ANSI G61.1-1968). The employer shall retain a certificate of the proof test and shall make it available for examination.	n/a						
298	1926 Subpart H - Materials Handling, Storage, Use, and Disposal									
299		1926.250 - General requirements for storage.	<b>1926.250(a)(1)</b> All materials stored in tiers shall be stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, falling or collapse. <b>1926.250(a)(2)</b> Maximum safe load limits of floors within buildings and structures, in pounds per square foot, shall be conspicuously posted in a storage areas, except for floor or slab on grade. Maximum safe loads shall not be exceeded. <b>1926.250(a)(3)</b> Aisles and passageways shall be kept clear to provide for the free and safe movement of material handling equipment or employees. Such areas shall be kept in good repair. <b>1926.250(a)(4)</b> When a difference in road or working levels exist, means such as ramps, blocking, or grading shall be used to ensure the safe movement of vehicles between the two levels. <b>1926.250(b) Material storage.</b> <b>1926.250(b)(1)</b> Material stored inside buildings under construction shall not be placed within 6 feet of any hoistway or inside floor openings, nor within 10 feet of an exterior wall which does not extend above the top of the material stored. <b>1926.250(b)(2)</b> Each employee required to work on stored material in silos, hoppers, tanks, and similar storage areas shall be equipped with personal fall arrest equipment meeting the requirements of Subpart M of this part. <b>1926.250(b)(3)</b> Noncompatible materials shall be segregated in storage. <b>1926.250(b)(4)</b> Bagged materials shall be stacked by stepping back the layers and cross-keying the bags at least every 10 bags high. <b>1926.250(b)(5)</b> Materials shall not be stored on scaffolds or runways in excess of supplies needed for immediate operations. <b>1926.250(b)(6)</b> Brick stacks shall not be more than 7 feet in height. When a loose brick stack reaches a height of 4 feet, it shall be tapered back 2 inches in every foot of height above the foot level. <b>1926.250(b)(7)</b> When masonry blocks are stacked higher than 6 feet, the stack shall be tapered back one-half block per tier above the 6-foot level. <b>1926.250(b)(8)</b> Lumber: <b>1926.250(b)(8)(i)</b> Used lumber shall have all nails withdrawn before stacking. <b>1926.250(b)(8)(ii)</b> Lumber shall be stacked on level and solidly supported sills. <b>1926.250(b)(8)(iii)</b> Lumber shall be so stacked as to be stable and self-supporting. <b>1926.250(b)(8)(iv)</b> Lumber piles shall not exceed 20 feet in height provided that lumber to be handled manually shall not be stacked more than 16 feet high. <b>1926.250(b)(9)</b> Structural steel, poles, pipe, bar stock, and other cylindrical materials, unless racked, shall be stacked and blocked so as to prevent spreading or tilting. <b>1926.250(c)</b> "Housekeeping." Storage areas shall be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage. Vegetation control will be exercised when necessary. <b>1926.250(d)</b> "Dockboards (bridge plates)." <b>1926.250(d)(1)</b> Portable and powered dockboards shall be strong enough to carry the load imposed on them. <b>1926.250(d)(2)</b> Portable dockboards shall be secured in position, either by being anchored or equipped with devices which will prevent their slipping. <b>1926.250(d)(3)</b> Handholds, or other effective means, shall be provided on portable dockboards to permit safe handling. <b>1926.250(d)(4)</b> Positive protection shall be provided to prevent railroad cars from being moved while dockboards or bridge plates are in position.	n/a	Policy states guidelines for material handling work, however the policy is too brief/high-level and is silent on some individual provisions of the regulation.					
300		1926.251 - Rigging equipment for material handling.		n/a						

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
301		1926.252 - Disposal of waste materials.	1926.252(a) Whenever materials are dropped more than 20 feet to any point lying outside the exterior walls of the building, an enclosed chute of wood, or equivalent material, shall be used. For the purpose of this paragraph, an enclosed chute is a slide, closed in on all sides, through which material is moved from a high place to a lower one. 1926.252(b) When debris is dropped through holes in the floor without the use of chutes, the area onto which the material is dropped shall be completely enclosed with barricades not less than 42 inches high and not less than 6 feet back from the projected edge of the opening above. Signs warning of the hazard of falling materials shall be posted at each level. Removal shall not be permitted in this lower area until debris handling ceases and the work area is cleared. 1926.252(c) All scrap lumber, waste material, and rubbish shall be removed from the immediate work area as the work progresses.1926.252(d) Disposal of waste material or debris by burning shall comply with local fire regulations1926.252(e) All solvent waste, oily rags, and flammable liquids shall be kept in fire resistant covered containers until removed from worksite.	n/a						
302	1926 Subpart CC - Cranes & Derricks in Construction									
303		1926.1400 - Scope.	1926.1400(a) This standard applies to power-operated equipment, when used in construction, that can hoist, lower and horizontally move a suspended load. Such equipment includes, but is not limited to: Articulating cranes (such as knuckle-boom cranes); crawler cranes; floating cranes; cranes on barges; locomotive cranes; mobile cranes (such as wheel-mounted, rough-terrain, all-terrain, commercial truck-mounted, and boom truck cranes); multi-purpose machines when configured to hoist and lower (by means of a winch or hook) and horizontally move a suspended load; industrial cranes (such as carry-deck cranes); dedicated pile drivers; service/mechanic trucks with a hoisting device; a crane on a monorail; tower cranes (such as a fixed jib, i.e., "hammerhead boom"), luffing boom and self-erecting); pedestal cranes; portal cranes; overhead and gantry cranes; straddle cranes; sideboom cranes; derricks; and variations of such equipment. However, items listed in paragraph (c) of this section are excluded from the scope of this standard.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation.	X				
304		1926.1402 - Ground conditions.	1926.1402(a)(1) "Ground conditions" means the ability of the ground to support the equipment (including slope, compaction, and firmness). 1926.1402(a)(2) "Supporting materials" means blocking, mats, cribbing, marsh buggies (in marshes/wetlands), or similar supporting materials or devices. 1926.1402(b) The equipment must not be assembled or used unless ground conditions are firm, drained, and graded to a sufficient extent so that, in conjunction (if necessary) with the use of supporting materials, the equipment manufacturer's specifications for adequate support and degree of level of the equipment are met. The requirement for the ground to be drained does not apply to marshes/wetlands.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including requirements for ground control.	X				
305		1926.1403 - Assembly/Disassembly--selection of manufacturer or employer procedures.	When assembling or disassembling equipment (or attachments), the employer must comply with all applicable manufacturer prohibitions and must comply with either: 1926.1403(a) Manufacturer procedures applicable to assembly and disassembly, or 1926.1403(b) Employer procedures for assembly and disassembly. Employer procedures may be used only where the employer can demonstrate that the procedures used meet the requirements in § 1926.1406. Note: The employer must follow manufacturer procedures when an employer uses synthetic slings during assembly or disassembly rigging. ( See § 1926.1404(r).)	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including requirements for assembly/disassembly.	X				
306		1926.1404 - Assembly/Disassembly--general requirements (applies to all assembly and disassembly operations).	1926.1404(a)(1) Assembly/disassembly must be directed by a person who meets the criteria for both a competent person and a qualified person, or by a competent person who is assisted by one or more qualified persons ("A/D director"). 1926.1404(a)(2) Where the assembly/disassembly is being performed by only one person, that person must meet the criteria for both a competent person and a qualified person. For purposes of this standard, that person is considered the A/D director. 1926.1404(b) Knowledge of procedures . The A/D director must understand the applicable assembly/disassembly procedures. 1926.1404(c) Review of procedures . The A/D director must review the applicable assembly/disassembly procedures immediately prior to the commencement of assembly/disassembly unless the A/D director understands the procedures and has applied them to the same type and configuration of equipment (including accessories, if any). 1926.1404(d) Crew instructions . 1926.1404(d)(1) Before commencing assembly/disassembly operations, the A/D director must ensure that the crew members understand all of the following: 1926.1404(d)(1)(i) Their tasks. 1926.1404(d)(1)(ii) The hazards associated with their tasks. 1926.1404(d)(1)(iii) The hazardous positions/locations that they need to avoid. 1926.1404(d)(2) During assembly/disassembly operations, before a crew member takes on a different task, or when adding new personnel during the operations, the requirements in paragraphs (d)(1)(i) through (d)(1)(iii) of this section must be met. 1926.1404(e) Protecting assembly/disassembly crew members out of operator view. 1926.1404(e)(1) Before a crew member goes to a location that is out of view of the operator and is either in, on, or under the equipment, or near the equipment (or load) where the crew member could be injured by movement of the equipment (or load), the crew member must inform the operator that he/she is going to that location. 1926.1404(e)(2) Where the operator knows that a crew member went to a location covered by paragraph (e)(1) of this section, the operator must not move any part of the equipment (or load) until the operator is informed in accordance with a pre-arranged system of communication that the crew member is in a safe position. 1926.1404(f) Working under the boom, jib or other components. 1926.1404(f)(1) When pins (or similar devices) are being removed, employees must not be under the boom, jib, or other components, except where the requirements of paragraph (f)(2) of this section are met. 1926.1404(f)(2) Exception. Where the employer demonstrates that site constraints require one or more employees to be under the boom, jib, or other components when pins (or similar devices) are being removed, the A/D director must implement procedures that minimize the risk of unintended dangerous movement and minimize the duration and extent of exposure under the boom. (See Non-mandatory Appendix B of this subpart for an example.) 1926.1404(g) Capacity limits. During all phases of assembly/disassembly, rated capacity limits for loads imposed on the equipment, equipment components (including rigging), lifting lugs and equipment accessories, must not be exceeded for the equipment being assembled/disassembled. 1926.1404(h) Addressing specific hazards. The A/D director supervising the assembly/disassembly operation must address the hazards associated with the operation, which include: 1926.1404(h)(1) Site and ground bearing conditions. Site and ground conditions must be adequate for safe assembly/disassembly operations and to support the equipment during assembly/disassembly (see § 1926.1402 for ground condition requirements). 1926.1404(h)(2) Blocking material. The size, amount, condition and method of stacking the blocking must be sufficient to sustain the loads and maintain stability. 1926.1404(h)(3) Proper location of blocking. When used to support lattice booms or components, blocking must be appropriately placed to: 1926.1404(h)(3)(i) Protect the structural integrity of the equipment, and 1926.1404(h)(3)(ii) Prevent dangerous movement and collapse. 1926.1404(h)(4) Verifying assist crane loads. When using an assist crane, the loads that will be imposed on the assist crane at each phase of assembly/disassembly must be verified in accordance with § 1926.1417(o)(3) before assembly/disassembly begins. 1926.1404(h)(5) Boom and jib pick points. The point(s) of attachment of rigging to a boom (or boom sections or jib or jib sections) must be suitable for preventing structural damage and facilitating safe handling of these components. 1926.1404(h)(6) Center of gravity. 1926.1404(h)(6)(i) The center of gravity of the load must be identified if that is necessary for the method used for maintaining stability. 1926.1404(h)(6)(ii) Where there is insufficient information to accurately identify the center of gravity, measures designed to prevent unintended dangerous movement resulting from an inaccurate identification of the center of gravity must be used. (See Non-mandatory Appendix B of this subpart for an example.) 1926.1404(h)(7) Stability upon pin removal. The boom sections, boom suspension systems (such as gantry A-frames and jib struts), and components must be rigged or supported to maintain stability upon the removal of the pins. 1926.1404(h)(8) Snagging. Suspension ropes and pendants must not be allowed to catch on the boom or jib connection pins or cotter pins (including keepers and locking pins). 1926.1404(h)(9) Struck by counterweights. The potential for unintended movement from inadequately supported counterweights and from hoisting counterweights. 1926.1404(h)(10) Boom hoist brake failure. Each time reliance is to be placed on the boom hoist brake to prevent boom movement during assembly/disassembly, the brake must be tested prior to such reliance to determine if it is sufficient to prevent boom movement. If it is not sufficient, a boom hoist pawl, other locking device/back-up braking device, or another method of preventing dangerous movement of the boom (such as blocking or using an assist crane) from a boom hoist brake failure must be used. 1926.1404(h)(11) Loss of backward stability. Backward stability before swinging the upperworks, travel, and when attaching or removing equipment components. 1926.1404(h)(12) Wind speed and weather. The effect of wind speed and weather on the equipment. 1926.1404(j) Cantilevered boom sections. Manufacturer limitations on the maximum amount of boom supported only by cantilevering must not be exceeded. Where these are unavailable, a registered professional engineer familiar with the type of equipment involved must determine in writing this limitation, which must not be exceeded. 1926.1404(k) Weight of components. The weight of each of the components must be readily available. 1926.1404(m) Components and configuration. 1926.1404(m)(1) The selection of components, and configuration of the equipment, that affect the capacity or safe operation of the equipment must be in accordance with: 1926.1404(m)(1)(i) Manufacturer instructions, prohibitions, limitations, and specifications. Where these are unavailable, a registered professional engineer familiar with the type of equipment involved must approve, in writing, the selection and configuration of components; or 1926.1404(m)(1)(ii) Approved modifications that meet the requirements of § 1926.1434 (Equipment modifications). 1926.1404(m)(2) Post-assembly inspection. Upon completion of assembly, the equipment must be inspected to ensure compliance with paragraph (m)(1) of this section (see § 1926.1412(c) for post-assembly inspection requirements). 1926.1404(o) Shipping pins. Reusable shipping pins, straps, links, and similar equipment must be removed. Once they are removed they must either be stowed or otherwise stored so that they do not present a falling object hazard. 1926.1404(p) Pile driving. Equipment used for pile driving must not have a jib attached during pile driving operations. 1926.1404(q) Outriggers and Stabilizers. When the load to be handled and the operating radius require the use of outriggers or stabilizers, or at any time when outriggers or stabilizers are used, all of the following requirements must be met (except as otherwise indicated): 1926.1404(q)(1) The outriggers or stabilizers must be either fully extended or, if manufacturer procedures permit, deployed as specified in the load chart. 1926.1404(q)(2) The outriggers must be set to remove the equipment weight from the wheels, except for locomotive cranes (see paragraph (q)(6) of this section for use of outriggers on locomotive cranes). This provision does not apply to stabilizers. 1926.1404(q)(3) When outrigger floats are used, they must be attached to the outriggers. When stabilizer floats are used, they must be attached to the stabilizers. 1926.1404(q)(4) Each outrigger or stabilizer must be visible to the operator or to a signal person during extension and setting. 1926.1404(q)(5) Outrigger and stabilizer blocking must: 1926.1404(q)(5)(i) Meet the requirements in paragraphs (h)(2) and (h)(3) of this section. 1926.1404(q)(5)(ii) Be placed only under the outrigger or stabilizer float/pad of the jack or, where the outrigger or stabilizer is designed without a jack, under the outer bearing surface of the extended outrigger or stabilizer beam. 1926.1404(q)(6) For locomotive cranes, when using outriggers or stabilizers to handle loads, the manufacturer's procedures must be followed. When lifting loads without using outriggers or stabilizers, the manufacturer's procedures must be met regarding truck wedges or screws. 1926.1404(r) Rigging. In addition to following the requirements in 29 CFR 1926.251 and other requirements in this and other standards applicable to rigging, when rigging is used for assembly/disassembly, the employer must ensure that: 1926.1404(r)(1) The rigging work is done by a qualified rigger. 1926.1404(r)(2) Synthetic slings are protected from: Abrasive, sharp or acute edges, and configurations that could cause a reduction of the sling's rated capacity, such as distortion or localized compression. Note: Requirements for the protection of wire rope slings are contained in 29 CFR 1926.251(c)(9). 1926.1404(r)(3) When synthetic slings are used, the synthetic sling manufacturer's instructions, limitations, specifications and recommendations must be followed.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including requirements for assembly/disassembly.	X				
307										
308		1926.1405 - Disassembly--additional requirements for dismantling of booms and jibs (applies to both the use of manufacturer procedures and employer procedures).	Dismantling (including dismantling for changing the length of) booms and jibs. 1926.1405(a) None of the pins in the pendants are to be removed (partly or completely) when the pendants are in tension. 1926.1405(b) None of the pins (top or bottom) on boom sections located between the pendant attachment points and the crane/derrick body are to be removed (partly or completely) when the pendants are in tension. 1926.1405(c) None of the pins (top or bottom) on boom sections located between the uppermost boom section and the crane/derrick body are to be removed (partly or completely) when the boom is being supported by the uppermost boom section resting on the ground (or other support). 1926.1405(d) None of the top pins on boom sections located on the cantilevered portion of the boom being removed (the portion being removed ahead of the pendant attachment points) are to be removed (partly or completely) until the cantilevered section to be removed is fully supported.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including requirements for assembly/disassembly.	X				
309		1926.1406 - Assembly/Disassembly--employer procedures--general requirements.	1926.1406(a) When using employer procedures instead of manufacturer procedures for assembly/disassembly, the employer must ensure that the procedures: 1926.1406(a)(1) Prevent unintended dangerous movement, and prevent collapse, of any part of the equipment. 1926.1406(a)(2) Provide adequate support and stability of all parts of the equipment. 1926.1406(a)(3) Position employees involved in the assembly/disassembly operation so that their exposure to unintended movement or collapse of part or all of the equipment is minimized. 1926.1406(b) Qualified person . Employer procedures must be developed by a qualified person.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including requirements for assembly/disassembly.	X				

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
		1926.1407 - Power line safety (up to 350 kV)--assembly and disassembly.	Before assembling or disassembling equipment, the employer must determine if any part of the equipment, load line, or load (including rigging and lifting accessories) could get, in the direction or area of assembly/disassembly, closer than 20 feet to a power line during the assembly/disassembly process. If so, the employer must meet the requirements in Option (1), Option (2), or Option (3) of this section, as follows: <b>1926.1407(a)(1)</b> Option (1)--Deenergize and ground. Confirm from the utility owner/operator that the power line has been deenergized and visibly grounded at the worksite. <b>1926.1407(a)(2)</b> Option (2)--20 foot clearance. Ensure that no part of the equipment, load line or load (including rigging and lifting accessories), gets closer than 20 feet to the power line by implementing the measures specified in paragraph (b) of this section. <b>1926.1407(a)(3)</b> Option (3)--Table A clearance. 1926.1407(a)(3)(i) Determine the line's voltage and the minimum clearance distance permitted under Table A (see § 1926.1408). <b>1926.1407(a)(3)(ii)</b> Determine if any part of the equipment, load line, or load (including rigging and lifting accessories), could get closer than the minimum clearance distance to the power line permitted under Table A (see § 1926.1408). If so, then the employer must follow the requirements in paragraph (b) of this section to ensure that no part of the equipment, load line, or load (including rigging and lifting accessories), gets closer to the line than the minimum clearance distance. <b>1926.1407(b)</b> Preventing encroachment/electrocution. Where encroachment precautions are required under Option (2), or Option (3) of this section, all of the following requirements must be met: <b>1926.1407(b)(1)</b> Conduct a planning meeting with the Assembly/Disassembly director (A/D director), operator, assembly/disassembly crew and the other workers who will be in the assembly/disassembly area to review the location of the power line(s) and the steps that will be implemented to prevent encroachment/electrocution. <b>1926.1407(b)(2)</b> If tag lines are used, they must be nonconductive. <b>1926.1407(b)(3)</b> At least one of the following additional measures must be in place. The measure selected from this list must be effective in preventing encroachment. The additional measures are: <b>1926.1407(b)(3)(i)</b> Use a dedicated spotter who is in continuous contact with the equipment operator. The dedicated spotter must: <b>1926.1407(b)(3)(i)(A)</b> Be equipped with a visual aid to assist in identifying the minimum clearance distance. Examples of a visual aid include, but are not limited to: A clearly visible line painted on the ground; a clearly visible line of stanchions; a set of clearly visible line-of-sight landmarks (such as a fence post behind the dedicated spotter and a building corner ahead of the dedicated spotter). 1926.1407(b)(3)(i)(B) Be positioned to effectively gauge the clearance distance. <b>1926.1407(b)(3)(i)(C)</b> Where necessary, use equipment that enables the dedicated spotter to communicate directly with the operator. <b>1926.1407(b)(3)(i)(D)</b> Give timely information to the operator so that the required clearance distance can be maintained. <b>1926.1407(b)(3)(ii)</b> A proximity alarm set to give the operator sufficient warning to prevent encroachment. <b>1926.1407(b)(3)(iii)</b> A device that automatically warns the operator when to stop movement, such as a range control warning device. Such a device must be set to give the operator sufficient warning to prevent encroachment. <b>1926.1407(b)(3)(iv)</b> A device that automatically limits range of movement, set to prevent encroachment. 1926.1407(b)(3)(v) An elevated warning line, barricade, or line of signs, in view of the operator, equipped with flags or similar high-visibility markings. <b>1926.1407(c)</b> Assembly/disassembly below power lines prohibited. No part of a crane/derrick, load line, or load (including rigging and lifting accessories), whether partially or fully assembled, is allowed below a power line unless the employer has confirmed that the utility owner/operator has deenergized and (at the worksite) visibly grounded the power line. <b>1926.1407(d)</b> Assembly/disassembly inside Table A clearance prohibited. No part of a crane/derrick, load line, or load (including rigging and lifting accessories), whether partially or fully assembled, is allowed closer than the minimum approach distance under Table A (see § 1926.1408) to a power line unless the employer has confirmed that the utility owner/operator has deenergized and (at the worksite) visibly grounded the power line. <b>1926.1407(e)</b> Voltage information. Where Option (3) of this section is used, the utility owner/operator of the power lines must provide the requested voltage information within two working days of the employer's request. <b>1926.1407(f)</b> Power lines presumed energized. The employer must assume that all power lines are energized unless the utility owner/operator confirms that the power line has been and continues to be deenergized and visibly grounded at the worksite. <b>1926.1407(g)</b> Posting of electrocution warnings. There must be at least one electrocution hazard warning conspicuously posted in the cab so that it is in view of the operator and (except for overhead gantry and tower cranes) at least two on the outside of the equipment.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including work around powerlines.	X					
310											
		1926.1408 - Power line safety (up to 350 kV)--equipment operations.	<b>1926.1408(a) Hazard assessments and precautions inside the work zone</b> . Before beginning equipment operations, the employer must: <b>1926.1408(a)(1)</b> <i>Identify the work zone by either:</i> <b>1926.1408(a)(1)(i)</b> Demarcating boundaries (such as with flags, or a device such as a range limit device or range control warning device) and prohibiting the operator from operating the equipment past those boundaries, or <b>1926.1408(a)(1)(ii)</b> Defining the work zone as the area 360 degrees around the equipment, up to the equipment's maximum working radius. <b>1926.1408(a)(2)</b> Determine if any part of the equipment, load line or load (including rigging and lifting accessories), if operated up to the equipment's maximum working radius in the work zone, could get closer than 20 feet to a power line. If so, the employer must meet the requirements in Option (1), Option (2), or Option (3) of this section, as follows: <b>1926.1408(a)(2)(i) Option (1)--Deenergize and ground</b> . Confirm from the utility owner/operator that the power line has been deenergized and visibly grounded at the worksite. <b>1926.1408(a)(2)(ii) Option (2)--20 foot clearance</b> . Ensure that no part of the equipment, load line, or load (including rigging and lifting accessories), gets closer than 20 feet to the power line by implementing the measures specified in paragraph (b) of this section. <b>1926.1408(a)(2)(iii) Option (3)--Table A clearance</b> <b>1926.1408(a)(2)(iii)(A)</b> Determine the line's voltage and the minimum approach distance permitted under Table A ( see § 1926.1408). <b>1926.1408(a)(2)(iii)(B)</b> Determine if any part of the equipment, load line or load (including rigging and lifting accessories), while operating up to the equipment's maximum working radius in the work zone, could get closer than the minimum approach distance of the power line permitted under Table A ( see § 1926.1408). If so, then the employer must follow the requirements in paragraph (b) of this section to ensure that no part of the equipment, load line, or load (including rigging and lifting accessories), gets closer to the line than the minimum approach distance. <b>1926.1408(b) Preventing encroachment/electrocution</b> . Where encroachment precautions are required under Option (2) or Option (3) of this section, all of the following requirements must be met: <b>1926.1408(b)(1)</b> Conduct a planning meeting with the operator and the other workers who will be in the area of the equipment or load to review the location of the power line(s), and the steps that will be implemented to prevent encroachment/electrocution. <b>1926.1408(b)(2)</b> If tag lines are used, they must be non-conductive. <b>1926.1408(b)(3)</b> Erect and maintain an elevated warning line, barricade, or line of signs, in view of the operator, equipped with flags or similar high-visibility markings, at 20 feet from the power line (if using Option (2) of this section) or at the minimum approach distance under Table A ( see § 1926.1408) (if using Option (3) of this section). If the operator is unable to see the elevated warning line, a dedicated spotter must be used as described in § 1926.1408(b)(4)(ii) in addition to implementing one of the measures described in § 1926.1408(b)(4)(i), (iii), (iv) and (v). <b>1926.1408(b)(4)</b> Implement at least one of the following measures: <b>1926.1408(b)(4)(i)</b> A proximity alarm set to give the operator sufficient warning to prevent encroachment. <b>1926.1408(b)(4)(ii)</b> A dedicated spotter who is in continuous contact with the operator. Where this measure is selected, the dedicated spotter must: <b>1926.1408(b)(4)(ii)(A)</b> Be equipped with a visual aid to assist in identifying the minimum clearance distance. Examples of a visual aid include, but are not limited to: A clearly visible line painted on the ground; a clearly visible line of stanchions; a set of clearly visible line-of-sight landmarks (such as a fence post behind the dedicated spotter and a building corner ahead of the dedicated spotter). <b>1926.1408(b)(4)(ii)(B)</b> Be positioned to effectively gauge the clearance distance. <b>1926.1408(b)(4)(ii)(C)</b> Where necessary, use equipment that enables the dedicated spotter to communicate directly with the operator. <b>1926.1408(b)(4)(ii)(D)</b> Give timely information to the operator so that the required clearance distance can be maintained. <b>1926.1408(b)(4)(iii)</b> A device that automatically warns the operator when to stop movement, such as a range control warning device. Such a device must be set to give the operator sufficient warning to prevent encroachment. <b>1926.1408(b)(4)(iv)</b> A device that automatically limits range of movement, set to prevent encroachment. <b>1926.1408(b)(4)(v)</b> An insulating link/device, as defined in § 1926.1401, installed at a point between the end of the load line (or below) and the load. <b>1926.1408(b)(5)</b> The requirements of paragraph (b)(4) of this section do not apply to work covered by subpart V of this part. <b>1926.1408(c) Voltage information</b> . Where Option (3) of this section is used, the utility owner/operator of the power lines must provide the requested voltage information within two working days of the employer's request. <b>1926.1408(d) Operations below power lines</b> . <b>1926.1408(d)(1)</b> No part of the equipment, load line, or load (including rigging and lifting accessories) is allowed below a power line unless the employer has confirmed that the utility owner/operator has deenergized and (at the worksite) visibly grounded the power line, except where one of the exceptions in paragraph (d)(2) of this section applies. <b>1926.1408(d)(2) Exceptions</b> . Paragraph (d)(1) of this section is inapplicable where the employer demonstrates that one of the following applies: <b>1926.1408(d)(2)(i)</b> The work is covered by subpart V of this part. <b>1926.1408(d)(2)(ii)</b> For equipment with non-extensible booms: The uppermost part of the equipment, with the boom at true vertical, would be more than 20 feet below the plane of the power line or more than the Table A of this section minimum clearance distance below the plane of the power line. <b>1926.1408(d)(2)(iii)</b> For equipment with articulating or extensible booms: The uppermost part of the equipment, with the boom in the fully extended position, at true vertical, would be more than 20 feet below the plane of the power line or more than the Table A of this section minimum clearance distance below the plane of the power line. <b>1926.1408(d)(2)(iv)</b> The employer demonstrates that compliance with paragraph (d)(1) of this section is infeasible and meets the requirements of § 1926.1410. <b>1926.1408(e) Power lines presumed energized</b> . The employer must assume that all power lines are energized unless the utility owner/operator confirms that the power line has been and continues to be deenergized and visibly grounded at the worksite. <b>1926.1408(f)</b> When working near transmitter/communication towers where the equipment is close enough for an electrical charge to be induced in the equipment or materials being handled, the transmitter must be deenergized or the following precautions must be taken: <b>1926.1408(f)(1)</b> The equipment must be provided with an electrical ground. <b>1926.1408(f)(2)</b> If tag lines are used, they must be non-conductive.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including work around powerlines.	X					
311											
		1926.1409 - Power line safety (over 350 kV).	The requirements of § 1926.1407 and § 1926.1408 apply to power lines over 350 kV except: <b>1926.1409(a)</b> For power lines at or below 1000 kV, wherever the distance "20 feet" is specified, the distance "50 feet" must be substituted; and <b>1926.1409(b)</b> For power lines over 1000 kV, the minimum clearance distance must be established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including work around powerlines.	X					
312											
		1926.1410 - Power line safety (all voltages)--equipment operations closer than the Table A zone.	Equipment operations in which any part of the equipment, load line, or load (including rigging and lifting accessories) is closer than the minimum approach distance under Table A of § 1926.1408 to an energized power line is prohibited, except where the employer demonstrates that all of the following requirements are met: <b>1926.1410(a)</b> The employer determines that it is infeasible to do the work without breaching the minimum approach distance under Table A of § 1926.1408. <b>1926.1410(b)</b> The employer determines that, after consultation with the utility owner/operator, it is infeasible to deenergize and ground the power line or relocate the power line. <b>1926.1410(c) Minimum clearance distance</b> . <b>1926.1410(c)(1)</b> The power line owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution determines the minimum clearance distance that must be maintained to prevent electrical contact in light of the on-site conditions. The factors that must be considered in making this determination include, but are not limited to: Conditions affecting atmospheric conductivity; time necessary to bring the equipment, load line, and load (including rigging and lifting accessories) to a complete stop; wind conditions; degree of sway in the power line; lighting conditions, and other conditions affecting the ability to prevent electrical contact. <b>1926.1410(c)(2) Paragraph (c)(1) of this section does not apply to work covered by Subpart V of this part; instead, for such work, the minimum approach distances established by the employer under § 1926.960(c)(1)(i) apply.</b> <b>1926.1410(d)</b> A planning meeting with the employer and utility owner/operator (or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution) is held to determine the procedures that will be followed to prevent electrical contact and electrocution. At a minimum these procedures must include: <b>1926.1410(d)(1)</b> If the power line is equipped with a device that automatically reenergizes the circuit in the event of a power line contact, before the work begins, the automatic reclosing feature of the circuit interrupting device must be made inoperative if the design of the device permits. <b>1926.1410(d)(2)</b> A dedicated spotter who is in continuous contact with the operator. The dedicated spotter must: <b>1926.1410(d)(2)(i)</b> Be equipped with a visual aid to assist in identifying the minimum clearance distance. Examples of a visual aid include, but are not limited to: A line painted on the ground; a clearly visible line of stanchions; a set of clearly visible line-of-sight landmarks (such as a fence post behind the dedicated spotter and a building corner ahead of the dedicated spotter). <b>1926.1410(d)(2)(ii)</b> Be positioned to effectively gauge the clearance distance. <b>1926.1410(d)(2)(iii)</b> Where necessary, use equipment that enables the dedicated spotter to communicate directly with the operator. <b>1926.1410(d)(2)(iv)</b> Give timely information to the operator so that the required clearance distance can be maintained. <b>1926.1410(d)(3)</b> An elevated warning line, or barricade (not attached to the crane), in view of the operator (either directly or through video equipment), equipped with flags or similar high-visibility markings, to prevent electrical contact. However, this provision does not apply to work covered by subpart V of this part. <b>1926.1410(d)(4) Insulating link/device</b> . <b>1926.1410(d)(4)(i)</b> An insulating link/device installed at a point between the end of the load line (or below) and the load. <b>1926.1410(d)(4)(ii)</b> Paragraph (d)(4)(i) of this section does not apply to work covered by Subpart V of this part. <b>1926.1410(d)(4)(iv)</b> Until November 8, 2011, the following procedure may be substituted for the requirement in paragraph (d)(4)(i) of this section: All employees, excluding equipment operators located on the equipment, who may come in contact with the equipment, the load line, or the load must be insulated or guarded from the equipment, the load line, and the load. Insulating gloves rated for the voltage involved are adequate insulation for the purposes of this paragraph. <b>1926.1410(d)(4)(v)</b> Until November 8, 2013, the following procedure may be substituted for the requirement in (d)(4)(i) of this section: <b>1926.1410(d)(4)(v)(A)</b> The employer must use a link/device manufactured on or before November 8, 2011, that meets the definition of an insulating link/device, except that it has not been approved by a Nationally Recognized Testing Laboratory, and that is maintained and used in accordance with manufacturer requirements and recommendations, and is installed at a point between the end of the load line (or below) and the load; and <b>1926.1410(d)(4)(v)(B)</b> All employees, excluding equipment operators located on the equipment, who may come in contact with the equipment, the load line, or the load must be insulated or guarded from the equipment, the load line, and the load through an additional means other than the device described in paragraph (d)(4)(v)(A) of this section. Insulating gloves rated for the voltage involved are adequate additional means of protection for the purposes of this paragraph. <b>1926.1410(d)(5)</b> Nonconductive rigging if the rigging may be within the Table A of § 1926.1408 distance during the operation. <b>1926.1410(d)(6)</b> If the equipment is equipped with a device that automatically limits range of movement, it must be used and set to prevent any part of the equipment, load line, or load (including rigging and lifting accessories) from breaching the minimum approach distance established under paragraph (c) of this section. <b>1926.1410(d)(7)</b> If a tag line is used, it must be of the nonconductive type. <b>1926.1410(d)(8)</b> Barricades forming a perimeter at least 10 feet away from the equipment to prevent unauthorized personnel from entering the work area. In areas where obstacles prevent the barricade from being at least 10 feet away, the barricade must be as far from the equipment as feasible. <b>1926.1410(d)(9)</b> Workers other than the operator must be prohibited from touching the load line above the insulating link/device and crane. Operators remotely operating the equipment from the ground must use either wireless controls that isolate the operator from the equipment or insulating mats that insulate the operator from the ground. <b>1926.1410(d)(10)</b> Only personnel essential to the operation are permitted to be in the area of the crane and load. <b>1926.1410(d)(11)</b> The equipment must be properly grounded. <b>1926.1410(d)(12)</b> Insulating line hose or cover-up must be installed by the utility owner/operator except where such devices are unavailable for the line voltages involved. <b>1926.1410(e)</b> The procedures developed to comply with paragraph (d) of this section are documented and immediately available on-site. <b>1926.1410(f)</b> The equipment user and utility owner/operator (or registered professional engineer) meet with the equipment operator and the other workers who will be in the area of the equipment or load to review the procedures that will be implemented to prevent breaching the minimum approach distance established in paragraph (c) of this section and prevent electrocution. <b>1926.1410(g)</b> The procedures developed to comply with paragraph (d) of this section are implemented. <b>1926.1410(h)</b> The utility owner/operator (or registered professional engineer) and all employers of employees involved in the work must identify one person who will direct the implementation of the procedures. The person identified in accordance with this paragraph must direct the implementation of the procedures and must have the authority to stop work at any time to ensure safety. <b>1926.1410(i)</b> If a problem occurs implementing the procedures being used to comply with paragraph (d) of this section, or indicating that those procedures are inadequate to prevent electrocution, the employer must safely stop operations and either develop new procedures to comply with paragraph (d) of this section or have the utility owner/operator deenergize and visibly ground or relocate the power line before resuming work. <b>1926.1410(k)</b> Devices originally designed by the manufacturer for use as a safety device ( see § 1926.1415), operational aid, or a means to prevent power line contact or electrocution, when used to comply with this section, must comply with the manufacturer's procedures for use and conditions of use. <b>1926.1410(m)</b> The employer must train each operator and crew member assigned to work with the equipment in accordance with § 1926.1408(g).	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including work around powerlines.	X					
313											
314											



Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
315		1926.1411 - Power line safety-while traveling under or near power lines with no load.	<b>1926.1411(a)</b> This section establishes procedures and criteria that must be met for equipment traveling under or near a power line on a construction site with no load. Equipment traveling on a construction site with a load is governed by §§1926.1408, 1926.1409 or 1926.1410, whichever is appropriate, and §1926.1417(u). <b>1926.1411(b)</b> The employer must ensure that: <b>1926.1411(b)(1)</b> The boom/mast and boom/mast support system are lowered sufficiently to meet the requirements of this paragraph. <b>1926.1411(b)(2)</b> The clearances specified in Table T of this section are maintained. <b>1926.1411(b)(3)</b> The effects of speed and terrain on equipment movement (including movement of the boom/mast) are considered so that those effects do not cause the minimum clearance distances specified in Table T of this section to be breached. <b>1926.1411(b)(4)</b> <i>Dedicated spotter</i> . If any part of the equipment while traveling will get closer than 20 feet to the power line, the employer must ensure that a dedicated spotter who is in continuous contact with the driver/operator is used. The dedicated spotter must: <b>1926.1411(b)(4)(i)</b> Be positioned to effectively gauge the clearance distance. <b>1926.1411(b)(4)(ii)</b> Where necessary, use equipment that enables the dedicated spotter to communicate directly with the operator. <b>1926.1411(b)(4)(iii)</b> Give timely information to the operator so that the required clearance distance can be maintained. <b>1926.1411(b)(5)</b> <i>Additional precautions for traveling in poor visibility</i> . When traveling at night, or in conditions of poor visibility, in addition to the measures specified in paragraphs (b)(1) through (4) of this section, the employer must ensure that: <b>1926.1411(b)(5)(i)</b> The power lines are illuminated or another means of identifying the location of the lines is used. <b>1926.1411(b)(5)(ii)</b> A safe path of travel is identified and used. Table T-Minimum Clearance Distances While Traveling With No Load	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific criteria for working near powerlines.	X					
316		1926.1412 - Inspections.	<b>1926.1412(a)</b> <i>Modified equipment</i> . <b>1926.1412(a)(1)</b> Equipment that has had modifications or additions which affect the safe operation of the equipment (such as modifications or additions involving a safety device or operational aid, critical part of a control system, power plant, braking system, load-sustaining structural components, load hook, or in-use operating mechanism) or capacity must be inspected by a qualified person after such modifications/additions have been completed, prior to initial use. The inspection must meet all of the following requirements: <b>1926.1412(a)(1)(i)</b> The inspection must assure that the modifications or additions have been done in accordance with the approval obtained pursuant to § 1926.1434 (Equipment modifications). <b>1926.1412(a)(1)(ii)</b> The inspection must include functional testing of the equipment. <b>1926.1412(a)(2)</b> Equipment must not be used until an inspection under this paragraph demonstrates that the requirements of paragraph (a)(1)(i) of this section have been met. <b>1926.1412(b)</b> <i>Repaired/adjusted equipment</i> . <b>1926.1412(b)(1)</b> Equipment that has had a repair or adjustment that relates to safe operation (such as: A repair or adjustment to a safety device or operator aid, or to a critical part of a control system, power plant, braking system, load-sustaining structural components, load hook, or in-use operating mechanism), must be inspected by a qualified person after such a repair or adjustment has been completed, prior to initial use. The inspection must meet all of the following requirements: <b>1926.1412(b)(1)(i)</b> The qualified person must determine if the repair/adjustment meets manufacturer equipment criteria (where applicable and available). <b>1926.1412(b)(1)(ii)</b> Where manufacturer equipment criteria are unavailable or inapplicable, the qualified person must: <b>1926.1412(b)(1)(ii)(A)</b> Determine if a registered professional engineer (RPE) is needed to develop criteria for the repair/adjustment. If an RPE is not needed, the employer must ensure that the criteria are developed by the qualified person. If an RPE is needed, the employer must ensure that they are developed by an RPE. <b>1926.1412(b)(1)(ii)(B)</b> Determine if the repair/adjustment meets the criteria developed in accordance with paragraph (b)(1)(i)(ii)(A) of this section. <b>1926.1412(b)(1)(iii)</b> The inspection must include functional testing of the repaired/adjusted parts and other components that may be affected by the repair/adjustment. <b>1926.1412(b)(4)</b> Equipment must not be used until an inspection under this paragraph demonstrates that the repair/adjustment meets the requirements of paragraph (b)(1)(i) of this section (or, where applicable, paragraph (b)(1)(ii) of this section). <b>1926.1412(c)</b> <i>Post-assembly</i> . <b>1926.1412(c)(1)</b> Upon completion of assembly, the equipment must be inspected by a qualified person to assure that it is configured in accordance with manufacturer equipment criteria. <b>1926.1412(c)(2)</b> Where manufacturer equipment criteria are unavailable, a qualified person must: <b>1926.1412(c)(2)(i)</b> Determine if a registered professional engineer (RPE) familiar with the type of equipment involved is needed to develop criteria for the equipment configuration. If an RPE is not needed, the employer must ensure that the criteria are developed by the qualified person. If an RPE is needed, the employer must ensure that they are developed by an RPE. <b>1926.1412(c)(2)(ii)</b> Determine if the equipment meets the criteria developed in accordance with paragraph (c)(2)(i) of this section. <b>1926.1412(c)(3)</b> Equipment must not be used until an inspection under this paragraph demonstrates that the equipment is configured in accordance with the applicable criteria. <b>1926.1412(d)</b> <i>Each shift</i> . <b>1926.1412(d)(1)</b> A competent person must begin a visual inspection prior to each shift the equipment will be used, which must be completed before or during that shift. The inspection must consist of observation for apparent deficiencies. Taking apart equipment components and booming down is not required as part of this inspection unless the results of the visual inspection or trial operation indicate that further investigation necessitating taking apart equipment components or booming down is needed. Determinations made in conducting the inspection must be reassessed in light of observations made during operation. At a minimum the inspection must include all of the following: <b>1926.1412(d)(1)(i)</b> Control mechanisms for maladjustments interfering with proper operation. <b>1926.1412(d)(1)(ii)</b> Control and drive mechanisms for apparent excessive wear of components and contamination by lubricants, water or other foreign matter. <b>1926.1412(d)(1)(iii)</b> Air, hydraulic, and other pressurized lines for deterioration or leakage, particularly those which flex in normal operation. <b>1926.1412(d)(1)(iv)</b> Hydraulic system for proper fluid level. <b>1926.1412(d)(1)(v)</b> Hooks and latches for deformation, cracks, excessive wear, or damage such as from chemicals or heat. <b>1926.1412(d)(1)(vi)</b> Wire rope reeving for compliance with the manufacturer's specifications. <b>1926.1412(d)(1)(vii)</b> Wire rope, in accordance with § 1926.1413(a). <b>1926.1412(d)(1)(viii)</b> Electrical apparatus for malfunctioning, signs of apparent excessive deterioration, dirt or moisture accumulation. <b>1926.1412(d)(1)(ix)</b> Tires (when in use) for proper inflation and condition. <b>1926.1412(d)(1)(x)</b> Ground conditions around the equipment for proper support, including ground settling under and around outriggers/stabilizers and supporting foundations, ground water accumulation, or similar conditions. This paragraph does not apply to the inspection of ground conditions for railroad tracks and their underlying support when the railroad tracks are part of the general railroad system of transportation that is regulated pursuant to the Federal Railroad Administration under 49 CFR part 213. <b>1926.1412(d)(1)(xi)</b> The equipment for level position within the tolerances specified by the equipment manufacturer's recommendations, both before each shift and after each move and setup. <b>1926.1412(d)(1)(xii)</b> Operator cab windows for significant cracks, breaks, or other deficiencies that would hamper the operator's view. <b>1926.1412(d)(1)(xiii)</b> Rails, rail stops, rail clamps and supporting surfaces when the equipment has rail traveling. This paragraph does not apply to the inspection of rails, rail stops, rail clamps and supporting surfaces when the railroad tracks are part of the general railroad system of transportation that is regulated pursuant to the Federal Railroad Administration under 49 CFR part 213. <b>1926.1412(d)(1)(xiv)</b> Safety devices and operational aids for proper operation. <b>1926.1412(d)(2)</b> If any deficiency in paragraphs (d)(1)(i) through (xiii) of this section (or in additional inspection items required to be checked for specific types of equipment in accordance with other sections of this standard) is identified, an immediate determination must be made by the competent person as to whether the deficiency constitutes a safety hazard. If the deficiency is determined to constitute a safety hazard, the equipment must be taken out of service until it has been corrected. See § 1926.1417. <b>1926.1412(d)(3)</b> If any deficiency in paragraph (d)(1)(xiv) of this section (safety devices/operational aids) is identified, the action specified in § 1926.1415 and § 1926.1416 must be taken prior to using the equipment. <b>1926.1412(e)</b> <i>Monthly</i> . <b>1926.1412(e)(1)</b> Each month the equipment is in service it must be inspected in accordance with paragraph (d) of this section (each shift). <b>1926.1412(e)(2)</b> Equipment must not be used until an inspection under this paragraph demonstrates that no corrective action under paragraphs (d)(2) and (3) of this section is required. <b>1926.1412(e)(3)</b> <i>Documentation</i> . <b>1926.1412(e)(3)(i)</b> The following information must be documented and maintained by the employer that conducts the inspection: <b>1926.1412(e)(3)(i)(A)</b> The items checked and the results of the inspection. <b>1926.1412(e)(3)(i)(B)</b> The name and signature of the person who conducted the inspection and the date. <b>1926.1412(e)(3)(ii)</b> This document must be retained for a minimum of three months. <b>1926.1412(f)</b> <i>Annual/comprehensive</i> . <b>1926.1412(f)(1)</b> At least every 12 months the equipment must be inspected by a qualified person in accordance with paragraph (d) of this section (each shift) except that the corrective action set forth in paragraphs (f)(4), (f)(5), and (f)(6) of this section must apply in place of the corrective action required by paragraphs (d)(2) and (d)(3) of this section. <b>1926.1412(f)(2)</b> In addition, at least every 12 months, the equipment must be inspected by a qualified person. Disassembly is required, as necessary, to complete the inspection. The equipment must be inspected for all of the following: <b>1926.1412(f)(2)(i)</b> Equipment structure (including the boom and, if equipped, the jib): <b>1926.1412(f)(2)(i)(A)</b> Structural members: Deformed, cracked, or significantly corroded. <b>1926.1412(f)(2)(i)(B)</b> Bolts, rivets and other fasteners: loose, failed or significantly corroded. <b>1926.1412(f)(2)(i)(C)</b> Welds for cracks. <b>1926.1412(f)(2)(ii)</b> Sheaves and drums for cracks or significant wear. <b>1926.1412(f)(2)(iii)</b> Parts such as pins, bearings, shafts, gears, rollers and locking devices for distortion, cracks or significant wear. <b>1926.1412(f)(2)(iv)</b> Brake and clutch system parts, linings, pawls and ratchets for excessive wear. <b>1926.1412(f)(2)(v)</b> Safety devices and operational aids for proper operation (including significant inaccuracies). <b>1926.1412(f)(2)(vi)</b> Gasoline, diesel, electric, or other power plants for safety-related problems (such as leaking exhaust and emergency shut-down feature) and conditions, and proper operation. <b>1926.1412(f)(2)(vii)</b> Chains and chain drive sprockets for excessive wear of sprockets and excessive chain stretch. <b>1926.1412(f)(2)(viii)</b> Travel steering, brakes, and locking devices, for proper operation. <b>1926.1412(f)(2)(ix)</b> Tires for damage or excessive wear. <b>1926.1412(f)(2)(x)</b> Hydraulic, pneumatic and other pressurized hoses, fittings and tubing, as follows: <b>1926.1412(f)(2)(x)(A)</b> Flexible hose or its junction with the fittings for indications of leaks. <b>1926.1412(f)(2)(x)(B)</b> Threaded or clamped joints for leaks. <b>1926.1412(f)(2)(x)(C)</b> Outer covering of the hose for blistering, abnormal deformation or other signs of failure/impending failure. <b>1926.1412(f)(2)(x)(D)</b> Outer surface of a hose, rigid tube, or fitting for indications of excessive abrasion or scrubbing. <b>1926.1412(f)(2)(x)(E)</b> Hydraulic and pneumatic pumps and motors, as follows: <b>1926.1412(f)(2)(x)(i)(A)</b> Performance indicators: Unusual noises or vibration, low operating speed, excessive heating of the fluid, low pressure. <b>1926.1412(f)(2)(x)(i)(B)</b> Loose bolts or fasteners. <b>1926.1412(f)(2)(x)(i)(C)</b> Shaft seals and joints between pump sections for leaks. <b>1926.1412(f)(2)(x)(ii)</b> Hydraulic and pneumatic valves, as follows: <b>1926.1412(f)(2)(x)(ii)(A)</b> Spools: Sticking, improper return to neutral, and leaks. <b>1926.1412(f)(2)(x)(ii)(B)</b> Leaks. <b>1926.1412(f)(2)(x)(ii)(C)</b> Valve housing cracks. <b>1926.1412(f)(2)(x)(ii)(D)</b> Relief valves: Failure to reach correct pressure (if there is a manufacturer procedure for checking pressure, it must be followed). <b>1926.1412(f)(2)(x)(iii)</b> Hydraulic and pneumatic cylinders, as follows: <b>1926.1412(f)(2)(x)(iii)(A)</b> Drifting caused by fluid leaking across the piston. <b>1926.1412(f)(2)(x)(iii)(B)</b> Rod seals and welded joints for leaks. <b>1926.1412(f)(2)(x)(iii)(C)</b> Cylinder rods for scores, nicks, or dents. <b>1926.1412(f)(2)(x)(iii)(D)</b> Case (barrel) for significant dents. <b>1926.1412(f)(2)(x)(iii)(E)</b> Rod eyes and connecting joints: Loose or deformed. <b>1926.1412(f)(2)(x)(iv)</b> Outrigger or stabilizer pads/floats for excessive wear or cracks. <b>1926.1412(f)(2)(x)(v)</b> Slider pads for excessive wear or cracks. <b>1926.1412(f)(2)(x)(vi)</b> Electrical components and wiring for cracked or split insulation and loose or corroded terminations. <b>1926.1412(f)(2)(x)(vii)</b> Warning labels and decals originally supplied with the equipment by the manufacturer or otherwise required under this standard: Missing or unreadable. <b>1926.1412(f)(2)(x)(viii)</b> Originally equipped operator seat (or equivalent): Missing. <b>1926.1412(f)(2)(x)(ix)</b> Operator seat: Unserviceable. <b>1926.1412(f)(2)(x)(x)</b> Originally equipped steps, ladders, handrails, guards: Missing. <b>1926.1412(f)(2)(x)(xi)</b> Steps, ladders, handrails, guards: In unusable/unsafe condition. <b>1926.1412(f)(3)</b> This inspection must include functional testing to determine that the equipment as configured in the inspection is functioning properly. <b>1926.1412(f)(4)</b> If any deficiency is identified, an immediate determination must be made by the qualified person as to whether the deficiency constitutes a safety hazard or, though not yet a safety hazard, needs to be monitored in the monthly inspections. <b>1926.1412(f)(5)</b> If the qualified person determines that a deficiency is a safety hazard, the equipment must be taken out of service until it has been corrected, except when temporary alternative measures are implemented as specified in § 1926.1416(d) or § 1926.1435(e). See § 1926.1417. <b>1926.1412(f)(6)</b> If the qualified person determines that, though not presently a safety hazard, the deficiency needs to be monitored, the employer must ensure that the deficiency is checked in the monthly inspections. <b>1926.1412(f)(7)</b> <i>Documentation of annual/comprehensive inspection</i> . The following information must be documented, maintained, and retained for a minimum of 12 months, by the employer that conducts the inspection: <b>1926.1412(f)(7)(i)</b> The items checked and the results of the inspection. <b>1926.1412(f)(7)(ii)</b> The name and signature of the person who conducted the inspection and the date. <b>1926.1412(g)</b> <i>Severe service</i> . Where the severity of use/conditions is such that there is a reasonable probability of damage or excessive wear (such as loading that may have exceeded rated capacity, shock loading that may have exceeded rated capacity, prolonged exposure to a corrosive atmosphere), the employer must stop using the equipment and a qualified person must: <b>1926.1412(g)(1)</b> Inspect the equipment for structural damage to determine if the equipment can continue to be used safely. <b>1926.1412(g)(2)</b> In light of the use/conditions determine whether any items/conditions listed in paragraph (f) of this section need to be inspected; if so, the qualified person must inspect those items/conditions. <b>1926.1412(g)(3)</b> If a deficiency is found, the employer must follow the requirements in paragraphs (f)(4) through (6) of this section. <b>1926.1412(h)</b> <i>Equipment not in regular use</i> . Equipment that has been idle for 3 months or more must be inspected by a qualified person in accordance with the requirements of paragraph (e) (Monthly) of this section before initial use. <b>1926.1412(i)</b> Any part of a manufacturer's procedures regarding inspections that relate to safe operation (such as to a safety device or operational aid, critical part of a control system, power plant, braking system, load-sustaining structural components, load hook, or in-use operating mechanism) that is more comprehensive or has a more frequent schedule of inspection than the requirements of this section must be followed. <b>1926.1412(k)</b> All documents produced under this section must be available, during the applicable document retention period, to all persons who conduct inspections under this section.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific inspection requirements.	X					
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Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
318		1926.1413 - Wire rope--inspection.	<p><b>1926.1413(a) <i>Shift inspection</i></b> . <b>1926.1413(a)(1)</b> A competent person must begin a visual inspection prior to each shift the equipment is used, which must be completed before or during that shift. The inspection must consist of observation of wire ropes (running and standing) that are likely to be in use during the shift for apparent deficiencies, including those listed in paragraph (a)(2) of this section. Untwisting (opening) of wire rope or booming down is not required as part of this inspection. <b>1926.1413(a)(2)</b> <b>(i)</b> <b>(A)</b> Significant distortion of the wire rope structure such as kinking, crushing, unstranding, birdcaging, signs of core failure or steel core protrusion between the outer strands. <b>1926.1413(a)(2)(i)(B)</b> Significant corrosion. <b>1926.1413(a)(2)(i)(C)</b> Electric arc damage (from a source other than power lines) or heat damage. <b>1926.1413(a)(2)(i)(D)</b> Improperly applied end connections. <b>1926.1413(a)(2)(i)(E)</b> Significantly corroded, cracked, bent, or worn end connections (such as from severe service). <b>1926.1413(a)(2)(ii) <i>Category II</i></b> . Apparent deficiencies in this category are: <b>1926.1413(a)(2)(ii)(A)</b> Visible broken wires, as follows: <b>1926.1413(a)(2)(ii)(A)(1)</b> In running wire ropes: Six randomly distributed broken wires in one rope lay or three broken wires in one strand in one rope lay, where a rope lay is the length along the rope in which one strand makes a complete revolution around the rope. <b>1926.1413(a)(2)(ii)(A)(2)</b> In rotation resistant ropes: Two randomly distributed broken wires in six rope diameters or four randomly distributed broken wires in 30 rope diameters. <b>1926.1413(a)(2)(ii)(A)(3)</b> In pendants or standing wire ropes: More than two broken wires in one rope lay located in rope beyond end connections and/or more than one broken wire in a rope lay located at an end connection. <b>1926.1413(a)(2)(ii)(B)</b> A diameter reduction of more than 5% from nominal diameter. <b>1926.1413(a)(2)(iii) <i>Category III</i></b> . Apparent deficiencies in this category include the following: <b>1926.1413(a)(2)(iii)(A)</b> In rotation resistant wire rope, core protrusion or other distortion indicating core failure. <b>1926.1413(a)(2)(iii)(B)</b> Prior electrical contact with a power line. <b>1926.1413(a)(2)(iii)(C)</b> A broken strand. <b>1926.1413(a)(3) <i>Critical review items</i></b> . The competent person must give particular attention to all of the following: <b>1926.1413(a)(3)(i)</b> Rotation resistant wire rope in use. <b>1926.1413(a)(3)(ii)</b> Wire rope being used for boom hoists and luffing hoists, particularly at reverse bends. <b>1926.1413(a)(3)(iii)</b> Wire rope at flange points, crossover points and repetitive pickup points on drums. <b>1926.1413(a)(3)(iv)</b> Wire rope at or near terminal ends. <b>1926.1413(a)(3)(v)</b> Wire rope in contact with saddles, equalizer sheaves or other sheaves where rope travel is limited. <b>1926.1413(a)(4) <i>Removal from service</i></b> . <b>1926.1413(a)(4)(i)</b> If a deficiency in Category I ( see paragraph (a)(2)(i) of this section) is identified, an immediate determination must be made by the competent person as to whether the deficiency constitutes a safety hazard. If the deficiency is determined to constitute a safety hazard, operations involving use of the wire rope in question must be prohibited until: <b>1926.1413(a)(4)(i)(A)</b> The wire rope is replaced ( see § 1926.1417), or <b>1926.1413(a)(4)(i)(B)</b> If the deficiency is localized, the problem is corrected by severing the wire rope in two; the undamaged portion may continue to be used. Joining lengths of wire rope by splicing is prohibited. If a rope is shortened under this paragraph, the employer must ensure that the drum will still have two wraps of wire when the load and/or boom is in its lowest position. <b>1926.1413(a)(4)(ii)</b> If a deficiency in Category II ( see paragraph (a)(2)(ii) of this section) is identified, operations involving use of the wire rope in question must be prohibited until: <b>1926.1413(a)(4)(ii)(A)</b> The employer complies with the wire rope manufacturer's established criterion for removal from service or a different criterion that the wire rope manufacturer has approved in writing for that specific wire rope ( see § 1926.1417), <b>1926.1413(a)(4)(ii)(B)</b> The wire rope is replaced ( see § 1926.1417), or <b>1926.1413(a)(4)(ii)(C)</b> If the deficiency is localized, the problem is corrected by severing the wire rope in two; the undamaged portion may continue to be used. Joining lengths of wire rope by splicing is prohibited. If a rope is shortened under this paragraph, the employer must ensure that the drum will still have two wraps of wire when the load and/or boom is in its lowest position. <b>1926.1413(a)(4)(iii)(A)</b> If the deficiency (other than power line contact) is localized, the problem is corrected by severing the wire rope in two; the undamaged portion may continue to be used. Joining lengths of wire rope by splicing is prohibited. Repair of wire rope that contacted an energized power line is also prohibited. If a rope is shortened under this paragraph, the employer must ensure that the drum will still have two wraps of wire when the load and/or boom is in its lowest position. <b>1926.1413(a)(4)(iv)</b> Where a wire rope is required to be removed from service under this section, either the equipment (as a whole) or the hoist with that wire rope must be tagged-out, in accordance with § 1926.1417(f)(1), until the wire rope is repaired or replaced. <b>1926.1413(b) <i>Monthly inspection</i></b> . <b>1926.1413(b)(1)</b> Each month an inspection must be conducted in accordance with paragraph (a) (shift inspection) of this section. <b>1926.1413(b)(2)</b> The inspection must include any deficiencies that the qualified person who conducts the annual inspection determines under paragraph (c)(3)(ii) of this section must be monitored. <b>1926.1413(b)(3)</b> Wire ropes on equipment must not be used until an inspection under this paragraph demonstrates that no corrective action under paragraph (a)(4) of this section is required. <b>1926.1413(b)(4)</b> The inspection must be documented according to § 1926.1412(e)(3) (monthly inspection documentation). <b>1926.1413(c) <i>Annual/comprehensive</i></b> . <b>1926.1413(c)(1)</b> At least every 12 months, wire ropes in use on equipment must be inspected by a qualified person in accordance with paragraph (a) of this section (shift inspection). <b>1926.1413(c)(2)</b> In addition, at least every 12 months, the wire ropes in use on equipment must be inspected by a qualified person, as follows: <b>1926.1413(c)(2)(i)</b> The inspection must be for deficiencies of the types listed in paragraph (a)(2) of this section. <b>1926.1413(c)(2)(ii)</b> The inspection must be complete and thorough, covering the surface of the entire length of the wire ropes, with particular attention given to all of the following: <b>1926.1413(c)(2)(ii)(A)</b> Critical review items listed in paragraph (a)(3) of this section. <b>1926.1413(c)(2)(ii)(B)</b> Those sections that are normally hidden during shift and monthly inspections. <b>1926.1413(c)(2)(ii)(C)</b> Wire rope subject to reverse bends. <b>1926.1413(c)(2)(ii)(D)</b> Wire rope passing over sheaves. <b>1926.1413(c)(2)(iii) <i>Exception</i></b>: In the event an inspection under paragraph (c)(2) of this section is not feasible due to existing set-up and configuration of the equipment (such as where an assist crane is needed) or due to site conditions (such as a dense urban setting), such inspections must be conducted as soon as it becomes feasible, but no longer than an additional 6 months for running ropes and, for standing ropes, at the time of disassembly. <b>1926.1413(c)(3)</b> If a deficiency is identified, an immediate determination must be made by the qualified person as to whether the deficiency constitutes a safety hazard. <b>1926.1413(c)(3)(i)</b> If the deficiency is determined to constitute a safety hazard, operations involving use of the wire rope in question must be prohibited until: <b>1926.1413(c)(3)(i)(A)</b> The wire rope is replaced ( see § 1926.1417), or <b>1926.1413(c)(3)(i)(B)</b> If the deficiency is localized, the problem is corrected by severing the wire rope in two; the undamaged portion may continue to be used. Joining lengths of wire rope by splicing is prohibited. If a rope is shortened under this paragraph, the employer must ensure that the drum will still have two wraps of wire when the load and/or boom is in its lowest position. <b>1926.1413(c)(3)(ii)</b> If the qualified person determines that, though not presently a safety hazard, the deficiency needs to be monitored, the employer must ensure that the deficiency is checked in the monthly inspections. <b>1926.1413(c)(4)</b> The inspection must be documented according to § 1926.1412(f)(7) (annual/comprehensive inspection documentation). <b>1926.1413(d)</b> Rope lubricants that are of the type that hinder inspection must not be used. <b>1926.1413(e)</b> All documents produced under this section must be available, during the applicable document retention period, to all persons who conduct inspections under this section.</p>	No	Policy provides information about lifting and crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including operational aids.	X					
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320		1926.1414 - Wire rope--selection and installation criteria.	<p><b>1926.1414(a)</b> Original equipment wire rope and replacement wire rope must be selected and installed in accordance with the requirements of this section. Selection of replacement wire rope must be in accordance with the recommendations of the wire rope manufacturer, the equipment manufacturer, or a qualified person. <b>1926.1414(b) <i>Wire rope design criteria</i></b>: Wire rope (other than rotation resistant rope) must comply with either Option (1) or Option (2) of this section, as follows: <b>1926.1414(b)(1) <i>Option (1)</i></b> . Wire rope must comply with section 5-1.7.1 of ASME B30.5-2004 (incorporated by reference, see § 1926.6) except that section's paragraph (c) must not apply. <b>1926.1414(b)(2) <i>Option (2)</i></b> . Wire rope must be designed to have, in relation to the equipment's rated capacity, a sufficient minimum breaking force and design factor so that compliance with the applicable inspection provisions in § 1926.1413 will be an effective means of preventing sudden rope failure. <b>1926.1414(c)</b> Wire rope must be compatible with the safe functioning of the equipment. <b>1926.1414(d) <i>Boom hoist reeving</i></b> . <b>1926.1414(d)(1)</b> Fiber core ropes must not be used for boom hoist reeving, except for derricks. <b>1926.1414(d)(2)</b> Rotation resistant ropes must be used for boom hoist reeving only where the requirements of paragraph (e)(4)(ii) of this section are met. <b>1926.1414(e) <i>Rotation resistant ropes</i></b> . <b>1926.1414(e)(1) <i>Definitions</i></b> . <b>1926.1414(e)(1)(i) <i>Type I rotation resistant wire rope ("Type I")</i></b> . Type I rotation resistant rope is stranded rope constructed to have little or no tendency to rotate or, if guided, transmits little or no torque. It has at least 15 outer strands and comprises an assembly of at least three layers of strands laid helically over a center in two operations. The direction of lay of the outer strands is opposite to that of the underlying layer. <b>1926.1414(e)(1)(ii) <i>Type II rotation resistant wire rope ("Type II")</i></b> . Type II rotation resistant rope is stranded rope constructed to have significant resistance to rotation. It has at least 10 outer strands and comprises an assembly of two or more layers of strands laid helically over a center in two or three operations. The direction of lay of the outer strands is opposite to that of the underlying layer. <b>1926.1414(e)(1)(iii) <i>Type III rotation resistant wire rope ("Type III")</i></b> . Type III rotation resistant rope is stranded rope constructed to have limited resistance to rotation. It has no more than nine outer strands, and comprises an assembly of two layers of strands laid helically over a center in two operations. The direction of lay of the outer strands is opposite to that of the underlying layer. <b>1926.1414(e)(2) <i>Requirements</i></b> . <b>1926.1414(e)(2)(i)</b> Types II and III with an operating design factor of less than 5 must not be used for duty cycle or repetitive lifts. <b>1926.1414(e)(2)(ii)</b> Rotation resistant ropes (including Types I, II and III) must have an operating design factor of no less than 3.5. <b>1926.1414(e)(2)(iii)</b> Type I must have an operating design factor of no less than 5, except where the wire rope manufacturer and the equipment manufacturer approves the design factor, in writing. <b>1926.1414(e)(2)(iv)</b> Types II and III must have an operating design factor of no less than 5, except where the requirements of paragraph (e)(3) of this section are met. <b>1926.1414(e)(3)</b> When Types II and III with an operating design factor of less than 5 are used (for non-duty cycle, non-repetitive lifts), the following requirements must be met for each lifting operation: <b>1926.1414(e)(3)(i)</b> A qualified person must inspect the rope in accordance with § 1926.1413(a). The rope must be used only if the qualified person determines that there are no deficiencies constituting a hazard. In making this determination, more than one broken wire in any one rope lay must be considered a hazard. <b>1926.1414(e)(3)(ii)</b> Operations must be conducted in such a manner and at such speeds as to minimize dynamic effects. <b>1926.1414(e)(3)(iii)</b> Each lift made under § 1926.1414(e)(3) must be recorded in the monthly and annual inspection documents. Such prior uses must be considered by the qualified person in determining whether to use the rope again. <b>1926.1414(e)(4) <i>Additional requirements for rotation resistant ropes for boom hoist reeving</i></b> . <b>1926.1414(e)(4)(i)</b> Rotation resistant ropes must not be used for boom hoist reeving, except where the requirements of paragraph (e)(4)(ii) of this section are met. <b>1926.1414(e)(4)(ii)</b> Rotation resistant ropes may be used as boom hoist reeving when load hoists are used as boom hoists for attachments such as luffing attachments or boom and mast attachment systems. Under these conditions, all of the following requirements must be met: <b>1926.1414(e)(4)(iii)(A)</b> The drum must provide a first layer rope pitch diameter of not less than 18 times the nominal diameter of the rope used. <b>1926.1414(e)(4)(iii)(B)</b> The requirements in § 1926.1426(a) (irrespective of the date of manufacture of the equipment), and § 1926.1426(b). <b>1926.1414(e)(4)(iii)(C)</b> The requirements in ASME B30.5-2004 sections 5-1.3.2(a), (a)(2) through (a)(4), (b) and (d) (incorporated by reference, see § 1926.6) except that the minimum pitch diameter for sheaves used in multiple rope reeving is 18 times the nominal diameter of the rope used (instead of the value of 16 specified in section 5-1.3.2(d)). <b>1926.1414(e)(4)(iii)(D)</b> All sheaves used in the boom hoist reeving system must have a rope pitch diameter of not less than 18 times the nominal diameter of the rope used. <b>1926.1414(e)(4)(iii)(E)</b> The operating design factor for the boom hoist reeving system must be not less than five. <b>1926.1414(e)(4)(iii)(F)</b> The operating design factor for these ropes must be the total minimum breaking force of all parts of rope in the system divided by the load imposed on the rope system when supporting the static weights of the structure and the load within the equipment's rated capacity. <b>1926.1414(e)(4)(iii)(G)</b> When provided, a power-controlled lowering system must be capable of handling rated capacities and speeds as specified by the manufacturer. <b>1926.1414(f)</b> Wire rope clips used in conjunction with wedge sockets must be attached to the unloaded dead end of the rope only, except that the use of devices specifically designed for dead-ending rope in a wedge socket is permitted. <b>1926.1414(g)</b> Socketing must be done in the manner specified by the manufacturer of the wire rope or fitting. <b>1926.1414(h)</b> Prior to cutting a wire rope, seizings must be placed on each side of the point to be cut. The length and number of seizings must be in accordance with the wire rope manufacturer's instructions.</p>	No		X					
321		1926.1415 - Safety devices.	<p><b>1926.1415(a) <i>Safety devices</i></b> . The following safety devices are required on all equipment covered by this subpart, unless otherwise specified: <b>1926.1415(a)(1) <i>Crane level indicator</i></b> . <b>1926.1415(a)(1)(i)</b> The equipment must have a crane level indicator that is either built into the equipment or is available on the equipment. <b>1926.1415(a)(1)(ii)</b> If a built-in crane level indicator is not working properly, it must be tagged-out or removed. If a removable crane level indicator is not working properly, it must be removed. <b>1926.1415(a)(1)(iii)</b> This requirement does not apply to portal cranes, derricks, floating cranes/derricks and land cranes/derricks on barges, pontoons, vessels or other means of flotation. <b>1926.1415(a)(2)</b> Boom stops, except for derricks and hydraulic booms. <b>1926.1415(a)(3)</b> Jib stops (if a jib is attached), except for derricks. <b>1926.1415(a)(4)</b> Equipment with foot pedal brakes must have locks. <b>1926.1415(a)(5)</b> Hydraulic outrigger jacks and hydraulic stabilizer jacks must have an integral holding device/check valve. <b>1926.1415(a)(6)</b> Equipment on rails must have rail clamps and rail stops, except for portal cranes. <b>1926.1415(a)(7) <i>Horn</i></b> <b>1926.1415(a)(7)(i)</b> The equipment must have a horn that is either built into the equipment or is on the equipment and immediately available to the operator. <b>1926.1415(a)(7)(ii)</b> If a built-in horn is not working properly, it must be tagged-out or removed. If a removable horn is not working properly, it must be removed. <b>1926.1415(b) <i>Proper operation required</i></b> . Operations must not begin unless all of the devices listed in this section are in proper working order. If a device stops working properly during operations, the operator must safely stop operations. If any of the devices listed in this section are not in proper working order, the equipment must be taken out of service and operations must not resume until the device is again working properly. See § 1926.1417 (Operation). Alternative measures are not permitted to be used.</p>	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific safety devices.	X					



Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
322		1926.1416 - Operational aids.	<p><b>1926.1416(a)</b> The devices listed in this section ("listed operational aids") are required on all equipment covered by this subpart, unless otherwise specified. <b>1926.1416(a)(1)</b> The requirements in paragraphs (e)(1), (e)(2), and (e)(3) of this section do not apply to articulating cranes. <b>1926.1416(a)(2)</b> The requirements in paragraphs (d)(3), (e)(1), and (e)(4) of this section apply only to those digger derricks manufactured after November 8, 2011. <b>1926.1416(b)</b> Operations must not begin unless the listed operational aids are in proper working order, except where an operational aid is being repaired the employer uses the specified temporary alternative measures. The time periods permitted for repairing defective operational aids are specified in paragraphs (d) and (e) of this section. More protective alternative measures specified by the crane/derrick manufacturer, if any, must be followed. <b>1926.1416(c)</b> If a listed operational aid stops working properly during operations, the operator must safely stop operations until the temporary alternative measures are implemented or the device is again working properly. If a replacement part is no longer available, the use of a substitute device that performs the same type of function is permitted and is not considered a modification under § 1926.1434. <b>1926.1416(d) Category I operational aids and alternative measures</b> . Operational aids listed in this paragraph that are not working properly must be repaired no later than 7 calendar days after the deficiency occurs. <i>Exception:</i> If the employer documents that it has ordered the necessary parts within 7 calendar days of the occurrence of the deficiency, the repair must be completed within 7 calendar days of receipt of the parts. See § 1926.1417(j) for additional requirements. <b>1926.1416(d)(1) Boom hoist limiting device</b> . <b>1926.1416(d)(1)(i)</b> For equipment manufactured after December 16, 1969, a boom hoist limiting device is required. <i>Temporary alternative measures (use at least one)</i> . One or more of the following methods must be used: <b>1926.1416(d)(1)(i)(A)</b> Use a boom angle indicator. <b>1926.1416(d)(1)(i)(B)</b> Clearly mark the boom hoist cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to keep the boom within the minimum allowable radius. In addition, install mirrors or remote video cameras and displays if necessary for the operator to see the mark. <b>1926.1416(d)(1)(i)(C)</b> Clearly mark the boom hoist cable (so that it can easily be seen by a spotter) at a point that will give the spotter sufficient time to signal the operator and have the operator stop the hoist to keep the boom within the minimum allowable radius. <b>1926.1416(d)(1)(ii)</b> If the equipment was manufactured on or before December 16, 1969, and is not equipped with a boom hoist limiting device, at least one of the measures in paragraphs (d)(1)(i)(A) through (C) of this section must be used. <b>1926.1416(d)(2) Luffing jib limiting device</b> . Equipment with a luffing jib must have a luffing jib limiting device. Temporary alternative measures are the same as in paragraph (d)(1)(i) of this section, except to limit the movement of the luffing jib rather than the boom hoist. <b>1926.1416(d)(3) Anti two-blocking device</b> . <b>1926.1416(d)(3)(i)</b> Telescopic boom cranes manufactured after February 28, 1992, must be equipped with a device which automatically prevents damage from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component). The device(s) must prevent such damage at all points where two-blocking could occur. <i>Temporary alternative measures:</i> Clearly mark the cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to prevent two-blocking, and use a spotter when extending the boom. <b>1926.1416(d)(3)(ii) Lattice boom cranes</b> . <b>1926.1416(d)(3)(ii)(A)</b> Lattice boom cranes manufactured after Feb 28, 1992, must be equipped with a device that either automatically prevents damage and load failure from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component), or warns the operator in time for the operator to prevent two-blocking. The device must prevent such damage/failure or provide adequate warning for all points where two-blocking could occur. <b>1926.1416(d)(3)(ii)(B)</b> Lattice boom cranes and derricks manufactured after November 8, 2011 must be equipped with a device which automatically prevents damage and load failure from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component). The device(s) must prevent such damage/failure at all points where two-blocking could occur. <b>1926.1416(d)(3)(ii)(C) Exception</b> . The requirements in paragraphs (d)(3)(ii)(A) and (B) of this section do not apply to such lattice boom equipment when used for dragline, clamshell (grapple), magnet, drop ball, container handling, concrete bucket, marine operations that do not involve hoisting personnel, and pile driving work. <b>1926.1416(d)(3)(ii)(D) Temporary alternative measures</b> . Clearly mark the cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to prevent two-blocking, or use a spotter. <b>1926.1416(d)(3)(iii)</b> Articulating cranes manufactured after December 31, 1999, that are equipped with a load hoist must be equipped with a device that automatically prevents damage from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component). The device must prevent such damage at all points where two-blocking could occur. <i>Temporary alternative measures:</i> When two-blocking could only occur with movement of the load hoist, clearly mark the cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to prevent two-blocking, or use a spotter. When two-blocking could occur without movement of the load hoist, clearly mark the cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to prevent two-blocking, and use a spotter when extending the boom. <b>1926.1416(e) Category II operational aids and alternative measures</b> . Operational aids listed in this paragraph that are not working properly must be repaired no later than 30 calendar days after the deficiency occurs. <i>Exception:</i> If the employer documents that it has ordered the necessary parts within 7 calendar days of the occurrence of the deficiency, and the part is not received in time to complete the repair in 30 calendar days, the repair must be completed within 7 calendar days of receipt of the parts. See § 1926.1417(j) for additional requirements. <b>1926.1416(e)(1) Boom angle or radius indicator</b> . The equipment must have a boom angle or radius indicator readable from the operator's station. <i>Temporary alternative measures:</i> Radii or boom angle must be determined by measuring the radii or boom angle with a measuring device. <b>1926.1416(e)(2)</b> Jib angle indicator if the equipment has a luffing jib. <i>Temporary alternative measures:</i> Radii or jib angle must be determined by ascertaining the main boom angle and then measuring the radii or jib angle with a measuring device. <b>1926.1416(e)(3) Boom length indicator</b> if the equipment has a telescopic boom, except where the rated capacity is independent of the boom length. <i>Temporary alternative measures</i> . One or more of the following methods must be used: <b>1926.1416(e)(3)(i)</b> Mark the boom with measured marks to calculate boom length. <b>1926.1416(e)(3)(ii)</b> Calculate boom length from boom angle and radius measurements. <b>1926.1416(e)(3)(iii)</b> Measure the boom with a measuring device. <b>1926.1416(e)(4) Load weighing and similar devices</b> . <b>1926.1416(e)(4)(i)</b> Equipment (other than derricks and articulating cranes) manufactured after March 29, 2003 with a rated capacity over 6,000 pounds must have at least one of the following: load weighing device, load moment (or rated capacity) indicator, or load moment (or rated capacity) limiter. <i>Temporary alternative measures:</i> The weight of the load must be determined from a source recognized by the industry (such as the load's manufacturer) or by a calculation method recognized by the industry (such as calculating a steel beam from measured dimensions and a known per foot weight). This information must be provided to the operator prior to the lift. <b>1926.1416(e)(4)(ii)</b> Articulating cranes manufactured after November 8, 2011 must have at least one of the following: automatic overload prevention device, load weighing device, load moment (or rated capacity) indicator, or load moment (rated capacity) limiter. <i>Temporary alternative measures:</i> The weight of the load must be determined from a source recognized by the industry (such as the load's manufacturer) or by a calculation method recognized by the industry (such as calculating a steel beam from measured dimensions and a known per foot weight). This information must be provided to the operator prior to the lift. <b>1926.1416(e)(5)</b> The following devices are required on equipment manufactured after November 8, 2011: <b>1926.1416(e)(5)(i)</b> Outrigger/stabilizer position (horizontal beam extension) sensor/monitor if the equipment has outriggers or stabilizers. <i>Temporary alternative measures:</i> The operator must verify that the position of the outriggers or stabilizers is correct (in accordance with manufacturer procedures) before beginning operations requiring outrigger or stabilizer deployment. <b>1926.1416(e)(5)(ii)</b> Hoist drum rotation indicator if the equipment has a hoist drum not visible from the operator's station. <i>Temporary alternative measures:</i> Mark the drum to indicate the rotation of the drum. In addition, install mirrors or remote video cameras and displays if necessary for the operator to see the mark.</p>	No	Policy provides information about lifting and crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including operational aids.	X					
323											
324		1926.1417 - Operation.	<p><b>1926.1417(a)</b> The employer must comply with all manufacturer procedures applicable to the operational functions of equipment, including its use with attachments. <b>1926.1417(b) Unavailable operation procedures</b> . <b>1926.1417(b)(1)</b> Where the manufacturer procedures are unavailable, the employer must develop and ensure compliance with all procedures necessary for the safe operation of the equipment and attachments. <b>1926.1417(b)(2)</b> Procedures for the operational controls must be developed by a qualified person. <b>1926.1417(b)(3)</b> Procedures related to the capacity of the equipment must be developed and signed by a registered professional engineer familiar with the equipment. <b>1926.1417(c) Accessibility of procedures</b> . <b>1926.1417(c)(1)</b> The procedures applicable to the operation of the equipment, including rated capacities (load charts), recommended operating speeds, special hazard warnings, instructions, and operator's manual, must be readily available in the cab at all times for use by the operator. <b>1926.1417(c)(2)</b> Where rated capacities are available in the cab only in electronic form: In the event of a failure which makes the rated capacities inaccessible, the operator must immediately cease operations or follow safe shut-down procedures until the rated capacities (in electronic or other form) are available. <b>1926.1417(d)</b> The operator must not engage in any practice or activity that diverts his/her attention while actually engaged in operating the equipment, such as the use of cellular phones (other than when used for signal communications). <b>1926.1417(e) Leaving the equipment unattended</b> . <b>1926.1417(e)(1)</b> The operator must not leave the controls while the load is suspended, except where all of the following are met: <b>1926.1417(e)(1)(i)</b> The operator remains adjacent to the equipment and is not engaged in any other duties. <b>1926.1417(e)(1)(ii)</b> The load is to be held suspended for a period of time exceeding normal lifting operations. <b>1926.1417(e)(1)(iii)</b> The competent person determines that it is safe to do so and implements measures necessary to restrain the boom hoist and telescoping, load, swing, and outrigger or stabilizer functions. <b>1926.1417(e)(1)(iv)</b> Barricades or caution lines, and notices, are erected to prevent all employees from entering the fall zone. No employees, including those listed in § 1926.1425(b)(1) through (3), § 1926.1425(d) or § 1926.1425(e), are permitted in the fall zone. <b>1926.1417(e)(2)</b> The provisions in § 1926.1417(e)(1) do not apply to working gear (such as slings, spreader bars, ladders, and welding machines) where the weight of the working gear is negligible relative to the lifting capacity of the equipment as positioned, and the working gear is suspended over an area other than an entrance or exit. <b>1926.1417(f) Tag-out</b> . <b>1926.1417(f)(1) Tagging out of service equipment/functions</b> . Where the employer has taken the equipment out of service, a tag must be placed in the cab stating that the equipment is out of service and is not to be used. Where the employer has taken a function(s) out of service, a tag must be placed in a conspicuous position stating that the function is out of service and is not to be used. <b>1926.1417(f)(2) Response to "do not operate"/tag-out signs</b> . <b>1926.1417(f)(2)(i)</b> If there is a warning (tag-out or maintenance/do not operate) sign on the equipment or starting control, the operator must not activate the switch or start the equipment until the sign has been removed by a person authorized to remove it, or until the operator has verified that: <b>1926.1417(f)(2)(i)(A)</b> No one is servicing, working on, or otherwise in a dangerous position on the machine. <b>1926.1417(f)(2)(i)(B)</b> The equipment has been repaired and is working properly. <b>1926.1417(f)(2)(ii)</b> If there is a warning (tag-out or maintenance/do not operate) sign on any other switch or control, the operator must not activate that switch or control until the sign has been removed by a person authorized to remove it, or until the operator has verified that the requirements in paragraphs (f)(2)(i)(A) and (B) of this section have been met. <b>1926.1417(g)</b> Before starting the engine, the operator must verify that all controls are in the proper starting position and that all personnel are in the clear. <b>1926.1417(h) Storm warning</b> . When a local storm warning has been issued, the competent person must determine whether it is necessary to implement manufacturer recommendations for securing the equipment. <b>1926.1417(j)</b> If equipment adjustments or repairs are necessary: <b>1926.1417(j)(1)</b> The operator must, in writing, promptly inform the person designated by the employer to receive such information and, where there are successive shifts, to the next operator; and <b>1926.1417(j)(2)</b> The employer must notify all affected employees, at the beginning of each shift, of the necessary adjustments or repairs and all alternative measures. <b>1926.1417(k)</b> Safety devices and operational aids must not be used as a substitute for the exercise of professional judgment by the operator. <b>1926.1417(m)</b> If the competent person determines that there is a slack rope condition requiring re-spooling of the rope, it must be verified (before starting to lift) that the rope is seated on the drum and in the sheaves as the slack is removed. <b>1926.1417(n)</b> The competent person must adjust the equipment and/or operations to address the effect of wind, ice, and snow on equipment stability and rated capacity. <b>1926.1417(o) Compliance with rated capacity</b> . <b>1926.1417(o)(1)</b> The equipment must not be operated in excess of its rated capacity. <b>1926.1417(o)(2)</b> The operator must not be required to operate the equipment in a manner that would violate paragraph (o)(1) of this section. <b>1926.1417(o)(3) Load weight</b> . The operator must verify that the load is within the rated capacity of the equipment by at least one of the following methods: <b>1926.1417(o)(3)(i)</b> The weight of the load must be determined from a source recognized by the industry (such as the load's manufacturer), or by a calculation method recognized by the industry (such as calculating a steel beam from measured dimensions and a known per foot weight), or by other equally reliable means. In addition, when requested by the operator, this information must be provided to the operator prior to the lift; or <b>1926.1417(o)(3)(ii)</b> The operator must begin hoisting the load to determine, using a load weighing device, load moment indicator, rated capacity indicator, or rated capacity limiter, if it exceeds 75 percent of the maximum rated capacity at the longest radius that will be used during the lift operation. If it does, the operator must not proceed with the lift until he/she verifies the weight of the load in accordance with paragraph (o)(3)(i) of this section. <b>1926.1417(p)</b> The boom or other parts of the equipment must not contact any obstruction. <b>1926.1417(q)</b> The equipment must not be used to drag or pull loads sideways. <b>1926.1417(r)</b> On wheel-mounted equipment, no loads must be lifted over the front area, except as permitted by the manufacturer. <b>1926.1417(s)</b> The operator must test the brakes each time a load that is 90% or more of the maximum line pull is handled by lifting the load a few inches and applying the brakes. In duty cycle and repetitive lifts where each lift is 90% or more of the maximum line pull, this requirement applies to the first lift but not to successive lifts. <b>1926.1417(t)</b> Neither the load nor the boom must be lowered below the point where less than two full wraps of rope remain on their respective drums. <b>1926.1417(u) Traveling with a load</b> . <b>1926.1417(u)(1)</b> Traveling with a load is prohibited if the practice is prohibited by the manufacturer. <b>1926.1417(u)(2)</b> Where traveling with a load, the employer must ensure that: <b>1926.1417(u)(2)(i)</b> A competent person supervises the operation, determines if it is necessary to reduce rated capacity, and makes determinations regarding load position, boom location, ground support, travel route, overhead obstructions, and speed of movement necessary to ensure safety. <b>1926.1417(u)(2)(ii)</b> The determinations of the competent person required in paragraph (u)(2)(i) of this section are implemented. <b>1926.1417(u)(2)(iii)</b> For equipment with tires, tire pressure specified by the manufacturer is maintained. <b>1926.1417(v)</b> Rotational speed of the equipment must be such that the load does not swing out beyond the radius at which it can be controlled. <b>1926.1417(w)</b> A tag or restraint line must be used if necessary to prevent rotation of the load that would be hazardous. <b>1926.1417(x)</b> The brakes must be adjusted in accordance with manufacturer procedures to prevent unintended movement. <b>1926.1417(y)</b> The operator must obey a stop (or emergency stop) signal, irrespective of who gives it. <b>1926.1417(z) Swinging locomotive cranes</b> . A locomotive crane must not be swung into a position where railway cars on an adjacent track could strike it, until it is determined that cars are not being moved on the adjacent track and that proper flag protection has been established. <b>1926.1417(aa) Counterweight/ballast</b> . <b>1926.1417(aa)(1)</b> The following applies to equipment other than tower cranes: <b>1926.1417(aa)(1)(i)</b> Equipment must not be operated without the counterweight or ballast in place as specified by the manufacturer. <b>1926.1417(aa)(1)(ii)</b> The maximum counterweight or ballast specified by the manufacturer for the equipment must not be exceeded. <b>1926.1417(aa)(2)</b> Counterweight/ballast requirements for tower cranes are specified in § 1926.1435(b)(8).</p>	No	Policy provides information about lifting and crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including operational aids.	X					
325											
326		1926.1418 - Authority to stop operation.	Whenever there is a concern as to safety, the operator must have the authority to stop and refuse to handle loads until a qualified person has determined that safety has been assured.	Partial	Policy provides information about crane use and the authority to stop work, however policy is too brief/high-level and is silent on many individual provisions of the regulation.	X					

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1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
327		1926.1419 - Signals--general requirements.	<b>1926.1419(a)</b> A signal person must be provided in each of the following situations: <b>1926.1419(a)(1)</b> The point of operation, meaning the load travel or the area near or at load placement, is not in full view of the operator. <b>1926.1419(a)(2)</b> When the equipment is traveling, the view in the direction of travel is obstructed. <b>1926.1419(a)(3)</b> Due to site specific safety concerns, either the operator or the person handling the load determines that it is necessary. <b>1926.1419(b) Types of signals</b> . Signals to operators must be by hand, voice, audible, or new signals. <b>1926.1419(c) Hand signals</b> . <b>1926.1419(c)(1)</b> When using hand signals, the Standard Method must be used (see Appendix A of this subpart). <i>Exception:</i> Where use of the Standard Method for hand signals is infeasible, or where an operation or use of an attachment is not covered in the Standard Method, non-standard hand signals may be used in accordance with paragraph (c)(2) of this section. <b>1926.1419(c)(2) Non-standard hand signals</b> . When using non-standard hand signals, the signal person, operator, and lift director (where there is one) must contact each other prior to the operation and agree on the non-standard hand signals that will be used. <b>1926.1419(d) New signals</b> . Signals other than hand, voice, or audible signals may be used where the employer demonstrates that: <b>1926.1419(d)(1)</b> The new signals provide at least equally effective communication as voice, audible, or Standard Method hand signals, or <b>1926.1419(d)(2)</b> The new signals comply with a national consensus standard that provides at least equally effective communication as voice, audible, or Standard Method hand signals. <b>1926.1419(e) Suitability</b> . The signals used (hand, voice, audible, or new), and means of transmitting the signals to the operator (such as direct line of sight, video, radio, etc. ), must be appropriate for the site conditions. <b>1926.1419(f)</b> During operations requiring signals, the ability to transmit signals between the operator and signal person must be maintained. If that ability is interrupted at any time, the operator must safely stop operations requiring signals until it is reestablished and a proper signal is given and understood. <b>1926.1419(g)</b> If the operator becomes aware of a safety problem and needs to communicate with the signal person, the operator must safely stop operations. Operations must not resume until the operator and signal person agree that the problem has been resolved. <b>1926.1419(h)</b> Only one person may give signals to a crane/derrick at a time, except in circumstances covered by paragraph (j) of this section. <b>1926.1419(j)</b> Anyone who becomes aware of a safety problem must alert the operator or signal person by giving the stop or emergency stop signal. ( <b>Note:</b> § 1926.1417(y) requires the operator to obey a stop or emergency stop signal). <b>1926.1419(k)</b> All directions given to the operator by the signal person must be given from the operator's direction perspective. <b>1926.1419(m) Communication with multiple cranes/derricks</b> . Where a signal person(s) is in communication with more than one crane/derrick, a system must be used for identifying the crane/derrick each signal is for, as follows: <b>1926.1419(m)(1)</b> for each signal, prior to giving the function/direction, the signal person must identify the crane/derrick the signal is for, or <b>1926.1419(m)(2)</b> must use an equally effective method of identifying which crane/derrick the signal is for.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific signals.	X				
328		1926.1420 - Signals--radio, telephone or other electronic transmission of signals.	<b>1926.1420(a)</b> The device(s) used to transmit signals must be tested on site before beginning operations to ensure that the signal transmission is effective, clear, and reliable. <b>1926.1420(b)</b> Signal transmission must be through a dedicated channel, except: <b>1926.1420(b)(1)</b> Multiple cranes/derricks and one or more signal persons may share a dedicated channel for the purpose of coordinating operations. <b>1926.1420(b)(2)</b> Where a crane is being operated on or adjacent to railroad tracks, and the actions of the crane operator need to be coordinated with the movement of other equipment or trains on the same or adjacent tracks. <b>1926.1420(c)</b> The operator's reception of signals must be by a hands-free system.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific signals.	X				
329		1926.1421 - Signals--voice signals--additional requirements.	<b>1926.1421(a)</b> Prior to beginning operations, the operator, signal person and lift director (if there is one), must contact each other and agree on the voice signals that will be used. Once the voice signals are agreed upon, these workers need not meet again to discuss voice signals unless another worker is added or substituted, there is confusion about the voice signals, or a voice signal is to be changed. <b>1926.1421(b)</b> Each voice signal must contain the following three elements, given in the following order: function (such as hoist, boom, etc. ), direction; distance and/or speed; function, stop command. <b>1926.1421(c)</b> The operator, signal person and lift director (if there is one), must be able to effectively communicate in the language used.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific signals.	X				
330		1926.1422 - Signals--hand signal chart.	Hand signal charts must be either posted on the equipment or conspicuously posted in the vicinity of the hoisting operations.	No	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific signals.	X				
331		1926.1423 - Fall protection.	<b>1926.1423(a) Application</b> . <b>1926.1423(a)(1)</b> Paragraphs (b), (c)(3), (e) and (f) of this section apply to all equipment covered by this subpart except tower cranes. <b>1926.1423(a)(2)</b> Paragraphs (c)(1), (c)(2), (d), (g), (j) and (k) of this section apply to all equipment covered by this subpart. <b>1926.1423(a)(3)</b> Paragraphs (c)(4) and (h) of this section apply only to tower cranes. <b>1926.1423(b) Boom walkways</b> . <b>1926.1423(b)(1)</b> Equipment manufactured after November 8, 2011 with lattice booms must be equipped with walkways on the boom(s) if the vertical profile of the boom (from cord centerline to cord centerline) is 6 or more feet. <b>1926.1423(b)(2) Boom walkway criteria</b> . <b>1926.1423(b)(2)(i)</b> The walkways must be at least 12 inches wide. <b>1926.1423(b)(2)(ii)</b> Guardrails, railings and other permanent fall protection attachments along walkways are: <b>1926.1423(b)(2)(ii)(A)</b> Not required. <b>1926.1423(b)(2)(ii)(B)</b> Prohibited on booms supported by pendant ropes or bars if the guardrails/railings/attachments could be snagged by the ropes or bars. <b>1926.1423(b)(2)(ii)(C)</b> Prohibited if of the removable type (designed to be installed and removed each time the boom is assembled/disassembled). <b>1926.1423(b)(2)(ii)(D)</b> Where not prohibited, guardrails or railings may be of any height up to, but not more than, 45 inches. <b>1926.1423(c) Steps, handholds, ladders, grabrails, guardrails and railings</b> . <b>1926.1423(c)(1)</b> Section 1926.502(b) does not apply to equipment covered by this subpart. <b>1926.1423(c)(2)</b> The employer must maintain in good condition originally-equipped steps, handholds, ladders and guardrails/railings/grabrails. <b>1926.1423(c)(3)</b> Equipment manufactured after November 8, 2011 must be equipped so as to provide safe access and egress between the ground and the operator work station(s), including the forward and rear positions, by the provision of devices such as steps, handholds, ladders, and guardrails/railings/grabrails. These devices must meet the following criteria: <b>1926.1423(c)(3)(i)</b> Steps, handholds, ladders and guardrails/railings/grabrails must meet the criteria of SAE J185 (May 2003) (incorporated by reference, see § 1926.6) or ISO 11660-2:1994(E) (incorporated by reference, see § 1926.6) except where infeasible. <b>1926.1423(c)(3)(ii)</b> Walking/stepping surfaces, except for crawler treads, must have slip-resistant features/properties (such as diamond plate metal, strategically placed grip tape, expanded metal, or slip-resistant paint). <b>1926.1423(c)(4)</b> Tower cranes manufactured after November 8, 2011 must be equipped so as to provide safe access and egress between the ground and the cab, machinery platforms, and tower (mast), by the provision of devices such as steps, handholds, ladders, and guardrails/railings/grabrails. These devices must meet the following criteria: <b>1926.1423(c)(4)(i)</b> Steps, handholds, ladders, and guardrails/railings/grabrails must meet the criteria of ISO 11660-1:2008(E) (incorporated by reference, see § 1926.6) and ISO 11660-3:2008(E) (incorporated by reference, see § 1926.6) or SAE J185 (May 2003) (incorporated by reference, see § 1926.6) except where infeasible. <b>1926.1423(c)(4)(ii)</b> Walking/stepping surfaces must have slip-resistant features/properties (such as diamond plate metal, strategically placed grip tape, expanded metal, or slip-resistant paint). <b>1926.1423(d) Personal fall arrest and fall restraint systems</b> . Personal fall arrest system components must be used in personal fall arrest and fall restraint systems and must conform to the criteria in § 1926.502(d) except that § 1926.502(d)(15) does not apply to components used in personal fall arrest and fall restraint systems. Either body belts or body harnesses must be used in personal fall arrest and fall restraint systems. <b>1926.1423(e)</b> For non-assembly/disassembly work, the employer must provide and ensure the use of fall protection equipment for employees who are on a walking/working surface with an unprotected side or edge more than 6 feet above a lower level as follows: <b>1926.1423(e)(1)</b> When moving point-to-point: <b>1926.1423(e)(1)(i)</b> On non-lattice booms (whether horizontal or not horizontal). <b>1926.1423(e)(1)(ii)</b> On lattice booms that are not horizontal. <b>1926.1423(e)(1)(iii)</b> On horizontal lattice booms where the fall distance is 15 feet or more. <b>1926.1423(e)(2)</b> While at a work station on any part of the equipment (including the boom, of any type), except when the employee is at or near draw-works (when the equipment is running), in the cab, or on the deck. <b>1926.1423(f)</b> For assembly/disassembly work, the employer must provide and ensure the use of fall protection equipment for employees who are on a walking/working surface with an unprotected side or edge more than 15 feet above a lower level, except when the employee is at or near draw-works (when the equipment is running), in the cab, or on the deck. <b>1926.1423(g) Anchorage criteria</b> . <b>1926.1423(g)(1)</b> Sections 1926.502(d)(15) and 1926.502(e)(2) apply to equipment covered by this subpart only to the extent delineated in paragraph (g)(2) of this section. <b>1926.1423(g)(2) Anchorages for personal fall arrest and positioning device systems</b> . <b>1926.1423(g)(2)(i)</b> Personal fall arrest systems must be anchored to any apparently substantial part of the equipment unless a competent person, from a visual inspection, without an engineering analysis, would conclude that the criteria in § 1926.502(d)(15) would not be met. <b>1926.1423(g)(2)(ii)</b> Positioning device systems must be anchored to any apparently substantial part of the equipment unless a competent person, from a visual inspection, without an engineering analysis, would conclude that the criteria in § 1926.502(e)(2) would not be met. <b>1926.1423(g)(2)(iii)</b> Attachable anchor devices (portable anchor devices that are attached to the equipment) must meet the anchorage criteria in § 1926.502(d)(15) for personal fall arrest systems and § 1926.502(e)(2) for positioning device systems. <b>1926.1423(g)(3) Anchorages for fall restraint systems</b> . Fall restraint systems must be anchored to any part of the equipment that is capable of withstanding twice the maximum load that an employee may impose on it during reasonably anticipated conditions of use. <b>1926.1423(h) Tower cranes</b> . <b>1926.1423(h)(1)</b> For work other than erecting, climbing, and dismantling, the employer must provide and ensure the use of fall protection equipment for employees who are on a walking/working surface with an unprotected side or edge more than 6 feet above a lower level, except when the employee is at or near draw-works (when the equipment is running), in the cab, or on the deck. <b>1926.1423(h)(2)</b> For erecting, climbing, and dismantling work, the employer must provide and ensure the use of fall protection equipment for employees who are on a walking/working surface with an unprotected side or edge more than 15 feet above a lower level. <b>1926.1423(i) Anchoring to the load line</b> . A personal fall arrest system is permitted to be anchored to the crane/derrick's hook (or other part of the load line) where all of the following requirements are met: <b>1926.1423(j)(1)</b> A qualified person has determined that the set-up and rated capacity of the crane/derrick (including the hook, load line and rigging) meets or exceeds the requirements in § 1926.502(d)(15). <b>1926.1423(j)(2)</b> The equipment operator must be at the work site and informed that the equipment is being used for this purpose. <b>1926.1423(j)(3)</b> No load is suspended from the load line when the personal fall arrest system is anchored to the crane/derrick's hook (or other part of the load line).	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including requirements for fall protection.	X				
332		1926.1424 - Work area control.	<b>1926.1424(a) Swing radius hazards</b> . <b>1926.1424(a)(1)</b> The requirements in paragraph (a)(2) of this section apply where there are accessible areas in which the equipment's rotating superstructure (whether permanently or temporarily mounted) poses a reasonably foreseeable risk of: <b>1926.1424(a)(1)(i)</b> Striking and injuring an employee; or <b>1926.1424(a)(1)(ii)</b> Pinching/crushing an employee against another part of the equipment or another object. <b>1926.1424(a)(2)</b> To prevent employees from entering these hazard areas, the employer must: <b>1926.1424(a)(2)(i)</b> Train each employee assigned to work on or near the equipment ("authorized personnel") in how to recognize struck-by and pinch/crush hazard areas posed by the rotating superstructure. <b>1926.1424(a)(2)(ii)</b> Erect and maintain control lines, warning lines, railings or similar barriers to mark the boundaries of the hazard areas. <i>Exception:</i> When the employer can demonstrate that it is neither feasible to erect such barriers on the ground nor on the equipment, the hazard areas must be clearly marked by a combination of warning signs (such as "Danger--Swing/Crush Zone") and high visibility markings on the equipment that identify the hazard areas. In addition, the employer must train each employee to understand what these markings signify. <b>1926.1424(a)(3) Protecting employees in the hazard area</b> . <b>1926.1424(a)(3)(i)</b> Before an employee goes to a location in the hazard area that is out of view of the operator, the employee (or someone instructed by the employee) must ensure that the operator is informed that he/she is going to that location. <b>1926.1424(a)(3)(ii)</b> Where the operator knows that an employee went to a location covered by paragraph (a)(1) of this section, the operator must not rotate the superstructure until the operator is informed in accordance with a pre-arranged system of communication that the employee is in a safe position. <b>1926.1424(b)</b> Where any part of a crane/derrick is within the working radius of another crane/derrick, the controlling entity must institute a system to coordinate operations. If there is no controlling entity, the employer (if there is only one employer operating the multiple pieces of equipment), or employers, must institute such a system.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific work area controls.	X				
333		1926.1425 - Keeping clear of the load.	<b>1926.1425(a)</b> Where available, hoisting routes that minimize the exposure of employees to hoisted loads must be used, to the extent consistent with public safety. <b>1926.1425(b)</b> While the operator is not moving a suspended load, no employee must be within the fall zone, except for employees: <b>1926.1425(b)(1)</b> Engaged in hooking, unhooking or guiding a load; <b>1926.1425(b)(2)</b> Engaged in the initial attachment of the load to a component or structure; or <b>1926.1425(b)(3)</b> Operating a concrete hopper or concrete bucket. <b>1926.1425(c)</b> When employees are engaged in hooking, unhooking, or guiding the load, or in the initial connection of a load to a component or structure and are within the fall zone, all of the following criteria must be met: <b>1926.1425(c)(1)</b> The materials being hoisted must be rigged to prevent unintentional displacement. <b>1926.1425(c)(2)</b> Hooks with self-closing latches or their equivalent must be used. <i>Exception:</i> "J" hooks are permitted to be used for setting wooden trusses. <b>1926.1425(c)(3)</b> The materials must be rigged by a qualified rigger. <b>1926.1425(d) Receiving a load</b> . Only employees needed to receive a load are permitted to be within the fall zone when a load is being landed. <b>1926.1425(e)</b> During a tilt-up or tilt-down operation: <b>1926.1425(e)(1)</b> No employee must be directly under the load. <b>1926.1425(e)(2)</b> Only employees essential to the operation are permitted in the fall zone (but not directly under the load). An employee is essential to the operation if the employee is conducting one of the following operations and the employer can demonstrate it is infeasible for the employee to perform that operation from outside the fall zone: (1) Physically guide the load; (2) closely monitor and give instructions regarding the load's movement; or (3) either detach it from or initially attach it to another component or structure (such as, but not limited to, making an initial connection or installing bracing). <b>Note:</b> Boom free fall is prohibited when an employee is in the fall zone of the boom or load, and load line free fall is prohibited when an employee is directly under the load; see § 1926.1426.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including work in fall zones.	X				

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
334		1926.1426 - Free fall and controlled load lowering.	<b>1926.1426(a)</b> <i>Boom free fall prohibitions</i> . <b>1926.1426(a)(1)</b> The use of equipment in which the boom is designed to free fall (live boom) is prohibited in each of the following circumstances: <b>1926.1426(a)(1)(i)</b> An employee is in the fall zone of the boom or load. <b>1926.1426(a)(1)(ii)</b> An employee is being hoisted. <b>1926.1426(a)(1)(iii)</b> The load or boom is directly over a power line, or over any part of the area extending the Table A of § 1926.1408 clearance distance to each side of the power line; or any part of the area extending the Table A clearance distance to each side of the power line is within the radius of vertical travel of the boom or the load. <b>1926.1426(a)(1)(iv)</b> The load is over a shaft, except where there are no employees in the shaft. <b>1926.1426(a)(1)(v)</b> The load is over a cofferdam, except where there are no employees in the fall zone of the boom or the load. <b>1926.1426(a)(1)(vi)</b> Lifting operations are taking place in a refinery or tank farm. <b>1926.1426(a)(2)</b> The use of equipment in which the boom is designed to free fall (live boom) is permitted only where none of the circumstances listed in paragraph (a)(1) of this section are present and: <b>1926.1426(a)(2)(i)</b> The equipment was manufactured prior to October 31, 1984; or <b>1926.1426(a)(2)(ii)</b> The equipment is a floating crane/derrick or a land crane/derrick on a vessel/flotation device. <b>1926.1426(b)</b> <i>Preventing boom free fall</i> . Where the use of equipment with a boom that is designed to free fall (live boom) is prohibited, the boom hoist must have a secondary mechanism or device designed to prevent the boom from falling in the event the primary system used to hold or regulate the boom hoist fails, as follows: <b>1926.1426(b)(1)</b> Friction drums must have: <b>1926.1426(b)(1)(i)</b> A friction clutch and, in addition, a braking device, to allow for controlled boom lowering. <b>1926.1426(b)(1)(iii)</b> A secondary braking or locking device, which is manually or automatically engaged, to back-up the primary brake while the boom is held (such as a secondary friction brake or a ratchet and pawl device). <b>1926.1426(b)(2)</b> Hydraulic drums must have an integrally mounted holding device or internal static brake to prevent boom hoist movement in the event of hydraulic failure. <b>1926.1426(b)(3)</b> Neither clutches nor hydraulic motors must be considered brake or locking devices for purposes of this subpart. <b>1926.1426(b)(4)</b> Hydraulic boom cylinders must have an integrally mounted holding device. <b>1926.1426(c)</b> <i>Preventing uncontrolled retraction</i> . Hydraulic telescoping booms must have an integrally mounted holding device to prevent the boom from retracting in the event of hydraulic failure. <b>1926.1426(d)</b> <i>Load line free fall</i> . In each of the following circumstances, controlled load lowering is required and free fall of the load line hoist is prohibited: <b>1926.1426(d)(1)</b> An employee is directly under the load. <b>1926.1426(d)(2)</b> An employee is being hoisted. <b>1926.1426(d)(3)</b> The load is directly over a power line, or over any part of the area extending the Table A of § 1926.1408 clearance distance to each side of the power line; or any part of the area extending the Table A of § 1926.1408 clearance distance to each side of the power line is within the radius of vertical travel of the load. <b>1926.1426(d)(4)</b> The load is over a shaft. <b>1926.1426(d)(5)</b> The load is over a cofferdam, except where there are no employees in the fall zone of the load.	No	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including work in fall zones.	X				
335		1926.1427 - Operator qualification and certification.	<b>1926.1427(a)</b> The employer must ensure that, prior to operating any equipment covered under subpart CC, the person is operating the equipment during a training period in accordance with paragraph (f) of this section, or the operator is qualified or certified to operate the equipment in accordance with the following: <b>1926.1427(a)(1)</b> When a non-military government entity issues operator licenses for equipment covered under subpart CC, and that government licensing program meets the requirements of paragraphs (e)(2) and (j) of this section, the equipment operator must either be: <b>1926.1427(a)(1)(i)</b> Licensed by that government entity for operation of equipment within that entity's jurisdiction; or <b>1926.1427(a)(1)(ii)</b> qualified in compliance with paragraph (d) of this section. <b>1926.1427(a)(2)</b> Where paragraph (a)(1) of this section is not applicable, the certification or qualification must comply with one of the options in paragraphs (b) through (d) of this section. <b>1926.1427(a)(3)</b> <i>Exceptions</i> : Operator qualification or certification under this section is not required for operators of derricks ( see § 1926.1436), sideboom cranes ( see § 1926.1440), or equipment with a maximum manufacturer-rated hoisting/lifting capacity of 2,000 pounds or less ( see § 1926.1441). <b>1926.1427(a)(4)</b> Whenever operator qualification or certification is required under § 1926.1427, the employer must provide the qualification or certification at no cost to operators who are employed by the employer on November 8, 2010. <b>1926.1427(b)</b> <i>Option (1): Certification by an accredited crane operator testing organization</i> . <b>1926.1427(b)(1)</b> For a testing organization to be considered accredited to certify operators under this subpart, it must: <b>1926.1427(b)(1)(i)</b> Be accredited by a nationally recognized accrediting agency based on that agency's determination that industry recognized criteria for written testing materials, practical examinations, test administration, grading, facilities/equipment and personnel have been met. <b>1926.1427(b)(1)(ii)</b> Administer written and practical tests that: <b>1926.1427(b)(1)(iii)(A)</b> Assess the operator applicant regarding, at a minimum, the knowledge and skills listed in paragraphs (j)(1) and (2) of this section. <b>1926.1427(b)(1)(iii)(B)</b> Provide different levels of certification based on equipment capacity and type. <b>1926.1427(b)(1)(iii)</b> Have procedures for operators to re-apply and be re-tested in the event an operator applicant fails a test or is decertified. <b>1926.1427(b)(1)(iv)</b> Have testing procedures for re-certification designed to ensure that the operator continues to meet the technical knowledge and skills requirements in paragraphs (j)(1) and (2) of this section. <b>1926.1427(b)(1)(v)</b> Have its accreditation reviewed by the nationally recognized accrediting agency at least every three years. <b>1926.1427(b)(2)</b> An operator will be deemed qualified to operate a particular piece of equipment if the operator is certified under paragraph (b) of this section for that type and capacity of equipment or for higher-capacity equipment of that type. If no accredited testing agency offers certification examinations for a particular type and/or capacity of equipment, an operator will be deemed qualified to operate that equipment if the operator has been certified for the type/capacity that is most similar to that equipment and for which a certification examination is available. The operator's certificate must state the type/capacity of equipment for which the operator is certified. <b>1926.1427(b)(3)</b> A certification issued under this option is portable and meets the requirements of paragraph (a)(2) of this section. <b>1926.1427(b)(4)</b> A certification issued under this paragraph is valid for 5 years. <b>1926.1427(c)</b> <i>Option (2): Qualification by an audited employer program</i> . The employer's qualification of its employee must meet the following requirements: <b>1926.1427(c)(1)</b> The written and practical tests must be either: <b>1926.1427(c)(1)(i)</b> Developed by an accredited crane operator testing organization ( see paragraph (b) of this section); or <b>1926.1427(c)(1)(ii)</b> Approved by an auditor in accordance with the following requirements: <b>1926.1427(c)(1)(ii)(A)</b> The auditor is certified to evaluate such tests by an accredited crane operator testing organization ( see paragraph (b) of this section). <b>1926.1427(c)(1)(ii)(B)</b> The auditor is not an employee of the employer. <b>1926.1427(c)(1)(ii)(C)</b> The approval must be based on the auditor's determination that the written and practical tests meet nationally recognized test development criteria and are valid and reliable in assessing the operator applicants regarding, at a minimum, the knowledge and skills listed in paragraphs (j)(1) and (2) of this section. <b>1926.1427(c)(1)(ii)(D)</b> The audit must be conducted in accordance with nationally recognized auditing standards. <b>1926.1427(c)(2)</b> <i>Administration of tests</i> . <b>1926.1427(c)(2)(i)</b> The written and practical tests must be administered under circumstances approved by the auditor as meeting nationally recognized test administration standards. <b>1926.1427(c)(2)(ii)</b> The auditor must be certified to evaluate the administration of the written and practical tests by an accredited crane operator testing organization ( see paragraph (b) of this section). <b>1926.1427(c)(2)(iii)</b> The auditor must not be an employee of the employer. <b>1926.1427(c)(2)(iv)</b> The audit must be conducted in accordance with nationally recognized auditing standards. <b>1926.1427(c)(3)</b> The employer program must be audited within 3 months of the beginning of the program and at least every 3 years thereafter. <b>1926.1427(c)(4)</b> The employer program must have testing procedures for re-qualification designed to ensure that the operator continues to meet the technical knowledge and skills requirements in paragraphs (j)(1) and (2) of this section. The re-qualification procedures must be audited in accordance with paragraphs (c)(1) and (2) of this section. <b>1926.1427(c)(5)</b> <i>Deficiencies</i> . If the auditor determines that there is a significant deficiency ("deficiency") in the program, the employer must ensure that: <b>1926.1427(c)(5)(i)</b> No operator is qualified until the auditor confirms that the deficiency has been corrected. <b>1926.1427(c)(5)(ii)</b> The program is audited again within 180 days of the confirmation that the deficiency was corrected. <b>1926.1427(c)(5)(iii)</b> The auditor files a documented report of the deficiency to the appropriate Regional Office of the Occupational Safety and Health Administration within 15 days of the auditor's determination that there is a deficiency. <b>1926.1427(c)(5)(iv)</b> Records of the audits of the employer's program are maintained by the auditor for three years and are made available by the auditor to the Secretary of Labor or the Secretary's designated representative upon request. <b>1926.1427(c)(6)</b> A qualification under this paragraph is: <b>1926.1427(c)(6)(i)</b> Not portable. Such a qualification meets the requirements of paragraph (a) of this section only where the operator is employed by (and operating the equipment for) the employer that issued the qualification. <b>1926.1427(c)(6)(ii)</b> Valid for 5 years. <b>1926.1427(d)</b> <i>Option (3): Qualification by the U.S. military</i> . <b>1926.1427(d)(1)</b> For purposes of this section, an operator who is an employee of the U.S. military is considered qualified if he/she has a current operator qualification issued by the U.S. military for operation of the equipment. An employee of the U.S. military is a Federal employee of the Department of Defense or Armed Forces and does not include employees of private contractors. <b>1926.1427(d)(2)</b> A qualification under this paragraph is: <b>1926.1427(d)(2)(i)</b> Not portable. Such a qualification meets the requirements of paragraph (a) of this section only where the operator is employed by (and operating the equipment for) the employer that issued the qualification. <b>1926.1427(d)(2)(ii)</b> Valid for the period of time stipulated by the issuing entity. <b>1926.1427(e)</b> <i>Option (4): Licensing by a government entity</i> . <b>1926.1427(e)(1)</b> For purposes of this section, a government licensing department/office that issues operator licenses for operating equipment covered by this standard is considered a government accredited crane operator testing organization if the criteria in paragraph (e)(2) of this section are met. <b>1926.1427(e)(2)</b> <i>Licensing criteria</i> . <b>1926.1427(e)(2)(i)</b> The requirements for obtaining the license include an assessment, by written and practical tests, of the operator applicant regarding, at a minimum, the knowledge and skills listed in paragraphs (j)(1) and (2) of this section. <b>1926.1427(e)(2)(ii)</b> The testing meets industry recognized criteria for written testing materials, practical examinations, test administration, grading, facilities/equipment and personnel. <b>1926.1427(e)(2)(iii)</b> The government authority that oversees the licensing department/office, has determined that the requirements in paragraphs (e)(2)(i) and (ii) of this section have been met. <b>1926.1427(e)(2)(iv)</b> The licensing department/office has testing procedures for re-licensing designed to ensure that the operator continues to meet the technical knowledge and skills requirements in paragraphs (j)(1) and (2) of this section. <b>1926.1427(e)(3)</b> A license issued by a government accredited crane operator testing organization that meets the requirements of this option: <b>1926.1427(e)(3)(i)</b> Meets the operator qualification requirements of this section for operation of equipment only within the jurisdiction of the government entity. <b>1926.1427(e)(3)(ii)</b> is valid for the period of time stipulated by the licensing department/office, but no longer than 5 years.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific operator qualification and certification.	X		X		
336										
337		1926.1428 - Signal person qualifications.	<b>1926.1428(a)</b> The employer of the signal person must ensure that each signal person meets the Qualification Requirements (paragraph (c) of this section) prior to giving any signals. This requirement must be met by using either Option (1) or Option (2) of this section. <b>1926.1428(a)(1)</b> <i>Option (1)--Third party qualified evaluator</i> . The signal person has documentation from a third party qualified evaluator (see Qualified Evaluator (third party), § 1926.1401 for definition) showing that the signal person meets the Qualification Requirements ( see paragraph (c) of this section). <b>1926.1428(a)(2)</b> <i>Option (2)--Employer's qualified evaluator</i> . The employer's qualified (see Qualified Evaluator (not a third party), § 1926.1401 for definition) evaluator assesses the individual and determines that the individual meets the Qualification Requirements ( see paragraph (c) of this section) and provides documentation of that determination. An assessment by an employer's qualified evaluator under this option is not portable--other employers are not permitted to use it to meet the requirements of this section. <b>1926.1428(a)(3)</b> The employer must make the documentation for whichever option is used available at the site while the signal person is employed by the employer. The documentation must specify each type of signaling ( e.g . hand signals, radio signals, etc. ) for which the signal person meets the requirements of paragraph (c) of this section. <b>1926.1428(b)</b> If subsequent actions by the signal person indicate that the individual does not meet the Qualification Requirements ( see paragraph (c) of this section), the employer must not allow the individual to continue working as a signal person until re-training is provided and a re-assessment is made in accordance with paragraph (a) of this section that confirms that the individual meets the Qualification Requirements.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific signal person qualifications.	X		X		
338		1926.1429 - Qualifications of maintenance & repair employees.		n/a						
339		1926.1430 - Training.	<b>1926.1430(g)</b> <i>Training administration</i> . <b>1926.1430(g)(1)</b> The employer must evaluate each employee required to be trained under this subpart to confirm that the employee understands the information provided in the training. <b>1926.1430(g)(2)</b> The employer must provide refresher training in relevant topics for each employee when, based on the conduct of the employee or an evaluation of the employee's knowledge, there is an indication that retraining is necessary. <b>1926.1430(g)(3)</b> Whenever training is required under subpart CC, the employer must provide the training at no cost to the employee.	Partial	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific training requirements.	X	X	X		



Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
340			<p>The requirements of this section are supplemental to the other requirements in this subpart and apply when one or more employees are hoisted. <b>1926.1431(a)</b> The use of equipment to hoist employees is prohibited except where the employer demonstrates that the erection, use, and dismantling of conventional means of reaching the work area, such as a personnel hoist, ladder, stairway, aerial lift, elevating work platform, or scaffold, would be more hazardous, or is not possible because of the project's structural design or worksite conditions. This paragraph does not apply to work covered by subpart R (Steel Erection) of this part. <b>1926.1431(b)</b> <i>Use of personnel platform</i> . <b>1926.1431(b)(1)</b> When using equipment to hoist employees, the employees must be in a personnel platform that meets the requirements of paragraph (e) of this section. <b>1926.1431(b)(2)</b> <i>Exceptions</i>: A personnel platform is not required for hoisting employees: <b>1926.1431(b)(2)(i)</b> Into and out of drill shafts that are up to and including 8 feet in diameter ( see paragraph (o) of this section for requirements for hoisting these employees). <b>1926.1431(b)(2)(ii)</b> In pile driving operations (see paragraph (p) of this section for requirements for hoisting these employees). <b>1926.1431(b)(2)(iii)</b> Solely for transfer to or from a marine worksite in a marine-hoisted personnel transfer device ( see paragraph (r) of this section for requirements for hoisting these employees). <b>1926.1431(b)(2)(iv)</b> In storage-tank (steel or concrete), shaft and chimney operations (see paragraph (s) of this section for requirements for hoisting these employees). <b>1926.1431(c)</b> <i>Equipment set-up</i> . <b>1926.1431(c)(1)</b> The equipment must be uniformly level, within one percent of level grade, and located on footing that a qualified person has determined to be sufficiently firm and stable. <b>1926.1431(c)(2)</b> Equipment with outriggers or stabilizers must have them all extended and locked. The amount of extension must be the same for all outriggers and stabilizers and in accordance with manufacturer procedures and load charts. <b>1926.1431(d)</b> <i>Equipment criteria</i> . <b>1926.1431(d)(1)</b> <i>Capacity: Use of suspended personnel platforms</i> . The total load (with the platform loaded, including the hook, load line and rigging) must not exceed 50 percent of the rated capacity for the radius and configuration of the equipment, except during proof testing. <b>1926.1431(d)(2)</b> <i>Capacity: Use of boom-attached personnel platforms</i> . The total weight of the loaded personnel platform must not exceed 50 percent of the rated capacity for the radius and configuration of the equipment (except during proof testing). <b>1926.1431(d)(3)</b> <i>Capacity: Hoisting personnel without a personnel platform</i> . When hoisting personnel without a personnel platform pursuant to paragraph (b)(2) of this section, the total load (including the hook, load line, rigging and any other equipment that imposes a load) must not exceed 50 percent of the rated capacity for the radius and configuration of the equipment, except during proof testing. <b>1926.1431(d)(4)</b> When the occupied personnel platform is in a stationary working position, the load and boom hoist brakes, swing brakes, and operator actuated secondary braking and locking features (such as pawls or dogs) or automatic secondary brakes must be engaged. <b>1926.1431(d)(5)(i)</b> <i>Devices</i> . <b>1926.1431(d)(5)(i)</b> Equipment (except for derricks and articulating cranes) with a variable angle boom must be equipped with all of the following: <b>1926.1431(d)(5)(i)(A)</b> A boom angle indicator, readily visible to the operator, and <b>1926.1431(d)(5)(i)(B)</b> A boom hoist limiting device. <b>1926.1431(d)(5)(ii)</b> Articulating cranes must be equipped with a properly functioning automatic overload protection device. <b>1926.1431(d)(5)(iii)</b> Equipment with a luffing jib must be equipped with: <b>1926.1431(d)(5)(iii)(A)</b> A jib angle indicator, readily visible to the operator, and, <b>1926.1431(d)(5)(iii)(B)</b> A jib hoist limiting device. <b>1926.1431(d)(5)(iv)</b> Equipment with telescoping booms must be equipped with a device to indicate the boom's extended length clearly to the operator, or must have measuring marks on the boom. <b>1926.1431(d)(5)(v)</b> <i>Anti two-block</i> . A device which automatically prevents damage and load failure from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component) must be used. The device(s) must prevent such damage/failure at all points where two-blocking could occur. <i>Exception</i>: This device is not required when hoisting personnel in pile driving operations. Instead, paragraph (p)(2) of this section specifies how to prevent two-blocking during such operations. <b>1926.1431(d)(5)(vi)</b> <i>Controlled load lowering</i> . The load line hoist drum must have a system, other than the load line hoist brake, which regulates the lowering rate of speed of the hoist mechanism. This system or device must be used when hoisting personnel. <b>Note</b>: Free fall of the load line hoist is prohibited ( see § 1926.1426(d); the use of equipment in which the boom hoist mechanism can free fall is also prohibited ( see § 1926.1426(a)(1). <b>1926.1431(d)(5)(vii)</b> <i>Proper operation required</i> . Personnel hoisting operations must not begin unless the devices listed in this section are in proper working order. If a device stops working properly during such operations, the operator must safely stop operations. Personnel hoisting operations must not resume until the device is again working properly. Alternative measures are not permitted. ( See § 1926.1417 for tag-out and related requirements.) <b>1926.1431(d)(6)</b> Direct attachment of a personnel platform to a luffing jib is prohibited. <b>1926.1431(e)</b> <i>Personnel platform criteria</i> . <b>1926.1431(e)(1)</b> A qualified person familiar with structural design must design the personnel platform and attachment/suspension system used for hoisting personnel. <b>1926.1431(e)(2)</b> The system used to connect the personnel platform to the equipment must allow the platform to remain within 10 degrees of level, regardless of boom angle. <b>1926.1431(e)(3)</b> The suspension system must be designed to minimize tipping of the platform due to movement of employees occupying the platform. <b>1926.1431(e)(4)</b> The personnel platform itself (excluding the guardrail system and personal fall arrest system anchorages), must be capable of supporting, without failure, its own weight and at least five times the maximum intended load. <b>1926.1431(e)(5)</b> All welding of the personnel platform and its components must be performed by a certified welder familiar with the weld grades, types and material specified in the platform design. <b>1926.1431(e)(6)</b> The personnel platform must be equipped with a guardrail system which meets the requirements of subpart M of this part, and must be enclosed at least from the toeboard to mid-rail with either solid construction material or expanded metal having openings no greater than ¾ inch (1.27 cm). Points to which personal fall arrest systems are attached must meet the anchorage requirements in subpart M of this part. <b>1926.1431(e)(7)</b> A grab rail must be installed inside the entire perimeter of the personnel platform except for access gates/doors. <b>1926.1431(e)(8)</b> <i>Access gates/doors</i>. If installed, access gates/doors of all types (including swinging, sliding, folding, or other types) must: <b>1926.1431(e)(8)(i)</b> Not swing outward. If due to the size of the personnel platform, such as a 1-person platform, it is infeasible for the door to swing inward and allow safe entry for the platform occupant, then the access gate/door may swing outward. <b>1926.1431(e)(8)(ii)</b> Be equipped with a device that prevents accidental opening. <b>1926.1431(e)(9)</b> Headroom must be sufficient to allow employees to stand upright in the platform. <b>1926.1431(e)(10)</b> In addition to the use of hard hats, employees must be protected by overhead protection on the personnel platform when employees are exposed to falling objects. The platform overhead protection must not obscure the view of the operator or platform occupants (such as wire mesh that has up to ½ inch openings), unless full protection is necessary. <b>1926.1431(e)(11)</b> All edges exposed to employee contact must be smooth enough to prevent injury. <b>1926.1431(e)(12)</b> The weight of the platform and its rated capacity must be conspicuously posted on the platform with a plate or other permanent marking. <b>1926.1431(f)</b> <i>Personnel platform loading</i> . <b>1926.1431(f)(1)</b> The personnel platform must not be loaded in excess of its rated capacity. <b>1926.1431(f)(2)</b> <i>Use</i> . <b>1926.1431(f)(2)(i)</b> Personnel platforms must be used only for employees, their tools, and the materials necessary to do their work. Platforms must not be used to hoist materials or tools when not hoisting personnel. <b>1926.1431(f)(2)(ii)</b> <i>Exception</i>: Materials and tools to be used during the lift, if secured and distributed in accordance with paragraph (f)(3) of this section may be in the platform for trial lifts. <b>1926.1431(f)(3)</b> Materials and tools must be: <b>1926.1431(f)(3)(i)</b> Secured to prevent displacement. <b>1926.1431(f)(3)(ii)</b> Evenly distributed within the confines of the platform while it is suspended. <b>1926.1431(f)(4)</b> The number of employees occupying the personnel platform must not exceed the maximum number the platform was designed to hold or the number required to perform the work, whichever is less. <b>1926.1431(g)</b> <i>Attachment and rigging</i> . <b>1926.1431(g)(1)</b> <i>Hooks and other detachable devices</i> . <b>1926.1431(g)(1)(i) Hooks used in the connection between the hoist line and the personnel platform (including hooks on overhaul ball assemblies, lower load blocks, bridle legs, or other attachment assemblies or components) must be: <b>1926.1431(g)(1)(i)(A)</b> Of a type that can be closed and locked, eliminating the throat opening. <b>1926.1431(g)(1)(i)(B)</b> Closed and locked when attached. <b>1926.1431(g)(1)(ii)</b> Shackles used in place of hooks must be of the alloy anchor type, with either: <b>1926.1431(g)(1)(ii)(A)</b> A bolt, nut and retaining pin, in place; or <b>1926.1431(g)(1)(ii)(B)</b> Of the screw type, with the screw pin secured from accidental removal. <b>1926.1431(g)(1)(iii)</b> Where other detachable devices are used, they must be of the type that can be closed and locked to the same extent as the devices addressed in paragraphs (g)(1)(i) and (ii) of this section. Such devices must be closed and locked when attached. <b>1926.1431(g)(2)</b> <i>Rope bridle</i> . When a rope bridle is used to suspend the personnel platform, each bridle leg must be connected to a master link or shackle (see paragraph (g)(1) of this section) in a manner that ensures that the load is evenly divided among the bridle legs. <b>1926.1431(g)(3)</b> Rigging hardware (including wire rope, shackles, rings, master links, and other rigging hardware) and hooks must be capable of supporting, without failure, at least five times the maximum intended load applied or transmitted to that component. Where rotation resistant rope is used, the slings must be capable of supporting without failure at least ten times the maximum intended load. <b>1926.1431(g)(4)</b> Eyes in wire rope slings must be fabricated with thimbles. <b>1926.1431(g)(5)</b> Bridles and associated rigging for suspending the personnel platform must be used only for the platform and the necessary employees, their tools and materials necessary to do their work. The bridles and associated rigging must not have been used for any purpose other than hoisting personnel. <b>1926.1431(h)</b> <i>Trial lift and inspection</i> . <b>1926.1431(h)(1)</b> A trial lift with the unoccupied personnel platform loaded at least to the anticipated lightweight must be made from ground level, or any other location where employees will enter the platform, to each location at which the platform is to be hoisted and positioned. Where there is more than one location to be reached from a single set-up position, either individual trial lifts for each location, or a single trial lift, in which the platform is moved sequentially to each location, must be performed; the method selected must be the same as the method that will be used to hoist the personnel. <b>1926.1431(h)(2)</b> The trial lift must be performed immediately prior to each shift in which personnel will be hoisted. In addition, the trial lift must be repeated prior to hoisting employees in each of the following circumstances: <b>1926.1431(h)(2)(i)</b> The equipment is moved and set up in a new location or returned to a previously used location. <b>1926.1431(h)(2)(ii)</b> The lift route is changed, unless the competent person determines that the new route presents no new factors affecting safety. <b>1926.1431(h)(3)</b> The competent person must determine that: <b>1926.1431(h)(3)(i)</b> Safety devices and operational aids required by this section are activated and functioning properly. Other safety devices and operational aids must meet the requirements of § 1926.1415 and § 1926.1416. <b>1926.1431(h)(3)(ii)</b> Nothing interferes with the equipment or the personnel platform in the course of the trial lift. <b>1926.1431(h)(3)(iii)</b> The lift will not exceed 50 percent of the equipment's rated capacity at any time during the lift. <b>1926.1431(h)(3)(iv)</b> The load radius to be used during the lift has been accurately determined. <b>1926.1431(h)(4)</b> Immediately after the trial lift, the competent person must: <b>1926.1431(h)(4)(i)</b> Conduct a visual inspection of the equipment, base support or ground, and personnel platform, to determine whether the trial lift has exposed any defect or problem or produced any adverse effect. <b>1926.1431(h)(4)(ii)</b> Confirm that, upon the completion of the trial lift process, the test weight has been removed. <b>1926.1431(h)(5)</b> Immediately prior to each lift: <b>1926.1431(h)(5)(i)</b> The platform must be hoisted a few inches with the personnel and materials/tools on board and inspected by a competent person to ensure that it is secure and properly balanced. <b>1926.1431(h)(5)(ii)</b> The following conditions must be determined by a competent person to exist before the lift of personnel proceeds: <b>1926.1431(h)(5)(ii)(A)</b> Hoist ropes must be free of deficiencies in accordance with § 1926.1413(a). <b>1926.1431(h)(5)(ii)(B)</b> Multiple part lines must not be twisted around each other. <b>1926.1431(h)(5)(ii)(C)</b> The primary attachment must be centered over the platform. <b>1926.1431(h)(5)(ii)(D)</b> If the load rope is slack, the hoisting system must be inspected to ensure that all ropes are properly seated on drums and in sheaves. <b>1926.1431(h)(6)</b> Any condition found during the trial lift and subsequent inspection(s) that fails to meet a requirement of this standard or otherwise creates a safety hazard must be corrected before hoisting personnel. ( See § 1926.1417 for tag-out and related requirements.) <b>1926.1431(j)</b> <i>Proof testing</i> . <b>1926.1431(j)(1)</b> At each jobsite, prior to hoisting employees on the personnel platform, and after any repair or modification, the platform and rigging must be proof tested to 125 percent of the platform's rated capacity. The proof test may be done concurrently with the trial lift. <b>1926.1431(j)(2)</b> The platform must be lowered by controlled load lowering, braked, and held in a suspended position for a minimum of five minutes with the test load evenly distributed on the platform. <b>1926.1431(j)(3)</b> After proof testing, a competent person must inspect the platform and rigging to determine if the test has been passed. If any deficiencies are found that pose a safety hazard, the platform and rigging must not be used to hoist personnel unless the deficiencies are corrected, the test is repeated, and a competent person determines that the test has been passed. ( See § 1926.1417 for tag-out and related requirements.) <b>1926.1431(j)(4)</b> Personnel hoisting must not be conducted until the competent person determines that the platform and rigging have successfully passed the proof test. <b>1926.1431(k)</b> <i>Work practices</i> . <b>1926.1431(k)(1)</b> Hoisting of the personnel platform must be performed in a slow, controlled, cautious manner, with no sudden movements of the equipment or the platform. <b>1926.1431(k)(2)</b> Platform occupants must: <b>1926.1431(k)(2)(i)</b> Keep all parts of the body inside the platform during raising, lowering, and horizontal movement. This provision does not apply to an occupant of the platform when necessary to position the platform or while performing the duties of a signal person. <b>1926.1431(k)(2)(ii)</b> Not stand, sit on, or work from the top or intermediate rail or toeboard, or use any other means/device to raise their working height. <b>1926.1431(k)(2)(iii)</b> Not pull the platform out of plumb in relation to the hoisting equipment. <b>1926.1431(k)(3)</b> Before employees exit or enter a hoisted personnel platform that is not landed, the platform must be secured to the structure where the work is to be performed, unless the employer can demonstrate that securing to the structure would create a greater hazard. <b>1926.1431(k)(4)</b> If the platform is tied to the structure, the operator must not move the platform until the operator receives confirmation that it is freely suspended. <b>1926.1431(k)(5)</b> Tag lines must be used when necessary to control the platform. <b>1926.1431(k)(6)</b> <i>Platforms without controls</i> . Where the platform is not equipped with controls, the equipment operator must remain at the equipment controls, on site, and in view of the equipment, at all times while the platform is occupied. <b>1926.1431(k)(7)</b> Platforms with controls. Where the platform is equipped with controls, all of the following must be met at all times while the platform is occupied: <b>1926.1431(k)(7)(i)</b> The occupant using the controls in the platform must be a qualified person with respect to their use, including the safe limitations of the equipment and hazards associated with its operation. <b>1926.1431(k)(7)(ii)</b> The equipment operator must be at a set of equipment controls that include boom and swing functions of the equipment, and must be on site and in view of the equipment. <b>1926.1431(k)(7)(iii)</b> The platform operating manual must be in the platform or on the equipment. <b>1926.1431(k)(8)</b> Environmental conditions. <b>1926.1431(k)(8)(i)</b> Wind. When wind speed (sustained or gusts) exceeds 20 mph at the personnel platform, a qualified person must determine if, in light of the wind conditions, it is not safe to lift personnel. If it is not, the lifting operation must not begin (or, if already in progress, must be terminated). <b>1926.1431(k)(8)(ii)</b> Other weather and environmental conditions. A qualified person must determine if, in light of indications of dangerous weather conditions, or other impending or existing danger, it is not safe to lift personnel. If it is not, the lifting operation must not begin (or, if already in progress, must be terminated). <b>1926.1431(k)(9)</b> Employees being hoisted must remain in direct communication with the signal person (where used), or the operator. <b>1926.1431(k)(10)</b> Fall protection. <b>1926.1431(k)(10)(i)</b> Except over water, employees occupying the personnel platform must be provided and use a personal fall arrest system. The system must be attached to a structural member within the personnel platform. When working over or near water, the requirements of § 1926.106 apply. <b>1926.1431(k)(10)(ii)</b> The fall arrest system, including the attachment point (anchorage) used to comply with paragraph (i) of this section, must meet the requirements in § 1926.502. <b>1926.1431(k)(11)</b> Other load lines. <b>1926.1431(k)(11)(i)</b> No lifts must be made on any other of the equipment's load lines while personnel are being hoisted, except in pile driving operations. <b>1926.1431(k)(11)(ii)</b> Factory-produced boom-mounted personnel platforms that incorporate a winch as original equipment. Loads are permitted to be hoisted by such a winch while employees occupy the personnel platform only where the load on the winch line does not exceed 500 pounds and does not exceed the rated capacity of the winch and platform. <b>1926.1431(k)(12)</b> Traveling--equipment other than derricks. <b>1926.1431(k)(12)(i)</b> Hoisting of employees while the equipment is traveling is prohibited, except for: <b>1926.1431(k)(12)(i)(A)</b> Equipment that travels on fixed rails; or <b>1926.1431(k)(12)(i)(B)</b> Where the employer demonstrates that there is no less hazardous way to perform the work. <b>1926.1431(k)(12)(i)(C)</b> This exception does not apply to rubber-tired equipment. <b>1926.1431(k)(12)(ii)</b> Where employees are hoisted while the equipment is traveling, all of the following criteria must be met: <b>1926.1431(k)(12)(ii)(A)</b> Equipment travel must be restricted to a fixed track or runway. <b>1926.1431(k)(12)(ii)(B)</b> Where a runway is used, it must be a firm, level surface designed, prepared and designated as a path of travel for the weight and configuration of the equipment being used to lift and travel with the personnel platform. An existing surface may be used as long as it meets these criteria. <b>1926.1431(k)(12)(ii)(C)</b> Equipment travel must be limited to boom length. <b>1926.1431(k)(12)(ii)(D)</b> The boom must be parallel to the direction of travel, except where it is safer to do otherwise. <b>1926.1431(k)(12)(ii)(E)</b> A complete trial run must be performed to test the route of travel before employees are allowed to occupy the platform. This trial run can be performed at the same time as the trial lift required by paragraph (h) of this section which tests the lift route. <b>1926.1431(k)(13)</b> Traveling--derricks. Derricks are prohibited from traveling while personnel are hoisted. <b>1926.1431(m)</b> Pre-lift meeting. A pre-lift meeting must be: <b>1926.1431(m)(1)</b> Held to review the applicable requirements of this section and the procedures that will be followed. <b>1926.1431(m)(2)</b> Attended by the equipment operator, signal person (if used for the lift), employees to be hoisted, and the person responsible for the task to be performed. <b>1926.1431(m)(3)</b> Held prior to the trial lift at each new work location, and must be repeated for any employees newly assigned to the operation. <b>1926.1431(n)</b> Hoisting personnel near power lines.</b></p>	No	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific training requirements.	X					
341		1926.1431 - Hoisting personnel.									
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Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
2			Hoisting personnel within 20 feet of a power line that is up to 350 kV, and hoisting personnel within 50 feet of a power line that is over 350 kV, is prohibited, except for work covered by subpart V of this part (Power Transmission and Distribution). 1926.1431(o) Hoisting personnel in drill shafts. When hoisting employees into and out of drill shafts that are up to and including 8 feet in diameter, all of the following requirements must be met: 1926.1431(o)(1) The employee must be in either a personnel platform or on a boatswain's chair. 1926.1431(o)(2) If using a personnel platform, paragraphs (a) through (n) of this section apply. 1926.1431(o)(3) If using a boatswain's chair: 1926.1431(o)(3)(i) The following paragraphs of this section apply: (a), (c), (d)(1), (d)(3), (d)(4), (e)(1), (e)(2), (e)(3), (f)(1), (f)(2)(i), (f)(3)(i), (g), (h), (k)(1), (k)(6), (k)(8), (k)(9), (k)(11)(i), (m), (n). Where the terms "personnel platform" or "platform" are used in these paragraphs, substitute them with "boatswain's chair." 1926.1431(o)(3)(ii) A signal person must be stationed at the shaft opening. 1926.1431(o)(3)(iii) The employee must be hoisted in a slow, controlled descent and ascent. 1926.1431(o)(3)(iv) The employee must use personal fall protection equipment, including a full body harness, attached independent of the crane/derrick. 1926.1431(o)(3)(v) The fall protection equipment must meet the applicable requirements in § 1926.502. 1926.1431(o)(3)(vi) The boatswain's chair itself (excluding the personal fall arrest system anchorages), must be capable of supporting, without failure, its own weight and at least five times the maximum intended load. 1926.1431(o)(3)(vii) No more than one person must be hoisted at a time. 1926.1431(p) Hoisting personnel for pile driving operations. When hoisting an employee in pile driving operations, the following requirements must be met: 1926.1431(p)(1) The employee must be in a personnel platform or boatswain's chair. 1926.1431(p)(2) For lattice boom cranes: Clearly mark the cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to prevent two-blocking, or use a spotter who is in direct communication with the operator to inform the operator when this point is reached. For telescopic boom cranes: Clearly mark the cable (so that it can be easily seen by the operator) at a point that will give the operator sufficient time to stop the hoist to prevent two-blocking, and use a spotter who is in direct communication with the operator to inform the operator when this point is reached. 1926.1431(p)(3) If using a personnel platform, paragraphs (b) through (n) of this section apply. 1926.1431(p)(4) If using a boatswain's chair: 1926.1431(p)(4)(i) The following paragraphs of this section apply: (a), (c), (d)(1), (d)(3), (d)(4), (e)(1), (e)(2), (e)(3), (f)(1), (f)(2)(i), (f)(3)(i), (g), (h), (j), (k)(1), (k)(6), (k)(8), (k)(9), (k)(11)(i), (m), and (n). Where the terms "personnel platform" or "platform" are used in these paragraphs, substitute them with "boatswains chair." 1926.1431(p)(4)(ii) The employee must be hoisted in a slow, controlled descent and ascent. 1926.1431(p)(4)(iii) The employee must use personal fall protection equipment, including a full body harness, independently attached to the lower load block or overhaul ball. 1926.1431(p)(4)(iv) The fall protection equipment must meet the applicable requirements in § 1926.502. 1926.1431(p)(4)(v) The boatswain's chair itself (excluding the personal fall arrest system anchorages), must be capable of supporting, without failure, its own weight and at least five times the maximum intended load. 1926.1431(p)(4)(vi) No more than one person must be hoisted at a time. 1926.1431(r) Hoisting personnel for marine transfer. When hoisting employees solely for transfer to or from a marine worksite, the following requirements must be met: 1926.1431(r)(1) The employee must be in either a personnel platform or a marine-hoisted personnel transfer device. 1926.1431(r)(2) If using a personnel platform, paragraphs (a) through (n) of this section apply. 1926.1431(r)(3) If using a marine-hoisted personnel transfer device: 1926.1431(r)(3)(i) The following paragraphs of this section apply: (a), (c)(2), (d)(1), (d)(3), (d)(4), (e)(1) through (5), (e)(12), (f)(1), (g), (h), (j), (k)(1), (k)(8), (k)(9), (k)(10)(ii), (k)(11)(i), (k)(12), (m), and (n). Where the terms "personnel platform" or "platform" are used in these paragraphs, substitute them with "marine-hoisted personnel transfer device." 1926.1431(r)(3)(ii) The transfer device must be used only for transferring workers. 1926.1431(r)(3)(iii) The number of workers occupying the transfer device must not exceed the maximum number it was designed to hold. 1926.1431(r)(3)(iv) Each employee must wear a U.S. Coast Guard personal flotation device approved for industrial use. 1926.1431(s) Hoisting personnel for storage-tank (steel or concrete), shaft and chimney operations. When hoisting an employee in storage tank (steel or concrete), shaft and chimney operations, the following requirements must be met: 1926.1431(s)(1) The employee must be in a personnel platform except when the employer can demonstrate that use of a personnel platform is infeasible; in such a case, a boatswain's chair must be used. 1926.1431(s)(2) If using a personnel platform, paragraphs (a) through (n) of this section apply. 1926.1431(s)(3) If using a boatswain's chair: 1926.1431(s)(3)(i) The following paragraphs of this section apply: (a), (c), (d)(1), (d)(3), (d)(4), (e)(1), (e)(2), (e)(3), (f)(1), (f)(2)(i), (f)(3)(i), (g), (h), (k)(1), (k)(6), (k)(8), (k)(9), (k)(11)(i), (m), (n). Where the terms "personnel platform" or "platform" are used in these paragraphs, substitute them with "boatswains chair." 1926.1431(s)(3)(ii) The employee must be hoisted in a slow, controlled descent and ascent. 1926.1431(s)(3)(iii) The employee must use personal fall protection equipment, including a full body harness, attached independent of the crane/derrick. When there is no adequate structure for attachment of personal fall arrest equipment as required in § 1926.502(d)(15), the attachment must be to the lower load block or overhaul ball. 1926.1431(s)(3)(iv) The fall protection equipment must meet the applicable requirements in § 1926.502. 1926.1431(s)(3)(v) The boatswain's chair itself (excluding the personal fall arrest system anchorages), must be capable of supporting, without failure, its own weight and at least five times the maximum intended load. 1926.1431(s)(3)(vi) No more than one person must be hoisted at a time.								
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		1926.1432 - Multiple-crane/derrick lifts--supplemental requirements.	1926.1432(a) Plan development . Before beginning a crane/derrick operation in which more than one crane/derrick will be supporting the load, the operation must be planned. The planning must meet the following requirements: 1926.1432(a)(1) The plan must be developed by a qualified person. 1926.1432(a)(2) The plan must be designed to ensure that the requirements of this subpart are met. 1926.1432(a)(3) Where the qualified person determines that engineering expertise is needed for the planning, the employer must ensure that it is provided. 1926.1432(b) Plan implementation . 1926.1432(b)(1) The multiple-crane/derrick lift must be directed by a person who meets the criteria for both a competent person and a qualified person, or by a competent person who is assisted by one or more qualified persons (lift director). 1926.1432(b)(2) The lift director must review the plan in a meeting with all workers who will be involved with the operation.	No	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific training requirements.	X					
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		1926.1433 - Design, construction and testing.	The following requirements apply to equipment that has a manufacturer-rated hoisting/lifting capacity of more than 2,000 pounds. 1926.1433(a) Crawler, truck and locomotive cranes manufactured prior to November 8, 2010 must meet the applicable requirements for design, construction, and testing as prescribed in ANSI B30.5-1968 (incorporated by reference, see § 1926.6), PCSA Std. No. 2 (1968) (incorporated by reference, see § 1926.6), the requirements in paragraph (b) of this section, or the applicable DIN standards that were in effect at the time of manufacture. 1926.1433(b) Mobile (including crawler and truck) and locomotive cranes manufactured on or after November 8, 2010 must meet the following portions of ASME B30.5-2004 (incorporated by reference, see § 1926.6) as applicable: 1926.1433(b)(1) In section 5-1.1.1 ("Load Ratings--Where Stability Governs Lifting Performance"), paragraphs (a)--(d) (including subparagraphs). 1926.1433(b)(2) In section 5-1.1.2 ("Load Ratings--Where Structural Competence Governs Lifting Performance"), paragraph (b). 1926.1433(b)(3) Section 5-1.2 ("Stability (Backward and Forward)"). 1926.1433(b)(4) In section 5-1.3.1 ("Boom Hoist Mechanism"), paragraphs (a), (b)(1) and (b)(2), except that when using rotation resistant rope, § 1926.1414(c)(4)(iii)(A) applies. 1926.1433(b)(5) In section 5-1.3.2 ("Load Hoist Mechanism"), paragraphs (a)(2) through (a)(4) (including subparagraphs), (b) (including subparagraphs), (c) (first sentence only) and (d). 1926.1433(b)(6) Section 5-1.3.3 ("Telescoping Boom"). 1926.1433(b)(7) Section 5-1.4 ("Swing Mechanism"). 1926.1433(b)(8) In section 5-1.5 ("Crane Travel"), all provisions except 5-1.5.3(d). 1926.1433(b)(9) In section 5-1.6 ("Controls"), all provisions except 5-1.6.1 (c). 1926.1433(b)(10) Section 5-1.7.4 ("Sheaves"). 1926.1433(b)(11) Section 5-1.7.5 ("Sheave sizes"). 1926.1433(b)(12) In section 5-1.9.1 ("Booms"), paragraph (f). 1926.1433(b)(13) Section 5-1.9.3 ("Outriggers"). 1926.1433(b)(14) Section 5-1.9.4 ("Locomotive Crane Equipment"). 1926.1433(b)(15) Section 5-1.9.7 ("Clutch and Brake Protection"). 1926.1433(b)(16) In section 5-1.9.11 ("Miscellaneous equipment"), paragraphs (a), (c), (e), and (f). 1926.1433(c) Prototype testing: mobile (including crawler and truck) and locomotive cranes manufactured on or after November 8, 2010 must meet the prototype testing requirements in Test Option A or Test Option B of this section. Tower cranes manufactured on or after November 8, 2010 must meet the prototype testing requirements in BS EN 14439:2006 (incorporated by reference, see § 1926.6). Note: Prototype testing of crawler, locomotive and truck cranes manufactured prior to November 8, 2010 must conform to paragraph (a) of this section. 1926.1433(c)(1)(i) The following applies to equipment with cantilevered booms (such as hydraulic boom cranes): All the tests listed in SAE J1063 (Nov. 1993) Table 1 (incorporated by reference, see Sec. 1926.6) must be performed to load all critical structural elements to their respective limits. All the strength margins listed in SAE J1063 (Nov. 1993) Table 2 (incorporated by reference, see § 1926.6) must be met. 1926.1433(c)(1)(ii) The following applies to equipment with pendant supported lattice booms: All the tests listed in SAE J987 (Jun. 2003) Table 1 (incorporated by reference, see § 1926.6) must be performed to load all critical structural elements to their respective limits. All the strength margins listed in SAE J987 (Jun. 2003) Table 2 (incorporated by reference, see § 1926.6) must be met. 1926.1433(c)(2) Test Option B . The testing and verification requirements of BS EN 13000:2004 (incorporated by reference, see § 1926.6) must be met. In applying BS EN 13000:2004, the following additional requirements must be met: 1926.1433(c)(2)(i) The following applies to equipment with cantilevered booms (such as hydraulic boom cranes): The analysis methodology (computer modeling) must demonstrate that all load cases listed in SAE J1063 (Nov. 1993) (incorporated by reference, see § 1926.6) meet the strength margins listed in SAE J1063 (Nov. 1993) Table 2. 1926.1433(c)(2)(ii) The following applies to equipment with pendant supported lattice booms: The analysis methodology (computer modeling) must demonstrate that all load cases listed in SAE J987 (Jun. 2003) (incorporated by reference, see § 1926.6) meet the strength margins listed in SAE J987 (Jun. 2003) Table 2. 1926.1433(c)(2)(iii) Analysis verification . The physical testing requirements under SAE J1063 (Nov. 1993) (incorporated by reference, see § 1926.6) and SAE J987 (Jun. 2003) (incorporated by reference, see § 1926.6) must be met unless the reliability of the analysis methodology (computer modeling) has been demonstrated by a documented history of verification through strain gauge measuring or strain gauge measuring in combination with other physical testing. 1926.1433(d) All equipment covered by this subpart must meet the following requirements: 1926.1433(d)(1) Rated capacity and related information . The information available in the cab (see § 1926.1417(c)) regarding "rated capacity" and related information must include, at a minimum, the following information: 1926.1433(d)(1)(i) A complete range of the manufacturer's equipment rated capacities, as follows: 1926.1433(d)(1)(i)(A) At all manufacturer approved operating radii, boom angles, work areas, boom lengths and configurations, jib lengths and angles (or offset). 1926.1433(d)(1)(i)(B) Alternate ratings for use and nonuse of option equipment which affects rated capacities, such as outriggers, stabilizers, and extra counterweights. 1926.1433(d)(1)(ii) A work area chart for which capacities are listed in the load chart. ( Note: An example of this type of chart is in ASME B30.5-2004, section 5-1.1.3, Figure 11). 1926.1433(d)(1)(iii) The work area figure and load chart must clearly indicate the areas where no load is to be handled. 1926.1433(d)(1)(iv) Recommended reeving for the hoist lines must be shown. 1926.1433(d)(1)(v) Recommended parts of hoist reeving, size, and type of wire rope for various equipment loads. 1926.1433(d)(1)(vi) Recommended boom hoist reeving diagram, where applicable; size, type and length of wire rope. 1926.1433(d)(1)(vii) Tire pressure (where applicable). 1926.1433(d)(1)(viii) Caution or warnings relative to limitations on equipment and operating procedures, including an indication of the least stable direction. 1926.1433(d)(1)(ix) Position of the gantry and requirements for intermediate boom suspension (where applicable). 1926.1433(d)(1)(x) Instructions for boom erection and conditions under which the boom, or boom and jib combinations, may be raised or lowered. 1926.1433(d)(1)(xi) Whether the hoist holding mechanism is automatically or manually controlled, whether free fall is available, or any combination of these. 1926.1433(d)(1)(xii) The maximum telescopic travel length of each boom telescopic section. 1926.1433(d)(1)(xiii) Whether sections are telescoped manually or with power. 1926.1433(d)(1)(xiv) The sequence and procedure for extending and retracting the telescopic boom section. 1926.1433(d)(1)(xv) Maximum loads permitted during the boom extending operation, and any limiting conditions or cautions. 1926.1433(d)(1)(xvi) Hydraulic relief valve settings specified by the manufacturer. 1926.1433(d)(2) Load hooks (including latched and unlatched types), ball assemblies and load blocks must be of sufficient weight to overhaul the line from the highest hook position for boom or boom and jib lengths and the number of parts of the line in use. 1926.1433(d)(3) Hook and ball assemblies and load blocks must be marked with their rated capacity and weight. 1926.1433(d)(4) Latching hooks . 1926.1433(d)(4)(i) Hooks must be equipped with latches, except where the requirements of paragraph (d)(4)(ii) of this section are met. 1926.1433(d)(4)(ii) Hooks without latches, or with latches removed or disabled, must not be used unless: 1926.1433(d)(4)(ii)(A) A qualified person has determined that it is safer to hoist and place the load without latches (or with the latches removed/tied-back). 1926.1433(d)(4)(ii)(B) Routes for the loads are pre-planned to ensure that no employee is required to work in the fall zone except for employees necessary for the hooking or unhooking of the load. 1926.1433(d)(4)(iii) The latch must close the throat opening and be designed to retain slings or other lifting devices/accessories in the hook when the rigging apparatus is slack. 1926.1433(d)(5) Posted warnings . Posted warnings required by this subpart as well as those originally supplied with the equipment by the manufacturer must be maintained in legible condition. 1926.1433(d)(6) An accessible fire extinguisher must be on the equipment. 1926.1433(d)(7) Cabs . Equipment with cabs must meet the following requirements: 1926.1433(d)(7)(i) Cabs must be designed with a form of adjustable ventilation and method for clearing the windshield for maintaining visibility and air circulation. Examples of means for adjustable ventilation include air conditioner or window that can be opened (for ventilation and air circulation); examples of means for maintaining visibility include heater (for preventing windshield icing), defroster, fan, windshield wiper. 1926.1433(d)(7)(ii) Cab doors (swinging, sliding) must be designed to prevent inadvertent opening or closing while traveling or operating the machine. Swinging doors adjacent to the operator must open outward. Sliding operator doors must open rearward. 1926.1433(d)(7)(iii) Windows . 1926.1433(d)(7)(iii)(A) The cab must have windows in front and on both sides of the operator. Forward vertical visibility must be sufficient to give the operator a view of the boom point at all times. 1926.1433(d)(7)(iii)(B) Windows may have sections designed to be opened or readily removed. Windows with sections designed to be opened must be designed so that they can be secured to prevent inadvertent closure. 1926.1433(d)(7)(iii)(C) Windows must be of safety glass or material with similar optical and safety properties, that introduce no visible distortion or otherwise obscure visibility that interferes with the safe operation of the equipment. 1926.1433(d)(7)(iv) A clear passageway must be provided from the operator's station to an exit door on the operator's side. 1926.1433(d)(7)(v) Areas of the cab roof that serve as a workstation for rigging, maintenance or other equipment-related tasks must be capable of supporting 250 pounds without permanent distortion. 1926.1433(d)(8) Belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, and other parts or components that reciprocate, rotate or otherwise move must be guarded where contact by employees (except for maintenance and repair employees) is possible in the performance of normal duties. 1926.1433(d)(9) All exhaust pipes, turbochargers, and charge air coolers must be insulated or guarded where contact by employees (except for maintenance and repair employees) is possible in the performance of normal duties. 1926.1433(d)(10) Hydraulic and pneumatic lines must be protected from damage to the extent feasible. 1926.1433(d)(11) The equipment must be designed so that exhaust fumes are not discharged in the cab and are discharged in a direction away from the operator. 1926.1433(d)(12) Friction mechanisms . Where friction mechanisms (such as brakes and clutches) are used to control the boom hoist or load line hoist, they must be: 1926.1433(d)(12)(i) Of a size and thermal capacity sufficient to control all rated loads with the minimum recommended reeving. 1926.1433(d)(12)(ii) Adjustable to permit compensation for lining wear to maintain proper operation. 1926.1433(d)(13) Hydraulic load hoists . Hydraulic drums must have an integrally mounted holding device or internal static brake to prevent load hoist movement in the event of hydraulic failure. 1926.1433(e) The employer's obligations under paragraphs (a) through (c) and (d)(7) through (13) of this section are met where the equipment has not changed (except in accordance with § 1926.1434 (Equipment modifications)) and it can refer to documentation from the manufacturer showing that the equipment has been designed, constructed and tested in accordance with those paragraphs.	No	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific training requirements.	X					
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Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
		1926.1434 - Equipment modifications.	<p><b>1926.1434(a)</b> Modifications or additions which affect the capacity or safe operation of the equipment are prohibited except where the requirements of paragraphs (a)(1), (a)(2), (a)(3), (a)(4), or (a)(5) of this section are met. <b>1926.1434(a)(1)</b> Manufacturer review and approval. <b>1926.1434(a)(1)(i)</b> The manufacturer approves the modifications/additions in writing. <b>1926.1434(a)(1)(ii)</b> The load charts, procedures, instruction manuals and instruction plates/tags/decals are modified as necessary to accord with the modification/addition. <b>1926.1434(a)(1)(iii)</b> The original safety factor of the equipment is not reduced. <b>1926.1434(a)(2)</b> Manufacturer refusal to review request. The manufacturer is provided a detailed description of the proposed modification/addition, is asked to approve the modification/addition, but it declines to review the technical merits of the proposal or fails, within 30 days, to acknowledge the request or initiate the review, and all of the following are met: <b>1926.1434(a)(2)(i)</b> A registered professional engineer who is a qualified person with respect to the equipment involved: <b>1926.1434(a)(2)(i)(A)</b> Approves the modification/addition and specifies the equipment configurations to which that approval applies, and 1926.1434(a)(2)(i)(B) Modifies load charts, procedures, instruction manuals and instruction plates/tags/decals as necessary to accord with the modification/addition. <b>1926.1434(a)(2)(ii)</b> The original safety factor of the equipment is not reduced. <b>1926.1434(a)(3)</b> Unavailable manufacturer. The manufacturer is unavailable and the requirements of paragraphs (a)(2)(i) and (ii) of this section are met. <b>1926.1434(a)(4)</b> Manufacturer does not complete the review within 120 days of the request. The manufacturer is provided a detailed description of the proposed modification/addition, is asked to approve the modification/addition, agrees to review the technical merits of the proposal, but fails to complete the review of the proposal within 120 days of the date it was provided the detailed description of the proposed modification/addition, and the requirements of paragraphs (a)(2)(i) and (ii) of this section are met. <b>1926.1434(a)(5)</b> Multiple manufacturers of equipment designed for use on marine work sites. The equipment is designed for marine work sites, contains major structural components from more than one manufacturer, and the requirements of paragraphs (a)(2)(i) and (ii) of this section are met. <b>1926.1434(b)</b> Modifications or additions which affect the capacity or safe operation of the equipment are prohibited where the manufacturer, after a review of the technical safety merits of the proposed modification/addition, rejects the proposal and explains the reasons for the rejection in a written response. If the manufacturer rejects the proposal but does not explain the reasons for the rejection in writing, the employer may treat this as a manufacturer refusal to review the request under paragraph (a)(2) of this section. 1926.1434(c) The provisions in paragraphs (a) and (b) of this section do not apply to modifications made or approved by the U.S. military.</p>	No	Policy provides information about crane use, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including specific training requirements.	X					
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		1926.1435 - Tower cranes.	<p><b>1926.1435(a)</b> This section contains supplemental requirements for tower cranes; all sections of this subpart apply to tower cranes unless specified otherwise.<b>1926.1435(b)</b> <i>Erecting, climbing and dismantling</i> . <b>1926.1435(b)(1)</b> Section 1926.1403 (Assembly/Disassembly--selection of manufacturer or employer procedures), § 1926.1404 (Assembly/Disassembly--general requirements (applies to all assembly and disassembly operations)), § 1926.1405 (Disassembly--additional requirements for dismantling of booms and jibs (applies to both the use of manufacturer procedures and employer procedures)), and § 1926.1406 (Assembly/Disassembly--employer procedures--general requirements), apply to tower cranes (except as otherwise specified), except that the term "assembly/disassembly" is replaced by "erecting, climbing and dismantling," and the term "disassembly" is replaced by "dismantling."<b>1926.1435(b)(2)</b> <i>Dangerous areas (self-erecting tower cranes)</i> . In addition to the requirements in § 1926.1404(e), for self-erecting tower cranes, the following applies: Employees must not be in or under the tower, jib, or rotating portion of the crane during erecting, climbing and dismantling operations until the crane is secured in a locked position and the competent person in charge indicates it is safe to enter this area, unless the manufacturer's instructions direct otherwise and only the necessary personnel are permitted in this area.<b>1926.1435(b)(3)</b> <i>Foundations and structural supports</i> . Tower crane foundations and structural supports (including both the portions of the structure used for support and the means of attachment) must be designed by the manufacturer or a registered professional engineer familiar with the type of equipment involved and the requirements of paragraphs (a)(2)(i) and (ii) of this section are met.<b>1926.1435(b)(4)</b> <i>Addressing specific hazards</i> . The requirements in § 1926.1404(h)(1) through (9) apply. In addition, the A/D director must address the following:<b>1926.1435(b)(4)(i)</b> <i>Foundations and structural supports</i> . The A/D director must determine that tower crane foundations and structural supports are installed in accordance with their design.<b>1926.1435(b)(4)(ii)</b> <i>Loss of backward stability</i> . Backward stability before swinging self erecting cranes or cranes on traveling or static undercarriages<b>1926.1435(b)(4)(iii)</b> <i>Wind speed</i> . Wind must not exceed the speed recommended by the manufacturer or, where manufacturer does not specify this information, the speed determined by a qualified person.<b>1926.1435(b)(5)</b> <i>Plumb tolerance</i> . Towers must be erected plumb to the manufacturer's tolerance and verified by a qualified person. Where the manufacturer does not specify plumb tolerance, the crane tower must be plumb to a tolerance of at least 1:500 (approximately 1 inch in 40 feet)<b>1926.1435(b)(6)</b> <i>Multiple tower crane jobsites</i> . On jobsites where more than one fixed jib (hammerhead) tower crane is installed, the cranes must be located such that no crane can come in contact with the structure of another crane. Cranes are permitted to pass over one another.<b>1926.1435(b)(7)</b> <i>Climbing procedures</i> . Prior to, and during, all climbing procedures (including inside climbing and top climbing), the employer must:<b>1926.1435(b)(7)(i)</b> Comply with all manufacturer prohibitions. <b>1926.1435(b)(7)(ii)</b> Have a registered professional engineer verify that the host structure is strong enough to sustain the forces imposed through the braces, brace anchorages and supporting floor.<b>1926.1435(b)(8)</b> <i>Counterweight/ballast</i> . <b>1926.1435(b)(8)(i)</b> Equipment must not be erected, dismantled or operated without the amount and position of counterweight and/or ballast in place as specified by the manufacturer or a registered professional engineer familiar with the equipment.<b>1926.1435(b)(8)(ii)</b> The maximum counterweight and/or ballast specified by the manufacturer or registered professional engineer familiar with the equipment must not be exceeded.<b>1926.1435(c)</b> <i>Signs</i> . The size and location of signs installed on tower cranes must be in accordance with manufacturer specifications. Where these are unavailable, a registered professional engineer familiar with the type of equipment involved must approve in writing the size and location of any signs.<b>1926.1435(d)</b> <i>Safety devices</i> . <b>1926.1435(d)(1)</b> Section 1926.1415 does not apply to tower cranes.<b>1926.1435(d)(2)</b> The following safety devices are required on all tower cranes unless otherwise specified:<b>1926.1435(d)(2)(i)</b> Boom stops on luffing boom type tower cranes<b>1926.1435(d)(2)(ii)</b> Jib stops on luffing boom type tower cranes if equipped with a jib attachment<b>1926.1435(d)(2)(iii)</b> Travel rail end stops at both ends of travel rail. <b>1926.1435(d)(2)(iv)</b> Travel rail clamps on all travel bogies. <b>1926.1435(d)(2)(v)</b> Integrally mounted check valves on all load supporting hydraulic cylinders<b>1926.1435(d)(2)(vi)</b> Hydraulic system pressure limiting device<b>1926.1435(d)(2)(vii)</b> The following brakes, which must automatically set in the event of pressure loss or power failure, are required: <b>1926.1435(d)(2)(vii)(A)</b> A hoist brake on all hoists. <b>1926.1435(d)(2)(vii)(B)</b> Swing brake. <b>1926.1435(d)(2)(vii)(C)</b> Trolley brake. <b>1926.1435(d)(2)(vii)(D)</b> Rail travel brake. <b>1926.1435(d)(2)(viii)</b> Deadman control or forced neutral return control (hand) levers<b>1926.1435(d)(2)(ix)</b> Emergency stop switch at the operator's station. <b>1926.1435(d)(2)(x)</b> Trolley end stops must be provided at both ends of travel of the trolley<b>1926.1435(d)(3)</b> <i>Proper operation required</i> . Operations must not begin unless the devices listed in this section are in proper working order. If a device stops working properly during operations, the operator must safely stop operations. The equipment must be taken out of service, and operations must not resume until the device is again working properly.<b>1926.1435(e)</b> <i>Operational aids</i> . <b>1926.1435(e)(1)</b> Section 1926.1416 does not apply to tower cranes. <b>1926.1435(e)(2)</b> The devices listed in this section ("operational aids") are required on all tower cranes covered by this subpart, unless otherwise specified.<b>1926.1435(e)(3)</b> Operations must not begin unless the operational aids are in proper working order, except where the employer meets the specified temporary alternative measures. More protective alternative measures specified by the tower crane manufacturer, if any, must be followed.<b>1926.1435(e)(4)</b> If an operational aid stops working properly during operations, the operator must safely stop operations until the temporary alternative measures are implemented or the device is again working properly. If a replacement part is no longer available, the use of a substitute device that performs the same type of function is permitted and is not considered a modification under § 1926.1434.<b>1926.1435(e)(5)</b> <i>Category I operational aids and alternative measures</i> . Operational aids listed in this paragraph that are not working properly must be repaired no later than 7 calendar days after the deficiency occurs.<i>Exception:</i> If the employer documents that it has ordered the necessary parts within 7 calendar days of the occurrence of the deficiency, the repair must be completed within 7 calendar days of receipt of the parts.<b>1926.1435(e)(5)(i) <i>Trolley travel limiting device</i> . The travel of the trolley must be restricted at both ends of the jib by a trolley travel limiting device to prevent the trolley from running into the trolley end stop.<b>1926.1435(e)(5)(ii) <i>Temporary alternative measures:</i> <b>1926.1435(e)(5)(i)(A) Option A</b> . The trolley rope must be marked (so it can be seen by the operator) at a point that will give the operator sufficient time to stop the trolley prior to the end stops<b>1926.1435(e)(5)(i)(B) Option B</b> . A spotter who is in direct communication with the operator must be used when operations are conducted within 10 feet of the outer or inner trolley end stop<b>1926.1435(e)(5)(ii)</b></b></b></p>	n/a							
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		1926.1436 - Derricks.	<p><b>1926.1436(a)</b> This section contains supplemental requirements for derricks, whether temporarily or permanently mounted; all sections of this subpart apply to derricks unless specified otherwise. A derrick is powered equipment consisting of a mast or equivalent member that is held at or near the end by guys or braces, with or without a boom, and its hoisting mechanism. The mast/equivalent member and/or the load is moved by the hoisting mechanism (typically base-mounted) and operating ropes. Derricks include: A-frame, basket, breast, Chicago boom, gin pole (except gin poles used for erection of communication towers), guy, shearleg, stiffleg, and variations of such equipment.<b>1926.1436(b)</b> <i>Operation--procedures</i> . <b>1926.1436(b)(1)</b> Section 1926.1417 (Operation) applies except for § 1926.1417(c) (Accessibility of procedures)<b>1926.1436(b)(2)</b> <i>Load chart contents</i> . Load charts must contain at least the following information:<b>1926.1436(b)(2)(i)</b> Rated capacity at corresponding ranges of boom angle or operating radii<b>1926.1436(b)(2)(ii)</b> Specific lengths of components to which the rated capacities apply<b>1926.1436(b)(2)(iii)</b> Required parts for hoist reeving. <b>1926.1436(b)(2)(iv)</b> Size and construction of rope must be included on the load chart or in the operating manual<b>1926.1436(b)(3)</b> <i>Load chart location</i> . <b>1926.1436(b)(3)(i)</b> <i>Permanent installations</i> . For permanently installed derricks with fixed lengths of boom, guy, and mast, a load chart must be posted where it is visible to personnel responsible for the operation of the equipment<b>1926.1436(b)(3)(ii)</b> <i>Non-permanent installations</i> . For derricks that are not permanently installed, the load chart must be readily available at the job site to personnel responsible for the operation of the equipment. <b>1926.1436(c)</b> <i>Construction</i>. <b>1926.1436(c)(1)</b> <i>General requirements</i> . <b>1926.1436(c)(1)(i)</b> Derricks must be constructed to meet all stresses imposed on members and components when installed and operated in accordance with the manufacturer's/builder's procedures and within its rated capacity. <b>1926.1436(c)(1)(ii)</b> Welding of load sustaining members must conform to recommended practices in ANSI/AWS D14.3-94 (incorporated by reference, see § 1926.6) or AWS D1.1/D1.1M:2002 (incorporated by reference, see § 1926.6). <b>1926.1436(c)(2)</b> <i>Guy derricks</i> . <b>1926.1436(c)(2)(i)</b> The minimum number of guys must be 6, with equal spacing, except where a qualified person or derrick manufacturer approves variations from these requirements and revises the rated capacity to compensate for such variations.<b>1926.1436(c)(2)(ii)</b> Guy derricks must not be used unless the employer has the following guy information from the manufacturer or a qualified person, when not available from the manufacturer:<b>1926.1436(c)(2)(ii)(A)</b> The number of guys. <b>1926.1436(c)(2)(ii)(B)</b> The spacing around the mast. <b>1926.1436(c)(2)(ii)(C)</b> The size, grade, and construction of rope to be used for each guy. <b>1926.1436(c)(2)(iii)</b> For guy derricks manufactured after December 18, 1970, in addition to the information required in paragraph (c)(2)(ii) of this section, the employer must have the following guy information from the manufacturer or a qualified person, when not available from the manufacturer:<b>1926.1436(c)(2)(iii)(A)</b> The amount of initial sag or tension. <b>1926.1436(c)(2)(iii)(B)</b> The amount of tension in guy line rope at anchor.<b>1926.1436(c)(2)(iv)</b> The mast base must permit the mast to rotate freely with allowance for slight tilting of the mast caused by guy slack. <b>1926.1436(c)(2)(v)</b> The mast cap must: <b>1926.1436(c)(2)(v)(A)</b> Permit the mast to rotate freely. <b>1926.1436(c)(2)(v)(B)</b> Withstand tilting and cramping caused by the guy loads<b>1926.1436(c)(2)(v)(C)</b> Be secured to the mast to prevent disengagement during erection. <b>1926.1436(c)(2)(v)(D)</b> Be provided with means for attaching guy ropes.<b>1926.1436(c)(3)</b> <i>Stiffleg derricks</i> . <b>1926.1436(c)(3)(i)</b> The mast must be supported in the vertical position by at least two stifflegs; one end of each must be connected to the top of the mast and the other end securely anchored. <b>1926.1436(c)(3)(ii)</b> The stifflegs must be capable of withstanding the loads imposed at any point of operation within the load chart range.<b>1926.1436(c)(3)(iii)</b> The mast base must: <b>1926.1436(c)(3)(iii)(A)</b> Permit the mast to rotate freely (when necessary).<b>1926.1436(c)(3)(iii)(B)</b> Permit deflection of the mast without binding<b>1926.1436(c)(3)(iv)</b> The mast must be prevented from lifting out of its socket when the mast is in tension<b>1926.1436(c)(3)(v)</b> The stiffleg connecting member at the top of the mast must<b>1926.1436(c)(3)(v)(A)</b> Permit the mast to rotate freely (when necessary). <b>1926.1436(c)(3)(v)(B)</b> Withstand the loads imposed by the action of the stifflegs<b>1926.1436(c)(3)(v)(C)</b> Be secured so as to oppose separating forces. <b>1926.1436(c)(4)</b> <i>Gin pole derricks</i> . <b>1926.1436(c)(4)(i) Guy lines must be sized and spaced so as to make the gin pole stable in both boomed and vertical positions.<i>Exception:</i> Where the size and/or spacing of guy lines do not result in the gin pole being stable in both boomed and vertical positions, the employer must ensure that the derrick is not used in an unstable position.<b>1926.1436(c)(4)(ii)</b> The base of the gin pole must permit movement of the pole (when necessary)<b>1926.1436(c)(4)(iii)</b> The gin pole must be anchored at the base against horizontal forces (when such forces are present)<b>1926.1436(c)(5)</b> <i>Chicago boom derricks</i> . The fittings for stepping the boom and for attaching the topping lift must be arranged to: <b>1926.1436(c)(5)(i)</b> Permit the derrick to swing at all permitted operating radii and mounting heights between fitting<b>1926.1436(c)(5)(ii)</b> Accommodate attachment to the upright member of the host structure<b>1926.1436(c)(5)(iii)</b> Withstand the forces applied when configured and operated in accordance with the manufacturer's/builder's procedures and within its rated capacity<b>1926.1436(c)(5)(iv)</b> Prevent the boom or topping lift from lifting out under tensile forces<b>1926.1436(d)</b> <i>Anchoring and guying</i> . <b>1926.1436(d)(1)</b> Load anchoring data developed by the manufacturer or a qualified person must be used.<b>1926.1436(d)(2)</b> <i>Guy derricks</i> . <b>1926.1436(d)(2)(i) The mast base must be anchored. <b>1926.1436(d)(2)(ii) The guys must be secured to the ground or other firm anchorage<b>1926.1436(d)(2)(iii)</b> The anchorage and guying must be designed to withstand maximum horizontal and vertical forces encountered when operating within rated capacity with the particular guy slope and spacing specified for the application<b>1926.1436(d)(3)</b> <i>Stiffleg derricks</i> . <b>1926.1436(d)(3)(i)</b> The mast base and stifflegs must be anchored.<b>1926.1436(d)(3)(ii)</b> The mast base and stifflegs must be designed to withstand maximum horizontal and vertical forces encountered when operating within rated capacity with the particular stiffleg spacing and slope specified for the application<b>1926.1436(e)</b> <i>Swingers and hoists</i> . <b>1926.1436(e)(1)</b> The boom, swinger mechanisms and hoists must be suitable for the derrick work intended and must be anchored to prevent displacement from the imposed load<b>1926.1436(e)(2)</b> <i>Hoists</i> . <b>1926.1436(e)(2)(i)</b> Base mounted drum hoists must meet the requirements in the following sections of ASME B30.7-2001 (incorporated by reference, see § 1926.6): <b>1926.1436(e)(2)(i)(A)</b> Sections 7-1.1 ("Load ratings and markings"), <b>1926.1436(e)(2)(i)(B)</b> Section 7-1.2 ("Construction"), except: 7-1.2.13 ("Operator's cab"); 7-1.2.15 ("Fire extinguishers") <b>1926.1436(e)(2)(i)(C)</b> Section 7-1.3 ("Installation"). <b>1926.1436(e)(2)(i)(D)</b> Applicable terms in section 7-0.2 ("Definitions")<b>1926.1436(e)(2)(ii)</b> <i>Load tests for new hoists</i> . The employer must ensure that new hoists are load tested to a minimum of 110% of rated capacity, but not more than 125% of rated capacity, unless otherwise recommended</b></b></b></p>	n/a							
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Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
350		1926.1437 - Floating cranes/derricks and land cranes/derricks on barges.	<p><b>1926.1437(a)</b> This section contains supplemental requirements for floating cranes/derricks and land cranes/derricks on barges, pontoons, vessels or other means of flotation (i.e., vessel/flotation device). The sections of this subpart apply to floating cranes/derricks and land cranes/derricks on barges, pontoons, vessels or other means of flotation, unless specified otherwise. The requirements of this section do not apply when using jacked barges when the jacks are deployed to the river, lake, or sea bed and the barge is fully supported by the jacks.</p> <p><b>1926.1437(b)</b> <i>General requirements</i>.</p> <p>The requirements in paragraphs (c) through (k) of this section apply to both floating cranes/derricks and land cranes/derricks on barges, pontoons, vessels or other means of flotation.</p> <p><b>1926.1437(c)(1)</b> Erect and maintain control lines, warning lines, railings or similar barriers to mark the boundaries of the hazard areas; and</p> <p><b>1926.1437(c)(2)</b> Clearly mark the hazard areas by a combination of warning signs (such as, "Danger-Swing/Crush Zone") and high visibility markings on the equipment that identify the hazard areas. In addition, the employer must train each employee to understand what these markings signify.</p> <p><b>1926.1437(d)</b> <i>Keeping clear of the load</i>. Section 1926.1425 does not apply.</p> <p><b>1926.1437(e)</b> <i>Additional safety devices</i>. In addition to the safety devices listed in §1926.1415, the following safety devices are required:</p> <p><b>1926.1437(e)(1)</b> Barge, pontoon, vessel or other means of flotation list and trim device. The safety device must be located in the cab or, when there is no cab, at the operator's station.</p> <p><b>1926.1437(e)(2)</b> Positive equipment house lock.</p> <p><b>1926.1437(e)(3)</b> <i>Wind speed and direction indicator</i>. A competent person must determine if wind is a factor that needs to be considered; if wind needs to be considered, a wind speed and direction indicator must be used.</p> <p><b>1926.1437(f)</b> <i>Operational aids</i>.</p> <p><b>1926.1437(f)(1)</b> An anti two-block device is required only when hoisting personnel or hoisting over an occupied cofferdam or shaft.</p> <p><b>1926.1437(f)(2)</b> Section 1926.1416(e)(4) (Load weighing and similar devices) does not apply to dragline, clamshell (grapple), magnet, drop ball, container handling, concrete bucket, and pile driving work performed under this section.</p> <p><b>1926.1437(g)</b> <i>Accessibility of procedures applicable to equipment operation</i>. If the crane/derrick has a cab, the requirements of §1926.1417(c) apply. If the crane/derrick does not have a cab, the employer must ensure that:</p> <p><b>1926.1437(g)(1)</b> Rated capacities (load charts) are posted at the operator's station. If the operator's station is moveable (such as with pendant-controlled equipment), the load charts are posted on the equipment.</p> <p><b>1926.1437(g)(2)</b> Procedures applicable to the operation of the equipment (other than load charts), recommended operating speeds, special hazard warnings, instructions and operators manual, must be readily available on board the vessel/flotation device.</p> <p><b>1926.1437(h)</b> <i>Inspections</i>. In addition to meeting the requirements of §1926.1412 for inspecting the crane/derrick, the employer must inspect the barge, pontoons, vessel or other means of flotation used to support a floating crane/derrick or land crane/derrick, and ensure that:</p> <p><b>1926.1437(h)(1)</b> <i>Shift</i>. For each shift inspection, the means used to secure/attach the equipment to the vessel/flotation device is in proper condition, including wear, corrosion, loose or missing fasteners, defective welds, and (when applicable) insufficient tension.</p> <p><b>1926.1437(h)(2)</b> <i>Monthly</i>. For each monthly inspection:</p> <p><b>1926.1437(h)(2)(i)</b> The means used to secure/attach the equipment to the vessel/flotation device is in proper condition, including wear, corrosion, and, when applicable, insufficient tension.</p> <p><b>1926.1437(h)(2)(ii)</b> The vessel/flotation device is not taking on water.</p> <p><b>1926.1437(h)(2)(iii)</b> The deckload is properly secured.</p> <p><b>1926.1437(h)(2)(iv)</b> The vessel/flotation device is watertight based on the condition of the chain lockers, storage, fuel compartments, and hatch.</p> <p><b>1926.1437(h)(2)(v)</b> The firefighting and lifesaving equipment is in place and functional.</p> <p><b>1926.1437(h)(3)</b> The shift and monthly inspections are conducted by a competent person, and:</p> <p><b>1926.1437(h)(3)(i)</b> If any deficiency is identified, an immediate determination is made by a qualified person whether the deficiency constitutes a hazard.</p> <p><b>1926.1437(h)(3)(ii)</b> If the deficiency is determined to constitute a hazard, the vessel/flotation device is removed from service until the deficiency has been corrected.</p> <p><b>1926.1437(h)(4)</b> <i>Annual: external vessel/flotation device inspection</i>. For each annual inspection:</p> <p><b>1926.1437(h)(4)(i)</b> The external portion of the barge, pontoons, vessel or other means of flotation used is inspected annually by a qualified person who has expertise with respect to vessels/flotation devices and that the inspection includes the following items:</p> <p><b>1926.1437(h)(4)(i)(A)</b> The items identified in paragraphs (h)(1) (<i>Shift</i>) and (h)(2) (<i>Monthly</i>) of this section.</p> <p><b>1926.1437(h)(4)(i)(B)</b> Cleats, bits, chocks, fenders, capstans, ladders, and stanchions, for significant corrosion, wear, deterioration, or deformation that could impair the function of these items.</p> <p><b>1926.1437(h)(4)(i)(C)</b> External evidence of leaks and structural damage; evidence of leaks and damage below the waterline may be determined through internal inspection of the vessel/flotation device.</p> <p><b>1926.1437(h)(4)(i)(D)</b> Four-corner draft readings.</p> <p><b>1926.1437(h)(4)(i)(E)</b> Firefighting equipment for serviceability.</p> <p><b>1926.1437(h)(4)(ii)</b> Rescue skiffs, lifelines, work vests, life preservers and ring buoys are inspected for proper condition.</p> <p><b>1926.1437(h)(4)(iii)</b> If any deficiency is identified, an immediate determination is made by the qualified person whether the deficiency constitutes a hazard or, though not yet a hazard, needs to be monitored in the monthly inspection.</p> <p><b>1926.1437(h)(4)(iii)(A)</b> If the qualified person determines that the deficiency constitutes a hazard, the vessel/flotation device is removed from service until it has been corrected. See requirements in §1926.1417.</p> <p><b>1926.1437(h)(4)(iii)(B)</b> If the qualified person determines that, though not presently a hazard, the deficiency needs to be monitored, the deficiency is checked in the monthly inspections.</p> <p><b>1926.1437(h)(5)</b> <i>Four-year: internal vessel/flotation device inspection</i>. For each four-year inspection:</p> <p><b>1926.1437(h)(5)(i)</b> A marine engineer, marine architect, licensed surveyor, or other qualified person who has expertise with respect to vessels/flotation devices surveys the internal portion of the barge, pontoons, vessel, or other means of flotation.</p> <p><b>1926.1437(h)(5)(ii)</b> If the surveyor identifies a deficiency, an immediate determination is made by the surveyor as to whether the deficiency constitutes a hazard or, though not yet a hazard, needs to be monitored in the monthly or annual inspections, as appropriate.</p> <p><b>1926.1437(h)(5)(ii)(A)</b> If the surveyor determines that the deficiency constitutes a hazard, the vessel/flotation device is removed from service until it has been corrected.</p> <p><b>1926.1437(h)(5)(ii)(B)</b> If the surveyor determines that, though not presently a hazard, the deficiency needs to be monitored, the deficiency is checked in the monthly or annual inspections, as appropriate.</p> <p><b>1926.1437(h)(6)</b> <i>Documentation</i>. The monthly and annual inspections required in paragraphs (h)(2) and (h)(4) of this section are documented in accordance with §§1926.1412 (e)(3) and 1926.1412(f)(7), respectively, and that the four-year inspection required in paragraph (h)(5) of this section is documented in accordance with §1926.1412(f)(7), except that the documentation for that inspection must be retained for a minimum of 4 years. All such documents must be made</p>	n/a						
351		1926.1438 - Overhead & gantry cranes.	<p><b>1926.1438(a)</b> <i>Permanently installed overhead and gantry cranes</i>. The requirements of § 1910.179, except for § 1910.179(b)(1), and not the requirements of this subpart CC, apply to the following equipment when used in construction and permanently installed in a facility: overhead and gantry cranes, including semigantry, cantilever gantry, wall cranes, storage bridge cranes, and others having the same fundamental characteristic.</p> <p><b>1926.1438(b)</b> <i>Overhead and gantry cranes that are not permanently installed in a facility</i>.</p> <p><b>1926.1438(b)(1)</b> This paragraph applies to the following equipment when used in construction and not permanently installed in a facility: Overhead and gantry cranes, overhead/bridge cranes, semigantry, cantilever gantry, wall cranes, storage bridge cranes, launching gantry cranes, and similar equipment having the same fundamental characteristics, irrespective of whether it travels on tracks, wheels, or other means.</p> <p><b>1926.1438(b)(2)</b> The following requirements apply to equipment identified in paragraph (b)(1) of this section:</p> <p><b>1926.1438(b)(2)(i)</b> Sections 1926.1400 through 1926.1414; § § 1926.1417 through 1926.1425; § 1926.1426(d), § § 1926.1427 through 1926.1434; § 1926.1437, § 1926.1439, and § 1926.1441.</p> <p><b>1926.1438(b)(2)(ii)</b> The following portions of § 1910.179:</p> <p><b>1926.1438(b)(2)(ii)(A)</b> Paragraphs (b)(5),(6),(7); (e)(1),(3),(5),(6); (f)(1),(4); (g); (h)(1),(3); (k); and (n) of § 1910.179.</p> <p><b>1926.1438(b)(2)(ii)(B)</b> The definitions in § 1910.179(a) except for "hoist" and "load." For those words, the definitions in § 1926.1401 apply.</p> <p><b>1926.1438(b)(2)(ii)(C)</b> Section 1910.179(b)(2), but only where the equipment identified in paragraph (b)(1) of this section (§ 1926.1438) was manufactured before September 19, 2001.</p> <p><b>1926.1438(b)(2)(iii)</b> For equipment manufactured on or after September 19, 2001, the following sections of ASME B30.2-2005 (incorporated by reference, see § 1926.6) apply: 2-1.3.1; 2-1.3.2; 2-1.4.1; 2-1.6; 2-1.7.2; 2-1.8.2; 2-1.9.1; 2-1.9.2; 2-1.11; 2-1.12.2; 2-1.13.7; 2-1.14.2; 2-1.14.3; 2-1.14.5; 2-1.15.; 2-2.2.2; 2-3.2.1.1. In addition, 2-3.5 applies, except in 2-3.5.1(b), "29 CFR 1910.147" is substituted for "ANSI Z244.1."</p>	n/a						
352		1926.1439 - Dedicated pile drivers.	<p><b>1926.1439(a)</b> The provisions of subpart CC apply to dedicated pile drivers, except as specified in this section.</p> <p><b>1926.1439(b)</b> Section 1926.1416(d)(3) (Anti two-blocking device) does not apply.</p> <p><b>1926.1439(c)</b> Section 1926.1416(e)(4) (Load weighing and similar devices) applies only to dedicated pile drivers manufactured after November 8, 2011.</p> <p><b>1926.1439(d)</b> For equipment manufactured on or after September 19, 2001, the following sections of ASME B30.2-2005 (incorporated by reference, see § 1926.6) apply: 2-1.3.1; 2-1.3.2; 2-1.4.1; 2-1.6; 2-1.7.2; 2-1.8.2; 2-1.9.1; 2-1.9.2; 2-1.11; 2-1.12.2; 2-1.13.7; 2-1.14.2; 2-1.14.3; 2-1.14.5; 2-1.15.; 2-2.2.2; 2-3.2.1.1. In addition, 2-3.5 applies, except in 2-3.5.1(b), "29 CFR 1910.147" is substituted for "ANSI Z244.1."</p>	n/a						
353		1926.1440 - Sideboom cranes.	<p><b>1926.1440(a)</b> The provisions of this standard apply, except § 1926.1402 (Ground conditions), § 1926.1415 (Safety devices), § 1926.1416 (Operational aids), and § 1926.1427 (Operator qualification and certification).</p> <p><b>1926.1440(b)</b> Section 1926.1426 (Free fall and controlled load lowering) applies, except § 1926.1426(a)(2)(i). Sideboom cranes in which the boom is designed to free fall (live boom) are permitted only if manufactured prior to November 8, 2010.</p> <p><b>1926.1440(c)</b> Sideboom cranes mounted on wheel or crawler tractors must meet all of the following requirements of ASME B30.14-2004 (incorporated by reference, see § 1926.6):</p> <p><b>1926.1440(c)(1)</b> Section 14-1.1 ("Load Ratings").</p> <p><b>1926.1440(c)(2)</b> Section 14-1.3 ("Side Boom Tractor Travel").</p> <p><b>1926.1440(c)(3)</b> Section 14-1.5 ("Ropes and Reeving Accessories").</p> <p><b>1926.1440(c)(4)</b> Section 14-1.7.1 ("Booms").</p> <p><b>1926.1440(c)(5)</b> Section 14-1.7.2 ("General Requirements--Exhaust Gases").</p> <p><b>1926.1440(c)(6)</b> Section 14-1.7.3 ("General Requirements--Stabilizers (Wheel-Type Side Boom Tractors)").</p> <p><b>1926.1440(c)(7)</b> Section 14-1.7.4 ("General Requirements--Welded Construction").</p> <p><b>1926.1440(c)(8)</b> Section 14-1.7.6 ("General Requirements--Clutch and Brake Protection").</p> <p><b>1926.1440(c)(9)</b> Section 14-2.2.2 ("Testing--Rated Load Test"), except that it applies only to equipment that has been altered or modified.</p> <p><b>1926.1440(c)(10)</b> In section 14-3.1.2 ("Operator Qualifications"), paragraph (a), except the phrase "When required by law."</p> <p><b>1926.1440(c)(11)</b> In section 14-3.1.3 ("Operating Practices"), paragraphs (e), (f)(1)--(f)(4), (f)(6), (f)(7), (h), and (i).</p> <p><b>1926.1440(c)(12)</b> In section 14-3.2.3 ("Moving the Load"), paragraphs (j), (l), and (m). The following paragraphs of this section specify requirements for employers using equipment with a maximum rated hoisting/lifting capacity of 2,000 pounds or less.</p>	n/a						
354		1926.1441 - Equipment with a rated hoisting/lifting capacity of 2,000 pounds or less.	<p><b>1926.1441(a)</b> The employer using this equipment must comply with the following provisions of this subpart: § 1926.1400 (Scope); § 1926.1401 (Definitions); § 1926.1402 (Ground conditions); § 1926.1403 (Assembly/disassembly--selection of manufacturer or employer procedures); § 1926.1406 (Assembly/disassembly--employer procedures); §§ 1926.1407 through 1926.1411 (Power line safety); § 1926.1412(c) (<i>Post-assembly</i>); §§ 1926.1413 through 1926.1414 (Wire rope); § 1926.1418 (Authority to stop operation); §§ 1926.1419 through 1926.1422 (Signals); § 1926.1423 (Fall protection); § 1926.1425 (Keeping clear of the load) (except for § 1926.1425(c)(3) (qualified rigger)); § 1926.1426 (Free fall and controlled load lowering); § 1926.1432 (Multiple crane/derrick lifts--supplemental requirements); § 1926.1434 (Equipment modifications); § 1926.1435 (Tower cranes); § 1926.1436 (Derricks); § 1926.1437 (Floating cranes/derricks and land cranes/derricks on barges); § 1926.1438 (Overhead &amp; gantry cranes).</p> <p><b>1926.1441(b)</b> <i>Assembly/disassembly</i>.</p> <p><b>1926.1441(b)(1)</b> In addition to compliance with § § 1926.1403 (Assembly/disassembly--selection of manufacturer or employer procedures) and 1926.1406 (Assembly/disassembly--employer procedures), the employer must also comply with Sec. 1926.1441(b)(2).</p> <p><b>1926.1441(b)(2)</b> <i>Components and configuration</i>. The employer must ensure that:</p> <p><b>1926.1441(b)(2)(i)</b> The selection of components, and the configuration of the equipment, that affect the capacity or safe operation of the equipment complies with either:</p> <p><b>1926.1441(b)(2)(i)(A)</b> Manufacturer instructions, recommendations, limitations, and specifications. When these documents and information are unavailable, a registered professional engineer familiar with the type of equipment involved must approve, in writing, the selection and configuration of components.</p> <p><b>1926.1441(b)(2)(i)(B)</b> Approved modifications that meet the requirements of § 1926.1434 (Equipment modifications).</p> <p><b>1926.1441(b)(2)(ii)</b> <i>Post-assembly inspection</i>. Upon completion of assembly, the equipment is inspected to ensure that it is in compliance with paragraph (b)(2)(i) of this section.</p> <p><b>1926.1441(b)(2)(iii)</b> <i>Manufacturer prohibitions</i>. The employer must comply with applicable manufacturer prohibitions.</p> <p><b>1926.1441(c)</b> <i>Operation--procedures</i>.</p> <p><b>1926.1441(c)(1)</b> The employer must comply with all manufacturer procedures applicable to the operational functions of the equipment, including its use with attachments.</p> <p><b>1926.1441(c)(2)</b> <i>Unavailable operation procedures</i>. The employer must:</p> <p><b>1926.1441(c)(2)(i)</b> When the manufacturer's procedures are unavailable, develop, and ensure compliance with, all procedures necessary for the safe operation of the equipment and attachments.</p> <p><b>1926.1441(c)(2)(ii)</b> Ensure that procedures for the operational controls are developed by a qualified person.</p> <p><b>1926.1441(c)(2)(iii)</b> Ensure that procedures related to the capacity of the equipment are developed and signed by a registered professional engineer familiar with the equipment.</p> <p><b>1926.1441(c)(3)</b> <i>Accessibility</i>. The employer must ensure that:</p> <p><b>1926.1441(c)(3)(i)</b> The load chart is available to the operator at the control station.</p> <p><b>1926.1441(c)(3)(ii)</b> Procedures applicable to the operation of the equipment, recommended operating speeds, special hazard warnings, instructions, and operator's manual are readily available for use by the operator.</p> <p><b>1926.1441(c)(3)(iii)</b> When rated capacities are available at the control station only in electronic form and a failure occurs that makes the rated capacities inaccessible, the operator immediately ceases operations or follows safe shut-down procedures until the rated capacities (in electronic or other form) are available.</p> <p><b>1926.1441(d)</b> <i>Safety devices and operational aids</i>.</p> <p><b>1926.1441(d)(1)</b> The employer must ensure that safety devices and operational aids that are part of the original equipment are maintained in accordance with manufacturer procedures.</p> <p><b>1926.1441(d)(2)</b> <i>Anti two-blocking</i>. The employer must ensure that equipment covered by this section manufactured more than one year after November 8, 2010 have either an anti two-block device that meets the requirements of § 1926.1416(d)(3), or is designed so that, in the event of a two-block situation, no damage or load failure will occur (for example, by using a power unit that stalls in response to a two-block situation).</p> <p><b>1926.1441(e)</b> <i>Operator qualifications</i>. The employer must train each operator, prior to operating the equipment, on the safe operation of the type of equipment the operator will be using.</p> <p><b>1926.1441(f)</b> <i>Signal person qualifications</i>. The employer must train each signal person in the proper use of signals applicable to the use of the equipment.</p> <p><b>1926.1441(h)</b> <i>Inspections</i>. The employer must ensure that equipment is inspected in accordance with manufacturer procedures.</p> <p><b>1926.1441(j)</b> <i>Hoisting personnel</i>. The employer must ensure that equipment covered by this section is not used to hoist personnel.</p> <p><b>1926.1441(k)</b> <i>Design</i>. The employer must ensure that the equipment is designed by a qualified engineer.</p>	n/a						
355		1926.1442 - Severability.	Should a court of competent jurisdiction hold any provision(s) of subpart CC to be invalid, such action shall not affect any other provision of the subpart.	n/a						
356		1926 Subpart CC App A - Standard Hand Signals		n/a						

## Appendix C - Unfiltered Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
357		1926 Subpart CC App B - Assembly/Disassembly--Sample Procedures for Minimizing the Risk of Unintended Dangerous Boom Movement		n/a						
358		1926 Subpart CC App C - Operator Certification--Written Examination--Technical Knowledge Criteria		n/a						
359	1910 Subpart O - Machinery and Machine Guarding			.						
360		1910.212 - General requirements for all machines.	1910.212(a)(1) Types of guarding. One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips and sparks. Examples of guarding methods are-barrier guards, two-hand tripping devices, electronic safety devices, etc. 1910.212(a)(2) General requirements for machine guards. Guards shall be affixed to the machine where possible and secured elsewhere if for any reason attachment to the machine is not possible. The guard shall be such that it does not offer an accident hazard in itself.	Partial	Policy requires machine guarding to be in place however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
361		1910.213 - Woodworking machinery requirements.	n/a	n/a						
362		1910.214 - Cooperage machinery. [Reserved]	n/a	n/a						
363		1910.215 - Abrasive wheel machinery.	1910.215(a)(1) Machine guarding. Abrasive wheels shall be used only on machines provided with safety guards as defined in the following paragraphs of this section, except: 1910.215(a)(1)(i) Wheels used for internal work while within the work being ground; 1910.215(a)(1)(ii) Mounted wheels, used in portable operations, 2 inches and smaller in diameter; and 1910.215(a)(1)(iii) Types 16, 17, 18, 18R, and 19 cones, plugs, and threaded hole pot balls where the work offers protection. 1910.215(a)(2) Guard design. The safety guard shall cover the spindle end, nut, and flange projections. The safety guard shall be mounted so as to maintain proper alignment with the wheel, and the strength of the fastenings shall exceed the strength of the guard, except: 1910.215(a)(2)(i) Safety guards on all operations where the work provides a suitable measure of protection to the operator, may be so constructed that the spindle end, nut, and outer flange are exposed; and where the nature of the work is such as to entirely cover the side of the wheel, the side covers of the guard may be omitted; and 1910.215(a)(2)(ii) The spindle end, nut, and outer flange may be exposed on machines designed as portable saws. 1910.215(a)(3) Flanges. Grinding machines shall be equipped with flanges in accordance with paragraph (c) of this section.	Partial	Policy requires machine guarding to be in place however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
364		1910.216 - Mills and calendars in the rubber and plastics industries.	n/a	n/a						
365		1910.217 - Mechanical power presses.	n/a	n/a						
366		1910.217 App A - Mandatory requirements for certification/validation of safety systems for presence sensing device initiation of mechanical power presses	n/a	n/a						
367		1910.217 App B - Nonmandatory guidelines for certification/validation of safety systems for presence sensing device initiation of mechanical power presses	n/a	n/a						
368		1910.217 App C - Mandatory requirements for OSHA recognition of third-party validation organizations for the PSDI standard	n/a	n/a						
369		1910.217 App D - Nonmandatory supplementary information	n/a	n/a						
370		1910.218 - Forging machines.	n/a	n/a						
371		1910.219 - Mechanical power-transmission apparatus.	n/a	n/a						
372	1910 Subpart P - Hand and Portable Powered Tools and Other Hand-Held Equipment			.						
373		1910.242 - Hand and portable powered tools and equipment, general.	1910.242(a) General requirements. Each employer shall be responsible for the safe condition of tools and equipment used by employees, including tools and equipment which may be furnished by employees, including tools and equipment which may be furnished by employees, including tools and equipment which may be furnished by employees, including tools and equipment which may be furnished by employees, including tools and equipment which may be furnished by employees, including tools and equipment which may be furnished by employees, including tools and equipment which may be furnished by employees, including tools and equipment which may be furnished by employees, including tools and equipment which may be furnished by employees, including tools and equipment which may be furnished by employees, including tools and equipment which may be furnished by employees, including tools and equipment which may be furnished by employees, including tools and equipment which may be furnished by employees, including tools and equipment 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Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
377		1926.300 - General requirements.	1926.300(a) Condition of tools. All hand and power tools and similar equipment, whether furnished by the employer or the employee, shall be maintained in a safe condition. 1926.300(b) Guarding. 1926.300(b)(1) When power operated tools are designed to accommodate guards, they shall be equipped with such guards when in use. 1926.300(b)(2) Belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating or moving parts of equipment shall be guarded if such parts are exposed to contact by employees or otherwise create a hazard. Guarding shall meet the requirements as set forth in American National Standards Institute, B15.1-1953 (R1958), Safety Code for Mechanical Power-Transmission Apparatus. 1926.300(b)(3) "Types of guarding." One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips and sparks. Examples of guarding methods are - barrier guards, two-hand tripping devices, electronic safety devices, etc. 1926.300(b)(4) "Point of operation guarding." 1926.300(b)(4)(i) Point of operation is the area on a machine where work is actually performed upon the material being processed. 1926.300(b)(4)(ii) The point of operation of machines whose operation exposes an employee to injury, shall be guarded. The guarding device shall be in conformity with any appropriate standards thereof, or, in the absence of applicable specific standards, shall be so designed and constructed as to prevent the operator from having any part of his body in the danger zone during the operating cycle. 1926.300(b)(4)(iii) Special handtools for placing and removing material shall be such as to permit easy handling of material without the operator placing a hand in the danger zone. Such tools shall not be in lieu of other guarding required by this section, but can only be used to supplement protection provided. 1926.300(b)(4)(iv) The following are some of the machines which usually require point of operation guarding: 1926.300(b)(4)(iv)(a) Guillotine cutters. 1926.300(b)(4)(iv)(b) Shears. 1926.300(b)(4)(iv)(c) Alligator shears. 1926.300(b)(4)(iv)(d) Powered presses. 1926.300(b)(4)(iv)(e) Milling machines. 1926.300(b)(4)(iv)(f) Power saws. 1926.300(b)(4)(iv)(g) Jointers. 1926.300(b)(4)(iv)(h) Portable power tools. 1926.300(b)(4)(iv)(i) Forming rolls and calendars. 1926.300(b)(5) "Exposure of blades." When the periphery of the blades of a fan is less than 7 feet (2.128 m) above the floor or working level, the blades shall be guarded. The guard shall have openings no larger than 1/2 inch (1.27 cm). 1926.300(b)(6) "Anchoring fixed machinery." Machines designed for a fixed location shall be securely anchored to prevent walking or moving. 1926.300(b)(7) "Guarding of abrasive wheel machinery - exposure adjustment." Safety guards of the types described in paragraphs (b)(8) and (9) of this section, where the operator stands in front of the opening, shall be constructed so that the peripheral protecting member can be adjusted to the constantly decreasing diameter of the wheel. The maximum angular exposure above the horizontal plane of the wheel spindle as specified in paragraphs (b)(8) and (9) of this section shall never be exceeded, and the distance between the wheel periphery and the adjustable tongue or the end of the peripheral member at the top shall never exceed 1/4 inch (0.635 cm). (See Figures I-1 through I-6.) 1926.300(c) Personal protective equipment. Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dusts, fumes, mists, vapors, or gases shall be provided with the particular personal protective equipment necessary to protect them from the hazard. All personal protective equipment shall meet the requirements and be maintained according to Subparts D and E of this part. 1926.300(d) Switches. 1926.300(d)(1) All hand-held powered platen sanders, grinders with wheels 2-inch diameter or less, routers, planers, laminate trimmers, nibblers, shears, scroll saws, and jigsaws with blade shanks one-fourth of an inch wide or less may be equipped with only a positive "on-off" control. 1926.300(d)(2) All hand-held powered drills, tappers, fastener drivers, horizontal, vertical, and angle grinders with wheels greater than 2 inches in diameter, disc sanders, belt sanders, reciprocating saws, saber saws, and other similar operating powered tools shall be equipped with a momentary contact "on-off" control and may have a lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on. 1926.300(d)(3) All other hand-held powered tools, such as circular saws, chain saws, and percussion tools without positive accessory holding means, shall be equipped with a constant pressure switch that will shut off the power when the pressure is released. 1926.300(d)(4) The requirements of this paragraph shall become effective on July 15, 1972. 1926.300(d)(5) Exception: This paragraph does not apply to concrete vibrators, concrete breakers, powered tampers, jack hammers, rock drills, and similar hand operated power tools.	Partial	Policy requires machine guarding to be in place and proper tool usage, however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
378		1926.301 - Hand tools.	1926.301(a) Employers shall not issue or permit the use of unsafe hand tools. 1926.301(b) Wrenches, including adjustable, pipe, end, and socket wrenches shall not be used when jaws are sprung to the point that slippage occurs. 1926.301(c) Impact tools, such as drift pins, wedges, and chisels, shall be kept free of mushroomed heads. 1926.301(d) The wooden handles of tools shall be kept free of splinters or cracks and shall be kept tight in the tool.	Partial	Policy requires machine guarding to be in place and proper tool usage, however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
379		1926.302 - Power-operated hand tools.	1926.302(a) Electric power-operated tools. 1926.302(a)(1) Electric power operated tools shall either be of the approved double-insulated type or grounded in accordance with Subpart K of this part. 1926.302(a)(2) The use of electric cords for hoisting or lowering tools shall not be permitted. 1926.302(b) Pneumatic power tools. 1926.302(b)(1) Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected. 1926.302(b)(2) Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled. 1926.302(b)(3) All pneumatically driven nailers, staplers, and other similar equipment provided with automatic fastener feed, which operate at more than 100 p.s.i. pressure at the tool shall have a safety device on the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface. 1926.302(b)(4) Compressed air shall not be used for cleaning purposes except where reduced to less than 30 p.s.i. and then only with effective chip guarding and personal protective equipment which meets the requirements of Subpart E of this part. The 30 p.s.i. requirement does not apply for concrete form, mill scale and similar cleaning purposes. 1926.302(b)(5) The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings shall not be exceeded. 1926.302(b)(6) The use of hoses for hoisting or lowering tools shall not be permitted. 1926.302(b)(7) All hoses exceeding 1/2-inch inside diameter shall have a safety device at the source of supply or branch line to reduce pressure in case of hose failure. 1926.302(b)(8) Airless spray guns of the type which atomize paints and fluids at high pressures (1,000 pounds or more per square inch) shall be equipped with automatic or visible manual safety devices which will prevent pulling of the trigger to prevent release of the paint or fluid until the safety device is manually released. 1926.302(b)(9) In lieu of the above, a diffuser nut which will prevent high pressure, high velocity release, while the nozzle tip is removed, plus a nozzle tip guard which will prevent the tip from coming into contact with the operator, or other equivalent protection, shall be provided. 1926.302(b)(10) Abrasive blast cleaning nozzles." The blast cleaning nozzles shall be equipped with an operating valve which must be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use. 1926.302(c) Fuel powered tools. 1926.302(c)(1) All fuel powered tools shall be stopped while being refueled, serviced, or maintained, and fuel shall be transported, handled, and stored in accordance with Subpart F of this part. 1926.302(c)(2) When fuel powered tools are used in enclosed spaces, the applicable requirements for concentrations of toxic gases and use of personal protective equipment, as outlined in Subparts D and E of this part, shall apply. 1926.302(d) Hydraulic power tools. 1926.302(d)(1) The fluid used in hydraulic powered tools shall be fire-resistant fluids approved under Schedule 30 of the U.S. Bureau of Mines, Department of the Interior, and shall retain its operating characteristics at the most extreme temperatures to which it will be exposed. 1926.302(d)(2) The manufacturer's safe operating pressures for hoses, valves, pipes, filters, and other fittings shall not be exceeded. 1926.302(e) Powder-actuated tools. 1926.302(e)(1) Only employees who have been trained in the operation of the particular tool in use shall be allowed to operate a powder-actuated tool. 1926.302(e)(2) The tool shall be tested each day before loading to see that safety devices are in proper working condition. The method of testing shall be in accordance with the manufacturer's recommended procedure. 1926.302(e)(3) Any tool found not in proper working order, or that develops a defect during use, shall be immediately removed from service and not used until properly repaired. 1926.302(e)(4) Personal protective equipment shall be in accordance with Subpart E of this part. 1926.302(e)(5) Tools shall not be loaded until just prior to the intended firing time. Neither loaded nor empty tools are to be pointed at any employees. Hands shall be kept clear of the open barrel end. 1926.302(e)(6) Loaded tools shall not be left unattended. 1926.302(e)(7) Fasteners shall not be driven into very hard or brittle materials including, but not limited to, cast iron, glazed tile, surface-hardened steel, glass block, live rock, face brick, or hollow tile. 1926.302(e)(8) Driving into materials easily penetrated shall be avoided unless such materials are backed by a substance that will prevent the pin or fastener from passing completely through and creating a flying missile hazard on the other side. 1926.302(e)(9) No fastener shall be driven into a spalled area caused by an unsatisfactory fastening. 1926.302(e)(10) Tools shall not be used in an explosive or flammable atmosphere. 1926.302(e)(11) All tools shall be used with the correct shield, guard, or attachment recommended by the manufacturer. 1926.302(e)(12) Powder-actuated tools used by employees shall meet all other applicable requirements of American National Standards Institute, A10.3-1970, Safety Requirements for Explosive-Actuated Fastening Tools.	Partial	Policy requires machine guarding to be in place and proper tool usage, however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
380		1926.303 - Abrasive wheels and tools.	1926.303(a) Power. All grinding machines shall be supplied with sufficient power to maintain the spindle speed at safe levels under all conditions of normal operation. 1926.303(b) Guarding. 1926.303(b)(1) Grinding machines shall be equipped with safety guards in conformance with the requirements of American National Standards Institute, B7.1-1970, Safety Code for the Use, Care and Protection of Abrasive Wheels, and paragraph (d) of this section. 1926.303(b)(2) "Guarding design." The safety guard shall cover the spindle end, nut, and flange projections. The safety guard shall be mounted so as to maintain proper alignment with the wheel, and the strength of the fastenings shall exceed the strength of the guard, except: 1926.303(b)(2)(i) Safety guards on all operations where the work provides a suitable measure of protection to the operator, may be so constructed that the spindle end, nut, and outer flange are exposed; and where the nature of the work is such as to entirely cover the side of the wheel, the side covers of the guard may be omitted; and 1926.303(b)(2)(ii) The spindle end, nut, and outer flange may be exposed on machines designed as portable saws. 1926.303(c) Use of abrasive wheels. 1926.303(c)(1) Floor stand and bench mounted abrasive wheels, used for external grinding, shall be provided with safety guards (protection hoods). The maximum angular exposure of the grinding wheel periphery and sides shall be not more than 90 deg, except that when work requires contact with the wheel below the horizontal plane of the spindle, the angular exposure shall not exceed 125 deg. In either case, the exposure shall begin not more than 65 deg. above the horizontal plane of the spindle. Safety guards shall be strong enough to withstand the effect of a bursting wheel. 1926.303(c)(2) Floor and bench-mounted grinders shall be provided with work rests which are rigidly supported and readily adjustable. Such work rests shall be kept at a distance not to exceed one-eighth inch from the surface of the wheel. 1926.303(c)(3) Cup type wheels used for external grinding shall be protected by either a revolving cup guard or a band type guard in accordance with the provisions of the American National Standards Institute, B7.1-1970 Safety Code for the Use, Care, and Protection of Abrasive Wheels. All other portable abrasive wheels used for external grinding, shall be provided with safety guards (protection hoods) meeting the requirements of paragraph (c)(5) of this section, except as follows: 1926.303(c)(3)(i) When the work location makes it impossible, a wheel equipped with safety flanges, as described in paragraph (c)(6) of this section, shall be used; 1926.303(c)(3)(ii) When wheels 2 inches or less in diameter which are securely mounted on the end of a steel mandrel are used. 1926.303(c)(4) Portable abrasive wheels used for internal grinding shall be provided with safety flanges (protection flanges) meeting the requirements of paragraph (c)(6) of this section, except as follows: 1926.303(c)(4)(i) When wheels 2 inches or less in diameter which are securely mounted on the end of a steel mandrel are used; 1926.303(c)(4)(ii) If the wheel is entirely within the work being ground while in use. 1926.303(c)(5) When safety guards are required, they shall be so mounted as to maintain proper alignment with the wheel, and the guard and its fastenings shall be of sufficient strength to retain fragments of the wheel in case of accidental breakage. The maximum angular exposure of the grinding wheel periphery and sides shall not exceed 180 deg. 1926.303(c)(6) When safety flanges are required, they shall be used only with wheels designed to fit the flanges. Only safety flanges, of a type and design and properly assembled so as to ensure that the pieces of the wheel will be retained in case of accidental breakage, shall be used. 1926.303(c)(7) All abrasive wheels shall be closely inspected and ring-tested before mounting to ensure that they are free from cracks or defects. 1926.303(c)(8) Grinding wheels shall fit freely on the spindle and shall not be forced on. The spindle nut shall be tightened only enough to hold the wheel in place. 1926.303(c)(9) All employees using abrasive wheels shall be protected by eye protection equipment in accordance with the requirements of Subpart E of this part, except when adequate eye protection is afforded by eye shields which are permanently attached to the bench or floor stand. 1926.303(d) Other requirements. All abrasive wheels and tools used by employees shall meet other applicable requirements of American National Standards Institute, B7.1-1970, Safety Code for the Use, Care and Protection of Abrasive Wheels. 1926.303(e) "Work rests." On offhand grinding machines, work rests shall be used to support the work. They shall be of rigid construction and designed to be adjustable to compensate for wheel wear. Work rests shall be kept adjusted closely to the wheel with a maximum opening of 1/8 inch (0.3175 cm) to prevent the work from being jammed between the wheel and the rest, which may cause wheel breakage. The work rest shall be securely clamped after each adjustment. The adjustment shall not be made with the wheel in motion.	Partial	Policy requires machine guarding to be in place and proper tool usage, however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
381		1926.304 - Woodworking tools.	1926.304(a) Disconnect switches. All fixed power driven woodworking tools shall be provided with a disconnect switch that can either be locked or tagged in the off position. 1926.304(b) Speeds. The operating speed shall be etched or otherwise permanently marked on all circular saws over 20 inches in diameter or operating at over 10,000 peripheral feet per minute. Any saw so marked shall not be operated at a speed other than that marked on the blade. When a marked saw is retensioned for a different speed, the marking shall be corrected to show the new speed. 1926.304(c) Self-feed. Automatic feeding devices shall be installed on machines whenever the nature of the work will permit. Feeder attachments shall have the feed rolls or other moving parts covered or guarded so as to protect the operator from hazardous portions. 1926.304(d) Guarding. All portable, power-driven circular saws shall be equipped with guards above and below the base plate or shoe. The upper guard shall cover the saw to the depth of the teeth, except for the minimum are required to permit the base to be tilted for bevel cuts. The lower guard shall cover the saw to the depth of the teeth, except for the minimum are required to allow proper retraction and contact with the work. When the tool is withdrawn from the work, the lower guard shall automatically and instantly return to the covering position. 1926.304(e) Personal protective equipment. All personal protective equipment provided for use shall conform to Subpart E of this part. 1926.304(f) Other requirements. All woodworking tools and machinery shall meet other applicable requirements of American National Standards Institute, 01.1-1961, Safety Code for Woodworking Machinery. 1926.304(g) "Radial saws." 1926.304(g)(1) The upper hood shall completely enclose the upper portion of the blade down to a point that will include the end of the saw arbor. The upper hood shall be constructed in such a manner and of such material that it will protect the operator from flying splinters, broken saw teeth, etc., and will deflect sawdust away from the operator. The sides of the lower exposed portion of the blade shall be guarded to the full diameter of the blade by a device that will automatically adjust itself to the thickness of the stock and remain in contact with stock being cut to give maximum protection possible for the operation being performed. 1926.304(h) "Hand-fed crosscut table saws." 1926.304(h)(1) Each circular crosscut table saw shall be guarded by a hood which shall meet all the requirements of paragraph (i)(1) of this section for hoods for circular rip saws. 1926.304(i) "Hand-fed rip saws." 1926.304(i)(1) Each circular hand-fed rip saw shall be guarded by a hood which shall completely enclose the portion of the saw above the table and that portion of the saw above the material being cut. The hood and mounting shall be arranged so that the hood will automatically adjust itself to the thickness of and remain in contact with the material being cut but it shall not offer any considerable resistance to insertion of material to saw or to passage of the material being sawed. The hood shall be made of adequate strength to resist blows and strains incidental to reasonable operation, adjusting, and handling, and shall be so designed as to protect the operator from flying splinters and broken saw teeth. It shall be made of material that is soft enough so that it will be unlikely cause tooth breakage. the hood shall be so mounted as to insure that its operation will be positive, reliable, and in true alignment with the saw; and the mounting shall be adequate in strength to resist any reasonable side thrust or other force tending to throw it out of line.	n/a						

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
382		1926.305 - Jacks-lever and ratchet, screw, and hydraulic.	<b>1926.305(a)</b> General requirements. <b>1926.305(a)(1)</b> The manufacturer's rated capacity shall be legibly marked on all jacks and shall not be exceeded. <b>1926.305(a)(2)</b> All jacks shall have a positive stop to prevent overtravel. <b>1926.305(c)</b> Blocking. When it is necessary to provide a firm foundation the base of the jack shall be blocked or cribbed. Where there is a possibility of slippage of the metal cap of the jack, a wood block shall be placed between the cap and the load. <b>1926.305(d)</b> <b>1926.305(d)(1)</b> "Operation and maintenance." <b>1926.305(d)(1)(i)</b> After the load has been raised, it shall be cribbed, blocked, or otherwise secured at once. <b>1926.305(d)(1)(ii)</b> Hydraulic jacks exposed to freezing temperatures shall be supplied with an adequate antifreeze liquid. <b>1926.305(d)(1)(iii)</b> All jacks shall be properly lubricated at regular intervals. <b>1926.305(d)(1)(iv)</b> Each jack shall be thoroughly inspected at times which depend upon the service conditions. Inspections shall be not less frequent than the following: <b>1926.305(d)(1)(iv)(a)</b> For constant or intermittent use at one locality, once every 6 months <b>1926.305(d)(1)(iv)(b)</b> For jacks sent out of shop for special work, when sent out and when returned, <b>1926.305(d)(1)(iv)(c)</b> For a jack subjected to abnormal load or shock, immediately before and immediately thereafter <b>1926.305(d)(1)(v)</b> Repair or replacement parts shall be examined for possible defects <b>1926.305(d)(1)(vi)</b> Jacks which are out of order shall be tagged accordingly, and shall not be used until repairs are made.	n/a						
383		1926.306 - Air receivers.	<b>1926.306(a)(1)</b> "Application." This section applies to compressed air receivers, and other equipment used in providing and utilizing compressed air for performing operations such as cleaning, drilling, hoisting, and chipping. On the other hand, however, this section does not deal with the special problems created by using compressed air to convey materials nor the problems created when men work in compressed air as in tunnels and caissons. This section is not intended to apply to compressed air machinery and equipment used on transportation vehicles such as steam railroad cars, electric railway cars, and automotive equipment. <b>1926.306(a)(2)</b> "New and existing equipment." <b>1926.306(a)(2)(i)</b> All new air receivers installed after the effective date of these regulations shall be constructed in accordance with the 1968 edition of the A.S.M.E. Boiler and Pressure Vessel Code Section VIII. <b>1926.306(a)(2)(ii)</b> All safety valves used shall be constructed, installed and maintained in accordance with the A.S.M.E. Boiler and Pressure Vessel Code, Section VIII Edition 1968 <b>1926.306(b)</b> "Installation and equipment requirements" <b>1926.306(b)(1)</b> "Installation." Air receivers shall be so installed that all drains, handholes, and manholes therein are easily accessible. Under no circumstances shall an air receiver be buried underground or located in an inaccessible place <b>1926.306(b)(2)</b> "Drains and traps." A drain pipe and valve shall be installed at the lowest point of every air receiver to provide for the removal of accumulated oil and water. Adequate automatic traps may be installed in addition to drain valves. The drain valve on the air receiver shall be opened and the receiver completely drained frequently and at such intervals as to prevent the accumulation of excessive amounts of liquid in the receiver <b>1926.306(b)(3)</b> "Gages and valves." <b>1926.306(b)(3)(i)</b> Every air receiver shall be equipped with an indicating pressure gage (so located as to be readily visible) and with one or more spring-loaded safety valves. The total relieving capacity of such safety valves shall be such as to prevent pressure in the receiver from exceeding the maximum allowable working pressure of the receiver by more than 10 percent <b>1926.306(b)(3)(ii)</b> No valve of any type shall be placed between the air receiver and its safety valve or valves. <b>1926.306(b)(3)(iii)</b> Safety appliances, such as safety valves, indicating devices and controlling devices, shall be constructed, located, and installed so that they cannot be readily rendered inoperative by any means, including the element of fire <b>1926.306(b)(3)(iv)</b> All safety valves shall be tested frequently and at regular intervals to determine whether they are in good operating condition.	n/a						
384		1926.307 - Mechanical power-transmission apparatus.	<b>1926.307(a)(4)</b> This section covers the principal features with which power transmission safeguards shall comply <b>1926.307(b)</b> "Prime-mover guards" - <b>1926.307(b)(1)</b> "Flywheels." Flywheels located so that any part is 7 feet (2.128 m) or less above floor or platform shall be guarded in accordance with the requirements of this subparagraph: <b>1926.307(b)(1)(i)</b> With an enclosure of sheet, perforated, or expanded metal, or woven wire <b>1926.307(b)(1)(ii)</b> With guard rails placed not less than 15 inches (38.1 cm) nor more than 20 inches (50.8 cm) from rim. When flywheel extends into pit or is within 12 inches (30.48 cm) of floor, a standard toeboard shall also be provided <b>1926.307(b)(1)(iii)</b> When the upper rim of flywheel protrudes through a working floor, it shall be entirely enclosed or surrounded by a guardrail and toeboard. 1926.307(b)(1)(v) Adjustable guard to be used for starting engine or for running adjustment may be provided at the flywheel of gas or oil engines. A slot opening for jack bar will be permitted. 1926.307(b)(1)(vi) Wherever flywheels are above working areas, guards shall be installed having sufficient strength to hold the weight of the flywheel in the event of a shaft or wheel mounting failure. 1926.307(b)(2) "Cranks and connecting rods." Cranks and connecting rods, when exposed to contact, shall be guarded in accordance with paragraphs (m) and (n) of this section, or by a guardrail as described in paragraph (o)(5) of this section. 1926.307(b)(3) "Tail rods or extension piston rods." Tail rods or extension piston rods shall be guarded in accordance with paragraphs (m) and (o) of this section, or by a guardrail on sides and end, with a clearance of not less than 15 (38.1 cm) nor more than 20 inches (50.8 cm) when rod is fully extended. 1926.307(c) "Shafting" - 1926.307(c)(1) (i) "Installation." 1926.307(c)(1)(i) Each continuous line of shafting shall be secured in position against excessive endwise movement. 1926.307(c)(1)(ii) Inclined and vertical shafts, particularly inclined idler shafts, shall be securely held in position against endwise thrust. 1926.307(c)(2) "Guarding horizontal shafting." 1926.307(c)(2)(i) All exposed parts of horizontal shafting 7 feet (2.128 m) or less from floor or working platform, excepting runways used exclusively for oiling, or running adjustments, shall be protected by a stationary casing enclosing shafting completely or by a trough enclosing sides and top or sides and bottom of shafting as location requires. 1926.307(c)(2)(ii) Shafting under bench machines shall be enclosed by a stationary casing, or by a trough at sides and top or sides and bottom, as location requires. The sides of the trough shall come within at least 6 inches (15.24 cm) of the underside of table, or if shafting is located near floor within 6 inches (15.24 cm) of floor. In every case the sides of trough shall extend at least 2 inches (5.08 cm) beyond the shafting or protuberance. 1926.307(c)(3) "Guarding vertical and inclined shafting." Vertical and inclined shafting 7 feet (2.128 m) or less from floor or working platform, excepting maintenance runways, shall be enclosed with a stationary casing in accordance with requirements of paragraphs (m) and (o) of this section. 1926.307(c)(4) "Projecting shafts ends." 1926.307(c)(4)(i) Projecting shaft ends shall present a smooth edge and end and shall not project more than one-half the diameter of the shaft unless guarded by nonrotating caps or safety sleeves. 1926.307(c)(4)(ii) Unused keyways shall be filled up or covered.	n/a						
385	1910 Subpart Q - Welding, Cutting, and Brazing									
386		1910.252 - General requirements.	From the HASP "Except where more stringent requirements may exist, all hot work shall be in accordance with OSHA 29 CFR 1926 Subpart J."	Partial	Policy requires references OSHA 29 CFR 1926 subpart J. Policy defines welding as a type of hot work and the requirements for fire watch, however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements	X				
387		1910.253 - Oxygen-fuel gas welding and cutting.	From the HASP "Except where more stringent requirements may exist, all hot work shall be in accordance with OSHA 29 CFR 1926 Subpart J."	Partial	Policy requires references OSHA 29 CFR 1926 subpart J. Policy defines welding as a type of hot work however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
388		1910.254 - Arc welding and cutting.	From the HASP "Except where more stringent requirements may exist, all hot work shall be in accordance with OSHA 29 CFR 1926 Subpart J."	Partial	Policy requires references OSHA 29 CFR 1926 subpart J. Policy defines welding as a type of hot work however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
389		1910.255 - Resistance welding.	From the HASP "Except where more stringent requirements may exist, all hot work shall be in accordance with OSHA 29 CFR 1926 Subpart J."	Partial	Policy requires references OSHA 29 CFR 1926 subpart J. Policy defines welding as a type of hot work however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
390	1926 Subpart J - Welding and Cutting									
391		1926.350 - Gas welding and cutting.	<b>1926.350(a)</b> Transporting, moving, and storing compressed gas cylinders. <b>1926.350(a)(1)</b> Valve protection caps shall be in place and secured. <b>1926.350(a)(2)</b> When cylinders are hoisted, they shall be secured on a cradle, slingboard, or pallet. They shall not be hoisted or transported by means of magnets or choker slings. <b>1926.350(a)(3)</b> Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dropped, struck, or permitted to strike each other violently. <b>1926.350(a)(4)</b> When cylinders are transported by powered vehicles, they shall be secured in a vertical position. <b>1926.350(a)(5)</b> Valve protection caps shall not be used for lifting cylinders from one vertical position to another. Bars shall not be used under valves or valve protection caps to pry cylinders loose when frozen. Warm, not boiling, water shall be used to thaw cylinders loose. <b>1926.350(a)(6)</b> Unless cylinders are firmly secured on a special carrier intended for this purpose, regulators shall be removed and valve protection caps put in place before cylinders are moved. <b>1926.350(a)(7)</b> A suitable cylinder truck, chain, or other steadying device shall be used to keep cylinders from being knocked over while in use. <b>1926.350(a)(8)</b> When work is finished, when cylinders are empty, or when cylinders are moved at any time, the cylinder valve shall be closed. <b>1926.350(a)(9)</b> Compressed gas cylinders shall be secured in an upright position at all times except, if necessary, for short periods of time while cylinders are actually being hoisted or carried. <b>1926.350(a)(10)</b> Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease), a minimum distance of 20 feet (6.1 m) or by a noncombustible barrier at least 5 feet (1.5 m) high having a fire-resistance rating of at least one-half hour. <b>1926.350(a)(11)</b> Inside of buildings, cylinders shall be stored in a well-protected, well-ventilated, dry location, at least 20 feet (6.1 m) from highly combustible materials such as oil or excelsior. Cylinders should be stored in definitely assigned places away from elevators, stairs, or gangways. Assigned storage places shall be located where cylinders will not be knocked over or damaged by passing or falling objects, or subject to tampering by unauthorized persons. Cylinders shall not be kept in unventilated enclosures such as lockers and cupboards. <b>1926.350(a)(12)</b> The in-plant handling, storage, and utilization of all compressed gases in cylinders, portable tanks, rail tankcars, or motor vehicle cargo tanks shall be in accordance with Compressed Gas Association Pamphlet P-1-1965. <b>1926.350(b)</b> Placing cylinders. <b>1926.350(b)(1)</b> Cylinders shall be kept far enough away from the actual welding or cutting operation so that sparks, hot slag, or flame will not reach them. When this is impractical, fire resistant shields shall be provided. <b>1926.350(b)(2)</b> Cylinders shall be placed where they cannot become part of an electrical circuit. Electrodes shall not be struck against a cylinder to strike an arc. <b>1926.350(b)(3)</b> Fuel gas cylinders shall be placed with valve end up whenever they are in use. They shall not be placed in a location where they would be subject to open flame, hot metal, or other sources of artificial heat. <b>1926.350(b)(4)</b> Cylinders containing oxygen or acetylene or other fuel gas shall not be taken into confined spaces. <b>1926.350(c)</b> Treatment of cylinders. <b>1926.350(c)(1)</b> Cylinders, whether full or empty, shall not be used as rollers or supports. <b>1926.350(c)(2)</b> No person other than the gas supplier shall attempt to mix gases in a cylinder. No one except the owner of the cylinder or person authorized by him, shall refill a cylinder. No one shall use a cylinder's contents for purposes other than those intended by the supplier. All cylinders used shall meet the Department of Transportation requirements published in 49 CFR Part 178, Subpart C, Specification for Cylinders. <b>1926.350(c)(3)</b> No damaged or defective cylinder shall be used. <b>1926.350(d)</b> Use of fuel gas. The employer shall thoroughly instruct employees in the safe use of fuel gas, as follows: <b>1926.350(d)(1)</b> Before a regulator to a cylinder valve is connected, the valve shall be opened slightly and closed immediately. (This action is generally termed "cracking" and is intended to clear the valve of dust or dirt that might otherwise enter the regulator.) The person cracking the valve shall stand to one side of the outlet, not in front of it. The valve of a fuel gas cylinder shall not be cracked where the gas would reach welding work, sparks, flame, or other possible sources of ignition. <b>1926.350(d)(2)</b> The cylinder valve shall always be opened slowly to prevent damage to the regulator. For quick closing, valves on fuel gas cylinders shall not be opened more than 1 1/2 turns. When a special wrench is required, it shall be left in position on the stem of the valve while the cylinder is in use so that the fuel gas flow can be shut off quickly in case of an emergency. In the case of manifolded or coupled cylinders, at least one such wrench shall always be available for immediate use. Nothing shall be placed on top of a fuel gas cylinder, when in use, which may damage the safety device or interfere with the quick closing of the valve. <b>1926.350(d)(3)</b> Fuel gas shall not be used from cylinders through torches or other devices which are equipped with shutoff valves without reducing the pressure through a suitable regulator attached to the cylinder valve or manifold. <b>1926.350(d)(4)</b> Before a regulator is removed from a cylinder valve, the cylinder valve shall always be closed and the gas released from the regulator. <b>1926.350(d)(5)</b> If, when the valve on a fuel gas cylinder is opened, there is found to be a leak around the valve stem, the valve shall be closed and the gland nut tightened. If this action does not stop the leak, the use of the cylinder shall be discontinued, and it shall be properly tagged and removed from the work area. In the event that fuel gas should leak from the cylinder valve, rather than from the valve stem, and the gas cannot be shut off, the cylinder shall be properly tagged and removed from the work area. If a regulator attached to a cylinder valve will effectively stop a leak through the valve seat, the cylinder need not be removed from the work area. <b>1926.350(d)(6)</b> If a leak should develop at a fuse plug or other safety device, the cylinder shall be removed from the work area. <b>1926.350(e)</b> Fuel gas and oxygen manifolds. <b>1926.350(e)(1)</b> Fuel gas and oxygen manifolds shall bear the name of the substance they contain in letters at least 1-inch high which shall be either painted on the manifold or on a sign permanently attached to it. <b>1926.350(e)(2)</b> Fuel gas and oxygen manifolds shall be placed in safe, well ventilated, and accessible locations. They shall not be located within enclosed spaces. <b>1926.350(e)(3)</b> Manifold hose connections, including both ends of the supply hose that lead to the manifold, shall be such that the hose cannot be interchanged between fuel gas and oxygen manifolds and supply header connections. Adapters shall not be used to permit the interchange of hose. Hose connections shall be kept free of grease and oil. <b>1926.350(e)(4)</b> When not in use, manifold and header hose connections shall be capped. <b>1926.350(e)(5)</b> Nothing shall be placed on top of a manifold, when in use, which will damage the manifold or interfere with the quick closing of the valves. <b>1926.350(f)</b> Hose. <b>1926.350(f)(1)</b> Fuel gas hose and oxygen hose shall be easily distinguishable from each other. The contrast may be made by different colors or by surface characteristics readily distinguishable by the sense of touch. Oxygen and fuel gas hoses shall not be interchangeable. A single hose having more than one gas passage shall not be used. <b>1926.350(f)(2)</b> When parallel sections of oxygen and fuel gas hose are taped together, not more than 4 inches out of 12 inches shall be covered by tape. <b>1926.350(f)(3)</b> All hose in use, carrying acetylene, oxygen, natural or manufactured fuel gas, or any gas or substance which may ignite or enter into combustion, or be in any way harmful to employees, shall be inspected at the beginning of each working shift. Defective hose shall be removed from service. <b>1926.350(f)(4)</b> Hose which has been subject to flashback, or which shows evidence of severe wear or damage, shall be tested to twice the normal pressure to which it is subject, but in no case less than 300 p.s.i. Defective hose, or hose in doubtful condition, shall not be used. <b>1926.350(f)(5)</b> Hose couplings shall be of the type that cannot be unlocked or disconnected by means of a straight pull without rotary motion. <b>1926.350(f)(6)</b> Boxes used for the storage of gas hose shall be ventilated. <b>1926.350(f)(7)</b> Hoses, cables, and other equipment shall be kept clear of passageways, ladders and stairs. <b>1926.350(g)</b> Torches. <b>1926.350(g)(1)</b> Clogged torch tip openings shall be cleaned with suitable cleaning wires, drills, or other devices designed for such purpose. <b>1926.350(g)(2)</b> Torches in use shall be inspected at the beginning of each working shift for leaking shutoff valves, hose couplings, and tip connections. Defective torches shall not be used. <b>1926.350(g)(3)</b> Torches shall be lighted by friction lighters or other approved devices, and not by matches or from hot work. <b>1926.350(h)</b> Regulators and gauges. Oxygen and fuel gas pressure regulators, including their related gauges, shall be in proper working order while in use. <b>1926.350(i)</b> Oil and grease hazards. Oxygen cylinders and fittings shall be kept away from oil or grease. Cylinders, cylinder caps and valves, couplings, regulators, hose, and apparatus shall be kept free from oil or greasy substances and shall not be handled with oily hands or gloves. Oxygen shall not be directed at oily surfaces, greasy clothes, or within a fuel oil or other storage tank or vessel. <b>1926.350(j)</b> Additional rules. For additional details not covered in this subpart, applicable technical portions of American National Standards Institute, Z49.1-1967, Safety in Welding and Cutting, shall apply.	Partial	Policy requires references OSHA 29 CFR 1926 subpart J. Policy defines welding as a type of hot work however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
392										



Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K	
1	Occupational Safety & Health					Consolidated Deficiency Groupings					
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5	
393		1926.351 - Arc welding and cutting.	<b>1926.351(a)</b> Manual electrode holders. <b>1926.351(a)(1)</b> Only manual electrode holders which are specifically designed for arc welding and cutting, and are of a capacity capable of safely handling the maximum rated current required by the electrodes, shall be used. <b>1926.351(a)(2)</b> Any current-carrying parts passing through the portion of the holder which the arc welder or cutter grips in his hand, and the outer surfaces of the jaws of the holder, shall be fully insulated against the maximum voltage encountered to ground. <b>1926.351(b)</b> Welding cables and connectors. <b>1926.351(b)(1)</b> All arc welding and cutting cables shall be of the completely insulated, flexible type, capable of handling the maximum current requirements of the work in progress, taking into account the duty cycle under which the arc welder or cutter is working. <b>1926.351(b)(2)</b> Only cable free from repair or splices for a minimum distance of 10 feet from the cable end to which the electrode holder is connected shall be used, except that cables with standard insulated connectors or with splices whose insulating quality is equal to that of the cable are permitted. <b>1926.351(b)(3)</b> When it becomes necessary to connect or splice lengths of cable one to another, substantial insulated connectors of a capacity at least equivalent to that of the cable shall be used. If connections are effected by means of cable lugs, they shall be securely fastened together to give good electrical contact, and the exposed metal parts of the lugs shall be completely insulated. <b>1926.351(b)(4)</b> Cables in need of repair shall not be used. When a cable, other than the cable lead referred to in paragraph (b)(2) of this section, becomes worn to the extent of exposing bare conductors, the portion thus exposed shall be protected by means of rubber and friction tape or other equivalent insulation. <b>1926.351(c)</b> Ground returns and machine grounding. <b>1926.351(c)(1)</b> A ground return cable shall have a safe current carrying capacity equal to or exceeding the specified maximum output capacity of the arc welding or cutting unit which it services. When a single ground return cable services more than one unit, its safe current-carrying capacity shall equal or exceed the total specified maximum output capacities of all the units which it services. <b>1926.351(c)(2)</b> Pipelines containing gases or flammable liquids, or conduits containing electrical circuits, shall not be used as a ground return. For welding on natural gas pipelines, the technical portions of regulations issued by the Department of Transportation, Office of Pipeline Safety, 49 CFR Part 192, Minimum Federal Safety Standards for Gas Pipelines, shall apply. <b>1926.351(c)(3)</b> When a structure or pipeline is employed as a ground return circuit, it shall be determined that the required electrical contact exists at all joints. The generation of an arc, sparks, or heat at any point shall cause rejection of the structures as a ground circuit. <b>1926.351(c)(4)</b> When a structure or pipeline is continuously employed as a ground return circuit, all joints shall be bonded, and periodic inspections shall be conducted to ensure that no condition of electrolysis or fire hazard exists by virtue of such use. <b>1926.351(c)(5)</b> The frames of all arc welding and cutting machines shall be grounded either through a third wire in the cable containing the circuit conductor or through a separate wire which is grounded at the source of the current. Grounding circuits, other than by means of the structure, shall be checked to ensure that the circuit between the ground and the grounded power conductor has resistance low enough to permit sufficient current to flow to cause the fuse or circuit breaker to interrupt the current. <b>1926.351(c)(6)</b> All ground connections shall be inspected to ensure that they are mechanically strong and electrically adequate for the required current. <b>1926.351(d)</b> Operating instructions. Employers shall instruct employees in the safe means of arc welding and cutting as follows: <b>1926.351(d)(1)</b> When electrode holders are to be left unattended, the electrodes shall be removed and the holders shall be so placed or protected that they cannot make electrical contact with employees or conducting objects. <b>1926.351(d)(2)</b> Hot electrode holders shall not be dipped in water; to do so may expose the arc welder or cutter to electric shock. <b>1926.351(d)(3)</b> When the arc welder or cutter has occasion to leave his work or to stop work for any appreciable length of time, or when the arc welding or cutting machine is to be moved, the power supply switch to the equipment shall be opened. <b>1926.351(d)(4)</b> Any faulty or defective equipment shall be reported to the supervisor. <b>1926.351(d)(5)</b> See 1926.406(c) for additional requirements. <b>1926.351(e)</b> Shielding. Whenever practicable, all arc welding and cutting operations shall be shielded by noncombustible or flameproof screens which will protect employees and other persons working in the vicinity from the direct rays of the arc.	Partial	Policy requires references OSHA 29 CFR 1926 subpart J. Policy defines welding as a type of hot work however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X					
394		1926.352 - Fire prevention.	<b>1926.352(a)</b> When practical, objects to be welded, cut, or heated shall be moved to a designated safe location or, if the objects to be welded, cut, or heated cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place, or otherwise protected. <b>1926.352(b)</b> If the object to be welded, cut, or heated cannot be moved and if all the fire hazards cannot be removed, positive means shall be taken to confine the heat, sparks, and slag, and to protect the immovable fire hazards from them. <b>1926.352(c)</b> No welding, cutting, or heating shall be done where the application of flammable paints, or the presence of other flammable compounds, or heavy dust concentrations creates a hazard. <b>1926.352(d)</b> Suitable fire extinguishing equipment shall be immediately available in the work area and shall be maintained in a state of readiness for instant use. <b>1926.352(e)</b> When the welding, cutting, or heating operation is such that normal fire prevention precautions are not sufficient, additional personnel shall be assigned to guard against fire while the actual welding, cutting, or heating operation is being performed, and for a sufficient period of time after completion of the work to ensure that no possibility of fire exists. Such personnel shall be instructed as to the specific anticipated fire hazards and how the firefighting equipment provided is to be used. <b>1926.352(f)</b> When welding, cutting, or heating is performed on walls, floors, and ceilings, since direct penetration of sparks or heat transfer may introduce a fire hazard to an adjacent area, the same precautions shall be taken on the opposite side as are taken on the side on which the welding is being performed. <b>1926.352(g)</b> For the elimination of possible fire in enclosed spaces as a result of gas escaping through leaking or improperly closed torch valves, the gas supply to the torch shall be positively shut off at some point outside the enclosed space whenever the torch is not to be used or whenever the torch is left unattended for a substantial period of time, such as during the lunch period. Overnight and at the change of shifts, the torch and hose shall be removed from the confined space. Open end fuel gas and oxygen hoses shall be immediately removed from enclosed spaces when they are disconnected from the torch or other gas-consuming device. <b>1926.352(h)</b> Except when the contents are being removed or transferred, drums, pails, and other containers which contain or have contained flammable liquids shall be kept closed. Empty containers shall be removed to a safe area apart from hot work operations or open flames. <b>1926.352(i)</b> Drums containers, or hollow structures which have contained toxic or flammable substances shall, before welding, cutting, or heating is undertaken on them, either be filled with water or thoroughly cleaned of such substances and ventilated and tested. For welding, cutting and heating on steel pipelines containing natural gas, the pertinent portions of regulations issued by the Department of Transportation, Office of Pipeline Safety, 49 CFR Part 192, Minimum Federal Safety Standards for Gas Pipelines, shall apply. <b>1926.352(j)</b> Before heat is applied to a drum, container, or hollow structure, a vent or opening shall be provided for the release of any built-up pressure during the application of heat.	Partial	Policy requires references OSHA 29 CFR 1926 subpart J. Policy states a requirement for fire watch, however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X					
395		1926.353 - Ventilation and protection in welding cutting, and heating.	<b>1926.353(a)</b> Mechanical ventilation. For purposes of this section, mechanical ventilation shall meet the following requirements: <b>1926.353(a)(1)</b> Mechanical ventilation shall consist of either general mechanical ventilation systems or local exhaust systems. <b>1926.353(a)(2)</b> General mechanical ventilation shall be of sufficient capacity and so arranged as to produce the number of air changes necessary to maintain welding fumes and smoke within safe limits, as defined in Subpart D of this part. <b>1926.353(a)(3)</b> Local exhaust ventilation shall consist of freely movable hoods intended to be placed by the welder or burner as close as practicable to the work. This system shall be of sufficient capacity and so arranged as to remove fumes and smoke at the source and keep the concentration of them in the breathing zone within safe limits as defined in Subpart D of this part. <b>1926.353(a)(4)</b> Contaminated air exhausted from a working space shall be discharged into the open air or otherwise clear of the source of intake air. <b>1926.353(a)(5)</b> All air replacing that withdrawn shall be clean and respirable. <b>1926.353(a)(6)</b> Oxygen shall not be used for ventilation purposes, comfort cooling, blowing dust from clothing, or for cleaning the work area. <b>1926.353(b)</b> Welding, cutting, and heating in confined spaces. <b>1926.353(b)(1)</b> Except as provided in paragraph (b)(2) of this section, and paragraph (c)(2) of this section, either general mechanical or local exhaust ventilation meeting the requirements of paragraph (a) of this section shall be provided whenever welding, cutting, or heating is performed in a confined space. <b>1926.353(b)(2)</b> When sufficient ventilation cannot be obtained without blocking the means of access, employees in the confined space shall be protected by air line respirators in accordance with the requirements of Subpart E of this part, and an employee on the outside of such a confined space shall be assigned to maintain communication with those working within it and to aid them in an emergency. <b>1926.353(b)(3)</b> "Lifelines." Where a welder must enter a confined space through a manhole or other small opening, means shall be provided for quickly removing him in case of emergency. When safety belts and lifelines are used for this purpose they shall be so attached to the welder's body that his body cannot be jammed in a small exit opening. An attendant with a pre-planned rescue procedure shall be stationed outside to observe the welder at all times and be capable of putting rescue operations into effect. <b>1926.353(c)</b> Welding, cutting, or heating of metals of toxic significance. <b>1926.353(c)(1)</b> Welding, cutting, or heating in any enclosed spaces involving the metals specified in this subparagraph shall be performed with either general mechanical or local exhaust ventilation meeting the requirements of paragraph (a) of this section: <b>1926.353(c)(1)(i)</b> Zinc-bearing base or filler metals or metals coated with zinc-bearing materials; <b>1926.353(c)(1)(ii)</b> Lead base metals; <b>1926.353(c)(1)(iii)</b> Cadmium-bearing filler materials; <b>1926.353(c)(1)(iv)</b> Chromium-bearing metals or metals coated with chromium-bearing materials. <b>1926.353(c)(2)</b> Welding, cutting, or heating in any enclosed spaces involving the metals specified in this subparagraph shall be performed with local exhaust ventilation in accordance with the requirements of paragraph (a) of this section, or employees shall be protected by air line respirators in accordance with the requirements of Subpart E of this part: <b>1926.353(c)(2)(i)</b> Metals containing lead, other than as an impurity, or metals coated with lead-bearing materials; <b>1926.353(c)(2)(ii)</b> Cadmium-bearing or cadmium-coated base metals; <b>1926.353(c)(2)(iii)</b> Metals coated with mercury-bearing metals; <b>1926.353(c)(2)(iv)</b> Beryllium-containing base or filler metals. Because of its high toxicity, work involving beryllium shall be done with both local exhaust ventilation and air line respirators. <b>1926.353(c)(3)</b> Employees performing such operations in the open air shall be protected by filter-type respirators in accordance with the requirements of Subpart E of this part, except that employees performing such operations on beryllium-containing base or filler metals shall be protected by air line respirators in accordance with the requirements of Subpart E of this part. <b>1926.353(c)(4)</b> Other employees exposed to the same atmosphere as the welders or burners shall be protected in the same manner as the welder or burner. <b>1926.353(d)</b> Inert-gas metal-arc welding. <b>1926.353(d)(1)</b> Since the inert-gas metal-arc welding process involves the production of ultra-violet radiation of intensities of 5 to 30 times that produced during shielded metal-arc welding, the decomposition of chlorinated solvents by ultraviolet rays, and the liberation of toxic fumes and gases, employees shall not be permitted to engage in, or be exposed to the process until the following special precautions have been taken: <b>1926.353(d)(1)(i)</b> The use of chlorinated solvents shall be kept at least 200 feet, unless shielded, from the exposed arc, and surfaces prepared with chlorinated solvents shall be thoroughly dry before welding is permitted on such surfaces. <b>1926.353(d)(1)(ii)</b> Employees in the area not protected from the arc by screening shall be protected by filter lenses meeting the requirements of Subpart E of this part. When two or more welders are exposed to each other's arc, filter lens goggles of a suitable type, meeting the requirements of Subpart E of this part, shall be worn under welding helmets. Hand shields to protect the welder against flashes and radiant energy shall be used when either the helmet is lifted or the shield is removed. <b>1926.353(d)(1)(iii)</b> Welders and other employees who are exposed to radiation shall be suitably protected so that the skin is covered completely to prevent burns and other damage by ultraviolet rays. Welding helmets and hand shields shall be free of leaks and openings, and free of highly reflective surfaces. <b>1926.353(d)(1)(iv)</b> When inert-gas metal-arc welding is being performed on stainless steel, the requirements of paragraph (c)(2) of this section shall be met to protect against dangerous concentrations of nitrogen dioxide. <b>1926.353(e)</b> General welding, cutting, and heating. <b>1926.353(e)(1)</b> Welding, cutting, and heating, not involving conditions or materials described in paragraph (b), (c), or (d) of this section, may normally be done without mechanical ventilation or respiratory protective equipment, but where, because of unusual physical or atmospheric conditions, an unsafe accumulation of contaminants exists, suitable mechanical ventilation or respiratory protective equipment shall be provided. <b>1926.353(e)(2)</b> Employees performing any type of welding, cutting, or heating shall be protected by suitable eye protective equipment in accordance with the requirements of Subpart E of this part.	Partial	Policy requires references OSHA 29 CFR 1926 subpart J. Policy states the need for ventilation, however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X					
396		1926.354 - Welding, cutting, and heating in way of preservative coatings.	<b>1926.354(a)</b> Before welding, cutting, or heating is commenced on any surface covered by a preservative coating whose flammability is not known, a test shall be made by a competent person to determine its flammability. Preservative coatings shall be considered to be highly flammable when scrapings burn with extreme rapidity. <b>1926.354(b)</b> Precautions shall be taken to prevent ignition of highly flammable hardened preservative coatings. When coatings are determined to be highly flammable, they shall be stripped from the area to be heated to prevent ignition. <b>1926.354(c)</b> Protection against toxic preservative coatings: <b>1926.354(c)(1)</b> In enclosed spaces, all surfaces covered with toxic preservatives shall be stripped of all toxic coatings for a distance of at least 4 inches from the area of heat application, or the employees shall be protected by air line respirators, meeting the requirements of Subpart E of this part. <b>1926.354(c)(2)</b> In the open air, employees shall be protected by a respirator, in accordance with requirements of Subpart E of this part. <b>1926.354(d)</b> The preservative coatings shall be removed a sufficient distance from the area to be heated to ensure that the temperature of the unstripped metal will not be appreciably raised. Artificial cooling of the metal surrounding the heating area may be used to limit the size of the area required to be cleaned.	Partial	Policy requires references OSHA 29 CFR 1926 subpart J. The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X					
397	1+379:390910 Subpart R - Special Industries			n/a							
398		1910.261 - Pulp, paper, and paperboard mills.	n/a	n/a							
399		1910.262 - Textiles.	n/a	n/a							
400		1910.263 - Bakery equipment.	n/a	n/a							
401		1910.264 - Laundry machinery and operations.	n/a	n/a							
402		1910.265 - Sawmills.	n/a	n/a							
403		1910.266 - Logging operations.	n/a	n/a							
404		1910.266 App A - First-aid Kits (Mandatory).	n/a	n/a							
405		1910.266 App B - First-aid and CPR Training (Mandatory).	n/a	n/a							
406		1910.266 App C - Comparable ISO Standards (Non-mandatory)	n/a	n/a							
407		1910.268 - Telecommunications.	n/a	n/a							

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1			Occupational Safety & Health			Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
	1910.269 - Electric Power Generation, Transmission, and Distribution.			n/a						
408			n/a							
409		1910.269 App A - Flow Charts.	n /a	n/a						
410		1910.269 App B - Working on Exposed Energized Parts.	n/a	n/a						
411		1910.269 App C - Protection From Hazardous Differences in Electric Potential	n/a	n/a						
412		1910.269 App D - Methods of Inspecting and Testing Wood Poles.	n/a	n/a						
413		1910.269 App E - Protection From Flames and Electric Arcs.	n/a	n/a						
414		1910.269 App F - Work-Positioning Equipment Inspection Guidelines.	n/a	n/a						
415		1910.269 App G - Reference Documents.	n/a	n/a						
	1926 Subpart V - Electric Power Transmission and Distribution			n/a						
416										
417		1926.950 - General.	n/a	n/a						
418		1926.951 - Medical services and first aid.	n/a	n/a						
419		1926.952 - Job briefing.	n/a	n/a						
420		1926.953 - Enclosed spaces.	n/a	n/a						
421		1926.954 - Personal protective equipment.	n/a	n/a						
422		1926.955 - Portable ladders and platforms.	n/a	n/a						
423		1926.956 - Hand and portable power equipment.	n/a	n/a						
424		1926.957 - Live-line tools.	n/a	n/a						
425		1926.958 - Materials handling and storage.	n/a	n/a						
426		1926.959 - Mechanical equipment.	n/a	n/a						
427		1926.960 - Working on or near exposed energized parts.	n/a	n/a						
428		1926.961 - Deenergizing lines and equipment for employee protection.	n/a	n/a						
429		1926.962 - Grounding for the protection of employees.	n/a	n/a						
430		1926.963 - Testing and test facilities.	n/a	n/a						
431		1926.964 - Overhead lines and live-line barehand work.	n/a	n/a						
432		1926.965 - Underground electrical installations.	n/a	n/a						
433		1926.966 - Substations.	n/a	n/a						
434		1926.967 - Special conditions.	n/a	n/a						
435		1926.968 - Definitions.	n/a	n/a						
436		1926 Subpart V App D - Appendix D to Subpart V of Part 1926 - Methods of Inspecting and Testing Wood Poles	n/a	n/a						
437		1926 Subpart V App E - Appendix E to Subpart V of Part 1926 - Protection From Flames and Electric Arcs	n/a	n/a						
438		1926 Subpart V App F - Appendix F to Subpart V of Part 1926 - Work-Positioning Equipment Inspection Guidelines	n/a	n/a						
439		1926 Subpart V App G - Appendix G to Subpart V of Part 1926 - Reference Documents	n/a	n/a						
440		1926 Subpart V App A - Appendix A to Subpart V of Part 1926 - [Reserved]	n/a	n/a						
441		1926 Subpart V App B - Appendix B to Subpart V of Part 1926-Working on Exposed Energized Parts	n/a	n/a						
442		1926 Subpart V App C - Appendix C to Subpart V of Part 1926-Protection From Hazardous Differences in Electric Potential	n/a	n/a						
443		1910.272 - Grain handling facilities.	n/a	n/a						
444		1910.272 App A - Grain handling facilities	n/a	n/a						
445		1910.272 App B - National consensus standards	n/a	n/a						
446		1910.272 App C - References for further information	n/a	n/a						
447	1910 Subpart S - Electrical									
448		1910.301 - Introduction.	This subpart addresses electrical safety requirements that are necessary for the practical safeguarding of employees in their workplaces and is divided into four major divisions as follows: <b>1910.301(a)</b> Design safety standards for electrical systems. These regulations are contained in 1910.302 through 1910.330. Sections 1910.302 through 1910.308 contain design safety standards for electric utilization systems. Included in this category are all electric equipment and installations used to provide electric power and light for employee workplaces. Sections 1910.309 through 1910.330 are reserved for possible future design safety standards for other electrical systems. <b>1910.301(b)</b> Safety-related work practices. These regulations will be contained in 1910.331 through 1910.360. <b>1910.301(c)</b> Safety-related maintenance requirements. These regulations will be contained in 1910.361 through 1910.380. <b>1910.301(d)</b> Safety requirements for special equipment. These regulations will be contained in 1910.381 through 1910.398. <b>1910.301(e)</b> Definitions. Definitions applicable to each division are contained in 1910.399.	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel . The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	x				

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
449		1910.302 - Electric utilization systems.	Sections 1910.302 through 1910.308 contain design safety standards for electric utilization systems. 1910.302(a) Scope -- 1910.302(a)(1) Covered. The provisions of §§ 1910.302 through 1910.308 cover electrical installations and utilization equipment installed or used within or on buildings, structures, and other premises, including: 1910.302(a)(1)(i) Yards; 1910.302(a)(1)(ii) Carnivals; 1910.302(a)(1)(iii) Parking and other lots; 1910.302(a)(1)(iv) Mobile homes; 1910.302(a)(1)(v) Recreational vehicles; 1910.302(a)(1)(vi) Industrial substations; 1910.302(a)(1)(vii) Conductors that connect the installations to a supply of electricity; and 1910.302(a)(1)(viii) Other outside conductors on the premises. 1910.302(b)(2) Requirements applicable to installations made after March 15, 1972. Every electrical installation and all utilization equipment installed or overhauled after March 15, 1972, shall comply with the provisions of §§ 1910.302 through 1910.308, except as noted in paragraphs (b)(3) and (b)(4) of this section. 1910.302(c) Applicability of requirements for disconnecting means. The requirement in § 1910.147(c)(2)(iii) that energy isolating devices be capable of accepting a lockout device whenever replacement or major repair, renovation or modification of a machine or equipment is performed, and whenever new machines or equipment are installed after January 2, 1990, applies in addition to any requirements in § 1910.303 through § 1910.308 that disconnecting means be capable of being locked in the open position under certain conditions.	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel . The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
450		1910.303 - General.	1910.303(b)(1)(vii) Classification by type, size, voltage, current capacity, and specific use; and 1 1910.303(b)(1)(viii) Other factors that contribute to the practical safeguarding of persons using or likely to come in contact with the equipment. 1910.303(b)(2) Installation and use. Listed or labeled equipment shall be installed and used in accordance with any instructions included in the listing or labeling. 1910.303(b)(3) Insulation integrity. Completed wiring installations shall be free from short circuits and from grounds other than those required or permitted by this subpart. 1910.303(b)(4) Interrupting rating. Equipment intended to interrupt current at fault levels shall have an interrupting rating sufficient for the nominal circuit voltage and the current that is available at the line terminals of the equipment. Equipment intended to interrupt current at other than fault levels shall have an interrupting rating at nominal circuit voltage sufficient for the current that must be interrupted. 1910.303(b)(5) Circuit impedance and other characteristics. The overcurrent protective devices, the total impedance, the component short-circuit current ratings, and other characteristics of the circuit to be protected shall be selected and coordinated to permit the circuit protective devices used to clear a fault to do so without the occurrence of extensive damage to the electrical components of the circuit. This fault shall be assumed to be either between two or more of the circuit conductors, or between any circuit conductor and the grounding conductor or enclosing metal raceway. 1910.303(b)(6) Deteriorating agents. Unless identified for use in the operating environment, no conductors or equipment shall be located in damp or wet locations; where exposed to gases, fumes, vapors, liquids, or other agents that have a deteriorating effect on the conductors or equipment; or where exposed to excessive temperatures. 1910.303(b)(7) Mechanical execution of work. Electric equipment shall be installed in a neat and workmanlike manner. 1910.303(b)(7)(i) Unused openings in boxes, raceways, auxiliary gutters, cabinets, equipment cases, or housings shall be effectively closed to afford protection substantially equivalent to the wall of the equipment. 1910.303(b)(7)(ii) Conductors shall be racked to provide ready and safe access in underground and subsurface enclosures that persons enter for installation and maintenance. 1910.303(b)(7)(iii) Internal parts of electrical equipment, including busbars, wiring terminals, insulators, and other surfaces, may not be damaged or contaminated by foreign materials such as paint, plaster, cleaners, abrasives, or corrosive residues. 1910.303(b)(7)(iv) There shall be no damaged parts that may adversely affect safe operation or mechanical strength of the equipment, such as parts that are broken, bent, cut, or deteriorated by corrosion, chemical action, or overheating. 1910.303(b)(8) Mounting and cooling of equipment. 1910.303(b)(8)(i) Electric equipment shall be firmly secured to the surface on which it is mounted. Note to paragraph (b)(8)(i) of this section: Wooden plugs driven into holes in masonry, concrete, plaster, or similar materials are not considered secure means of fastening electric equipment. 1910.303(b)(8)(ii) Electric equipment that depends on the natural circulation of air and convection principles for cooling of exposed surfaces shall be installed so that room airflow over such surfaces is not prevented by walls or by adjacent installed equipment. For equipment designed for floor mounting, clearance between top surfaces and adjacent surfaces shall be provided to dissipate rising warm air. 1910.303(b)(8)(iii) Electric equipment provided with ventilating openings shall be installed so that walls or other obstructions do not prevent the free circulation of air through the equipment.	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel . The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
451		1910.304 - Wiring design and protection.		n/a						
452		1910.305 - Wiring methods, components, and equipment for general use.	1910.305(a) Wiring methods. The provisions of this section do not apply to conductors that are an integral part of factory-assembled equipment.	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel . The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
453		1910.306 - Specific purpose equipment and installations.	1910.306(a) Electric signs and outline lighting -- 1910.306(a)(1) Disconnecting means. 1910.306(a)(1)(i) Each sign and outline lighting system, or feeder circuit or branch circuit supplying a sign or outline lighting system, shall be controlled by an externally operable switch or circuit breaker that will open all ungrounded conductors. However, a disconnecting means is not required for an exit directional sign located within a building or for cord-connected signs with an attachment plug. 1910.306(a)(1)(ii) Signs and outline lighting systems located within fountains shall have the disconnect located at least 1.52 m (5.0 ft) from the inside walls of the fountain1910.306(a)(2)(i) The disconnecting means shall be within sight of the sign or outline lighting system that it controls. Where the disconnecting means is out of the line of sight from any section that may be energized, the disconnecting means shall be capable of being locked in the open position1910.306(a)(2)(ii) Signs or outline lighting systems operated by electronic or electromechanical controllers located external to the sign or outline lighting system may have a disconnecting means located within sight of the controller or in the same enclosure with the controller. The disconnecting means shall disconnect the sign or outline lighting system and the controller from all ungrounded supply conductors. It shall be designed so no pole can be operated independently and shall be capable of being locked in the open position1910.306(a)(2)(ii) Doors or covers giving access to uninsulated parts of indoor signs or outline lighting exceeding 600 volts and accessible to other than qualified persons shall either be provided with interlock switches to disconnect the primary circuit or shall be so fastened that the use of other than ordinary tools will be necessary to open them1910.306(b) Cranes and hoists. This paragraph applies to the installation of electric equipment and wiring used in connection with cranes, monorail hoists, hoists, and all runways. 1910.306(b)(1) Disconnecting means for runway conductors. A disconnecting means shall be provided between the runway contact conductors and the power supply. Such disconnecting means shall consist of a motor-circuit switch, circuit breaker, or molded case switch. The disconnecting means shall open all ungrounded conductors simultaneously and shall be1910.306(b)(1)(i) Readily accessible and operable from the ground or floor level1910.306(b)(1)(ii) Arranged to be locked in the open position; and1910.306(b)(1)(iii) Placed within view of the runway contact conductors. 1910.306(b)(2) Disconnecting means for cranes and monorail hoists. 1910.306(b)(2)(i) Except as provided in paragraph (b)(2)(iv) of this section, a motor-circuit switch, molded case switch, or circuit breaker shall be provided in the leads from the runway contact conductors or other power supply on all cranes and monorail hoists1910.306(b)(2)(ii) The disconnecting means shall be capable of being locked in the open position1910.306(b)(2)(iii) Means shall be provided at the operating station to open the power circuit to all motors of the crane or monorail hoist where the disconnecting means is not readily accessible from the crane or monorail hoist operating station1910.306(b)(2)(iv) The disconnecting means may be omitted where a monorail hoist or hand-propelled crane bridge installation meets all of the following conditions1910.306(b)(2)(iv)(A) The unit is controlled from the ground or floor level1910.306(b)(2)(iv)(B) The unit is within view of the power supply disconnecting means; and1910.306(b)(2)(iv)(C) No fixed work platform has been provided for servicing the unit1910.306(b)(3) Limit switch. A limit switch or other device shall be provided to prevent the load block from passing the safe upper limit of travel of any hoisting mechanism1910.306(b)(4) Clearance. The dimension of the working space in the direction of access to live parts that may require examination, adjustment, servicing, or maintenance while alive shall be a minimum of 762 mm (2.5 ft). Where controls are enclosed in cabinets, the doors shall either open at least 90 degrees or be removable1910.306(c) Elevators, dumbwaiters, escalators, moving walks, wheelchair lifts, and stairway chair lifts. The following requirements apply to elevators, dumbwaiters, escalators, moving walks, wheelchair lifts, and stairway chair lifts1910.306(c)(1) Disconnecting means. Elevators, dumbwaiters, escalators, moving walks, wheelchair lifts, and stairway chair lifts shall have a single means for disconnecting all ungrounded main power supply conductors for each unit. 1910.306(c)(2) Control panels. Control panels not located in the same space as the drive machine shall be located in cabinets with doors or panels capable of being locked close1910.306(c)(3) Type. The disconnecting means shall be an enclosed externally operable fused motor circuit switch or circuit breaker capable of being locked in the open position. The disconnecting means shall be a listed device1910.306(c)(4) Operation. No provision may be made to open or close this disconnecting means from any other part of the premises. If sprinklers are installed in hoistways, machine rooms, or machinery spaces, the disconnecting means may automatically open the power supply to the affected elevators prior to the application of water. No provision may be made to close this disconnecting means automatically (that is, power may only be restored by manual means)1910.306(c)(5) Location. The disconnecting means shall be located where it is readily accessible to qualified persons1910.306(c)(5)(i) On elevators without generator field control, the disconnecting means shall be located within sight of the motor controller. Driving machines or motion and operation controllers not within sight of the disconnecting means shall be provided with a manually operated switch installed in the control circuit adjacent to the equipment in order to prevent starting. Where the driving machine is located in a remote machinery space, a single disconnecting means for disconnecting all ungrounded main power supply conductors shall be provided and be capable of being locked in the open position1910.306(c)(5)(ii) On elevators with generator field control, the disconnecting means shall be located within sight of the motor controller for the driving motor of the motor-generator set. Driving machines, motor-generator sets, or motion and operation controllers not within sight of the disconnecting means shall be provided with a manually operated switch installed in the control circuit to prevent starting. The manually operated switch shall be installed adjacent to this equipment. Where the driving machine or the motor-generator set is located in a remote machinery space, a single means for disconnecting all ungrounded main power supply conductors shall be provided and be capable of being locked in the open position. 1910.306(c)(5)(iii) n escalators and moving walks, the disconnecting means shall be installed in the space where the controller is located1910.306(c)(5)(iv) On wheelchair lifts and stairway chair lifts, the disconnecting means shall be located within sight of the motor controller. 1910.306(c)(6) Identification and signs. 1910.306(c)(6)(i) Where there is more than one driving machine in a machine room, the disconnecting means shall be numbered to correspond to the identifying number of the driving machine that they contain1910.306(c)(6)(ii) The disconnecting means shall be provided with a sign to identify the location of the supply-side overcurrent protective device1910.306(c)(7) Single-car and multicar installations. On single-car and multicar installations, equipment receiving electrical power from more than one source shall be provided with a	n/a						
454		1910.307 - Hazardous (classified) locations.	1910.307(a)(1) Applicability. This section covers the requirements for electric equipment and wiring in locations that are classified depending on the properties of the flammable vapors, liquids or gases, or combustible dusts or fibers that may be present therein and the likelihood that a flammable or combustible concentration or quantity is present. Hazardous (classified) locations may be found in occupancies such as, but not limited to, the following: aircraft hangars, gasoline dispensing and service stations, bulk storage plants for gasoline or other volatile flammable liquids, paint-finishing process plants, health care facilities, agricultural or other facilities where excessive combustible dusts may be present, marinas, boat yards, and petroleum and chemical processing plants. Each room, section or area shall be considered individually in determining its classification.	n/a						
455		1910.308 - Special systems.	n/a	n/a						
456		1910.309 - [Reserved]	n/a	n/a						
457		1910.310 - [Reserved]	n/a	n/a						
458		1910.311 - [Reserved]	n/a	n/a						
459		1910.312 - [Reserved]	n/a	n/a						
460		1910.313 - [Reserved]	n/a	n/a						
461		1910.314 - [Reserved]	n/a	n/a						
462		1910.315 - [Reserved]	n/a	n/a						
463		1910.316 - [Reserved]	n/a	n/a						
464		1910.317 - [Reserved]	n/a	n/a						
465		1910.318 - [Reserved]	n/a	n/a						
466		1910.319 - [Reserved]	n/a	n/a						
467		1910.320 - [Reserved]	n/a	n/a						
468		1910.321 - [Reserved]	n/a	n/a						
469		1910.322 - [Reserved]	n/a	n/a						
470		1910.323 - [Reserved]	n/a	n/a						
471		1910.324 - [Reserved]	n/a	n/a						
472		1910.325 - [Reserved]	n/a	n/a						
473		1910.326 - [Reserved]	n/a	n/a						
474		1910.327 - [Reserved]	n/a	n/a						
475		1910.328 - [Reserved]	n/a	n/a						
476		1910.329 - [Reserved]	n/a	n/a						
477		1910.330 - [Reserved]	n/a	n/a						

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
478		1910.331 - Scope	<b>1910.331(a)</b> <i>Covered work by both qualified and unqualified persons</i> . The provisions of §§1910.331 through 1910.335 cover electrical safety-related work practices for both qualified persons (those who have training in avoiding the electrical hazards of working on or near exposed energized parts) and unqualified persons (those with little or no such training) working on, near, or with the following installations: <b>1910.331(a)(1)</b> <i>Premises wiring</i> . Installations of electric conductors and equipment within or on buildings or other structures, and on other premises such as yards, carnival, parking, and other lots, and industrial substations; <b>1910.331(a)(2)</b> <i>Wiring for connection to supply</i> . Installations of conductors that connect to the supply of electricity; and <b>1910.331(a)(3)</b> <i>Other wiring</i> . Installations of other outside conductors on the premises. <b>1910.331(a)(4)</b> <i>Optical fiber cable</i> . Installations of optical fiber cable where such installations are made along with electric conductors. Note: See §1910.399 for the definition of "qualified person." See §1910.332 for training requirements that apply to qualified and unqualified persons. <b>1910.331(b)</b> <i>Other covered work</i> . The provisions of §§ 1910.331 through 1910.335 also cover: <b>1910.331(b)(1)</b> Work performed by unqualified persons on, near, or with the installations listed in paragraphs (c)(1) through (4) of this section; and <b>1910.331(b)(2)</b> Work performed by qualified persons near the installations listed in paragraphs (c)(1) through (c)(4) of this section when that work is not on or directly associated with those installations. <b>1910.331(c)</b> <i>Excluded work by qualified persons</i> . The provisions of §§1910.331 through 1910.335 do not apply to work performed by qualified persons on or directly associated with the following installations: <b>1910.331(c)(1)</b> <i>Generation, transmission, and distribution installations</i> . Installations for the generation, control, transformation, transmission, and distribution of electric energy (including communication and metering) located in buildings used for such purposes or located outdoors. <b>Note 1 to paragraph (c)(1):</b> Work on or directly associated with installations of utilization equipment used for purposes other than generating, transmitting, or distributing electric energy (such as installations which are in office buildings, warehouses, garages, machine shops, or recreational buildings, or other utilization installations which are not an integral part of a generating installation, substation, or control center) is covered under paragraph (a)(1) of this section. <b>Note 2 to paragraph (c)(1):</b> For work on or directly associated with utilization installations, an employer who complies with the work practices of §1910.269 (electric power generation, transmission, and distribution) will be deemed to be in compliance with §1910.333(c) and §1910.335. However, the requirements of §1910.332, §1910.333(a), §1910.333(b), and §1910.334 apply to all work on or directly associated with utilization installations, regardless of whether the work is performed by qualified or unqualified persons. <b>Note 3 to paragraph (c)(1):</b> Work on or directly associated with generation, transmission, or distribution installations includes: (1) Work performed directly on such installations, such as repairing overhead or underground distribution lines or repairing a feed-water pump for the boiler in a generating plant. (2) Work directly associated with such installations, such as line-clearance tree trimming and replacing utility poles, when that work is covered by § 1910.269 (see § 1910.269(a)(1)(i)(D) and (E) and the definition of "line-clearance tree trimming" in § 1910.269(x)). (3) Work on electric utilization circuits in a generating plant provided that: (A) Such circuits are commingled with installations of power generation equipment or circuits, and (B) The generation equipment or circuits present greater electrical hazards than those posed by the utilization equipment or circuits (such as exposure to higher voltages or lack of overcurrent protection). This work is covered by § 1910.269. <b>1910.331(c)(2)</b> <i>Communications installations</i> . Installations of communication equipment to the extent that the work is covered under §1910.268. <b>1910.331(c)(3)</b> <i>Installations in vehicles</i> . Installations in ships, watercraft, railway rolling stock, aircraft, or automotive vehicles other than mobile homes and recreational vehicles. <b>1910.331(c)(4)</b> <i>Railway installations</i> . Installations of railways for generation, transformation, transmission, or distribution of power used exclusively for operation of rolling stock or installations of railways used exclusively for signaling and communication purposes.	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel . The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	x				
479		1910.332 - Training		Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel . The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	x	x	x		
480		1910.333 - Selection and use of work practices		Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel . The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	x				
481		1910.334 - Use of equipment.	<b>1910.334(a)</b> <i>Portable electric equipment</i> . This paragraph applies to the use of cord and plug connected equipment, including flexible cord sets (extension cords). <b>1910.334(a)(1)</b> <i>Handling</i> . Portable equipment shall be handled in a manner which will not cause damage. Flexible electric cords connected to equipment may not be used for raising or lowering the equipment. Flexible cords may not be fastened with staples or otherwise hung in such a fashion as could damage the outer jacket or insulation. <b>1910.334(a)(2)</b> <i>Visual inspection</i> . <b>1910.334(a)(2)(i)</b> Portable cord and plug connected equipment and flexible cord sets (extension cords) shall be visually inspected before use on any shift for external defects (such as loose parts, deformed and missing pins, or damage to outer jacket or insulation) and for evidence of possible internal damage (such as pinched or crushed outer jacket). Cord and plug connected equipment and flexible cord sets (extension cords) which remain connected once they are put in place and are not exposed to damage need not be visually inspected until they are relocated. <b>1910.334(a)(2)(ii)</b> If there is a defect or evidence of damage that might expose an employee to injury, the defective or damaged item shall be removed from service, and no employee may use it until repairs and tests necessary to render the equipment safe have been made. <b>1910.334(a)(2)(iii)</b> When an attachment plug is to be connected to a receptacle (including an on a cord set), the relationship of the plug and receptacle contacts shall first be checked to ensure that they are of proper mating configurations. <b>1910.334(a)(3)</b> <i>Grounding type equipment</i> . <b>1910.334(a)(3)(i)</b> A flexible cord used with grounding type equipment shall contain an equipment grounding conductor. <b>1910.334(a)(3)(ii)</b> Attachment plugs and receptacles may not be connected or altered in a manner which would prevent proper continuity of the equipment grounding conductor at the point where plugs are attached to receptacles. Additionally, these devices may not be altered to allow the grounding pole of a plug to be inserted into slots intended for connection to the current-carrying conductors. <b>1910.334(a)(3)(iii)</b> Adapters which interrupt the continuity of the equipment grounding connection may not be used. <b>1910.334(a)(4)</b> <i>Conductive work locations</i> . Portable electric equipment and flexible cords used in highly conductive work locations (such as those inundated with water or other conductive liquids), or in job locations where employees are likely to contact water or conductive liquids, shall be approved for those locations. <b>1910.334(a)(5)</b> <i>Connecting attachment plugs</i> . <b>1910.334(a)(5)(i)</b> Employees' hands may not be wet when plugging and unplugging flexible cords and cord and plug connected equipment, if energized equipment is involved. <b>1910.334(a)(5)(ii)</b> Energized plug and receptacle connections may be handled only with insulating protective equipment if the condition of the connection could provide a conducting path to the employee's hand (if, for example, a cord connector is wet from being immersed in water). <b>1910.334(a)(5)(iii)</b> Locking type connectors shall be properly secured after connection. <b>1910.334(b)</b> <i>Electric power and lighting circuits</i> . <b>1910.334(b)(1)</b> <i>Routine opening and closing of circuits</i> . Load rated switches, circuit breakers, or other devices specifically designed as disconnecting means shall be used for the opening, reversing, or closing of circuits under load conditions. Cable connectors not of the load break type, fuses, terminal lugs, and cable splice connections may not be used for such purposes, except in an emergency. <b>1910.334(b)(2)</b> <i>Reclosing circuits after protective device operation</i> . After a circuit is deenergized by a circuit protective device, the circuit may not be manually reenergized until it has been determined that the equipment and circuit can be safely energized. The repetitive manual reclosing of circuit breakers or reenergizing circuits through replaced fuses is prohibited. Note: When it can be determined from the design of the circuit and the overcurrent devices involved that the automatic operation of a device was caused by an overload rather than a fault condition, no examination of the circuit or connected equipment is needed before the circuit is reenergized. <b>1910.334(b)(3)</b> <i>Overcurrent protection modification</i> . Overcurrent protection of circuits and conductors may not be modified, even on a temporary basis, beyond that allowed by 1910.304(e), the installation safety requirements for overcurrent protection. <b>1910.334(c)</b> <i>Test instruments and equipment</i> . <b>1910.334(c)(1)</b> <i>Use</i> . Only qualified persons may perform testing work on electric circuits or equipment. <b>1910.334(c)(2)</b> <i>Visual inspection</i> . Test instruments and equipment and all associated test leads, cables, power cords, probes, and connectors shall be visually inspected for external defects and damage before the equipment is used. If there is a defect or evidence of damage that might expose an employee to injury, the defective or damaged item shall be removed from service, and no employee may use it until repairs and tests necessary to render the equipment safe have been made. <b>1910.334(c)(3)</b> <i>Rating of equipment</i> . Test instruments and equipment and their accessories shall be rated for the circuits and equipment to which they will be connected and shall be designed for the environment in which they will be used. <b>1910.334(d)</b> <i>Occasional use of flammable or ignitable materials</i> . Where flammable materials are present only occasionally, electric equipment capable of igniting them shall not be used, unless measures are taken to prevent hazardous conditions from developing. Such materials include, but are not limited to: flammable gases, vapors, or liquids; combustible dust; and ignitable fibers or fillings. Note: Electrical installation requirements for locations where flammable materials are present on a regular basis are contained in 1910.307.	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel . The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	x				
482		1910.335 - Safeguards for personnel protection.	<b>1910.335(a)</b> Use of protective equipment. <b>1910.335(a)(1)</b> Personal protective equipment. <b>1910.335(a)(1)(i)</b> Employees working in areas where there are potential electrical hazards shall be provided with, and shall use, electrical protective equipment that is appropriate for the specific parts of the body to be protected and for the work to be performed. Note: Personal protective equipment requirements are contained in subpart I of this part. <b>1910.335(a)(1)(ii)</b> Protective equipment shall be maintained in a safe, reliable condition and shall be periodically inspected or tested, as required by 1910.137. <b>1910.335(a)(1)(iii)</b> If the insulating capability of protective equipment may be subject to damage during use, the insulating material shall be protected. (For example, an outer covering of leather is sometimes used for the protection of rubber insulating material.) <b>1910.335(a)(1)(iv)</b> Employees shall wear nonconductive head protection wherever there is a danger of head injury from electric shock or burns due to contact with exposed energized parts. <b>1910.335(a)(1)(v)</b> Employees shall wear protective equipment for the eyes or face wherever there is danger of injury to the eyes or face from electric arcs or flashes or from flying objects resulting from electrical explosion. <b>1910.335(a)(2)</b> General protective equipment and tools. <b>1910.335(a)(2)(i)</b> When working near exposed energized conductors or circuit parts, each employee shall use insulated tools or handling equipment if the tools or handling equipment might make contact with such conductors or parts. If the insulating capability of insulated tools or handling equipment is subject to damage, the insulating material shall be protected. <b>1910.335(a)(2)(i)(A)</b> Fuse handling equipment, insulated for the circuit voltage, shall be used to remove or install fuses when the fuse terminals are energized. <b>1910.335(a)(2)(i)(B)</b> Ropes and handlines used near exposed energized parts shall be nonconductive. <b>1910.335(a)(2)(ii)</b> Protective shields, protective barriers, or insulating materials shall be used to protect each employee from shock, burns, or other electrically related injuries while that employee is working near exposed energized parts which might be accidentally contacted or where dangerous electric heating or arcing might occur. When normally enclosed live parts are exposed for maintenance or repair, they shall be guarded to protect unqualified persons from contact with the live parts. <b>1910.335(b)</b> Alerting techniques. The following alerting techniques shall be used to warn and protect employees from hazards which could cause injury due to electric shock, burns, or failure of electric equipment parts: <b>1910.335(b)(1)</b> Safety signs and tags. Safety signs, safety symbols, or accident prevention tags shall be used where necessary to warn employees about electrical hazards which may endanger them, as required by 1910.145. <b>1910.335(b)(2)</b> Barricades. Barricades shall be used in conjunction with safety signs where it is necessary to prevent or limit employee access to work areas exposing employees to uninsulated energized conductors or circuit parts. Conductive barricades may not be used where they might cause an electrical contact hazard. <b>1910.335(b)(3)</b> Attendants. If signs and barricades do not provide sufficient warning and protection from electrical hazards, an attendant shall be stationed to warn and protect employees.	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel . The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	x				
483		1910.336 - [Reserved]	n/a	n/a						
484		1910.337 - [Reserved]	n/a	n/a						
485		1910.338 - [Reserved]	n/a	n/a						
486		1910.339 - [Reserved]	n/a	n/a						
487		1910.340 - [Reserved]	n/a	n/a						
488		1910.341 - [Reserved]	n/a	n/a						
489		1910.342 - [Reserved]	n/a	n/a						
490		1910.343 - [Reserved]	n/a	n/a						
491		1910.344 - [Reserved]	n/a	n/a						
492		1910.345 - [Reserved]	n/a	n/a						
493		1910.346 - [Reserved]	n/a	n/a						
494		1910.347 - [Reserved]	n/a	n/a						
495		1910.348 - [Reserved]	n/a	n/a						
496		1910.349 - [Reserved]	n/a	n/a						
497		1910.350 - [Reserved]	n/a	n/a						
498		1910.351 - [Reserved]	n/a	n/a						
499		1910.352 - [Reserved]	n/a	n/a						
500		1910.353 - [Reserved]	n/a	n/a						
501		1910.354 - [Reserved]	n/a	n/a						
502		1910.355 - [Reserved]	n/a	n/a						
503		1910.356 - [Reserved]	n/a	n/a						
504		1910.357 - [Reserved]	n/a	n/a						
505		1910.358 - [Reserved]	n/a	n/a						
506		1910.359 - [Reserved]	n/a	n/a						
507		1910.360 - [Reserved]	n/a	n/a						

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
508		1910.361 - [Reserved]	n/a	n/a						
509		1910.362 - [Reserved]	n/a	n/a						
510		1910.363 - [Reserved]	n/a	n/a						
511		1910.364 - [Reserved]	n/a	n/a						
512		1910.365 - [Reserved]	n/a	n/a						
513		1910.366 - [Reserved]	n/a	n/a						
514		1910.367 - [Reserved]	n/a	n/a						
515		1910.368 - [Reserved]	n/a	n/a						
516		1910.369 - [Reserved]	n/a	n/a						
517		1910.370 - [Reserved]	n/a	n/a						
518		1910.371 - [Reserved]	n/a	n/a						
519		1910.372 - [Reserved]	n/a	n/a						
520		1910.373 - [Reserved]	n/a	n/a						
521		1910.374 - [Reserved]	n/a	n/a						
522		1910.375 - [Reserved]	n/a	n/a						
523		1910.376 - [Reserved]	n/a	n/a						
524		1910.377 - [Reserved]	n/a	n/a						
525		1910.378 - [Reserved]	n/a	n/a						
526		1910.379 - [Reserved]	n/a	n/a						
527		1910.380 - [Reserved]	n/a	n/a						
528		1910.381 - [Reserved]	n/a	n/a						
529		1910.382 - [Reserved]	n/a	n/a						
530		1910.383 - [Reserved]	n/a	n/a						
531		1910.384 - [Reserved]	n/a	n/a						
532		1910.385 - [Reserved]	n/a	n/a						
533		1910.386 - [Reserved]	n/a	n/a						
534		1910.387 - [Reserved]	n/a	n/a						
535		1910.388 - [Reserved]	n/a	n/a						
536		1910.389 - [Reserved]	n/a	n/a						
537		1910.390 - [Reserved]	n/a	n/a						
538		1910.391 - [Reserved]	n/a	n/a						
539		1910.392 - [Reserved]	n/a	n/a						
540		1910.393 - [Reserved]	n/a	n/a						
541		1910.394 - [Reserved]	n/a	n/a						
542		1910.395 - [Reserved]	n/a	n/a						
543		1910.396 - [Reserved]	n/a	n/a						
544		1910.397 - [Reserved]	n/a	n/a						
545		1910.398 - [Reserved]	n/a	n/a						
546	1926 Subpart K - Electrical									
547		1926.400 - Introduction.	This subpart addresses electrical safety requirements that are necessary for the practical safeguarding of employees involved in construction work and is divided into four major divisions and applicable definitions as follows: <b>1926.400(a)</b> Installation safety requirements. Installation safety requirements are contained in 1926.402 through 1926.408. Included in this category are electric equipment and installations used to provide electric power and light on jobsites. <b>1926.400(b)</b> Safety-related work practices. Safety-related work practices are contained in 1926.416 and 1926.417. In addition to covering the hazards arising from the use of electricity at jobsites, these regulations also cover the hazards arising from the accidental contact, direct or indirect, by employees with all energized lines, above or below ground, passing through or near the jobsite. <b>1926.400(c)</b> Safety-related maintenance and environmental considerations. Safety-related maintenance and environmental considerations are contained in 1926.431 and 1926.432. <b>1926.400(d)</b> Safety requirements for special equipment. Safety requirements for special equipment are contained in 1926.441. <b>1926.400(e)</b> Definitions. Definitions applicable to this Subpart are contained in 1926.449.	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel. The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	x				
548		1926.401 - [Reserved]	n/a	n/a						
549		1926.402 - Applicability.	<b>1926.402(a)</b> Covered. Sections 1926.402 through 1926.408 contain installation safety requirements for electrical equipment and installations used to provide electric power and light at the jobsite. These sections apply to installations, both temporary and permanent, used on the jobsite; but these sections do not apply to existing permanent installations that were in place before the construction activity commenced. NOTE: If the electrical installation is made in accordance with the National Electrical Code ANSI/NFPA 70-1984, exclusive of Formal Interpretations and Tentative Interim Amendments, it will be deemed to be in compliance with 1926.403 through 1926.408, except for 1926.404(b)(1) and 1926.405(a)(2)(iii)(E), (F), (G), and (J). <b>1926.402(b)</b> Not covered. Sections 1926.402 through 1926.408 do not cover installations used for the generation, transmission, and distribution of electric energy, including related communication, metering, control, and transformation installations. (However, these regulations do cover portable and vehicle-mounted generators used to provide power for equipment used at the jobsite.) See Subpart V of this Part for the construction of power distribution and transmission lines	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel. The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	x				
550		1926.403 - General requirements.		Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel. The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	x				
551		1926.404 - Wiring design and protection.		Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel. The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	x				
552		1926.405 - Wiring methods, components, and equipment for general use.		Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel. The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	x				
553		1926.406 - Specific purpose equipment and installations.	<b>1926.406(a)</b> Cranes and hoists. This paragraph applies to the installation of electric equipment and wiring used in connection with cranes, monorail hoists, hoists, and all runways. <b>1926.406(a)(1)</b> Disconnecting means - <b>1926.406(a)(1)(i)</b> Runway conductor disconnecting means. A readily accessible disconnecting means shall be provided between the runway contact conductors and the power supply. <b>1926.406(a)(1)(ii)</b> Disconnecting means for cranes and monorail hoists. A disconnecting means, capable of being locked in the open position, shall be provided in the leads from the runway contact conductors or other power supply on any crane or monorail hoist. <b>1926.406(a)(1)(iii)(A)</b> If this additional disconnecting means is not readily accessible from the crane or monorail hoist operating station, means shall be provided at the operating station to open the power circuit to all motors of the crane or monorail hoist. <b>1926.406(a)(1)(iii)(B)</b> The additional disconnect may be omitted if a monorail hoist or hand-propelled crane bridge installation meets all of the following: <b>1926.406(a)(1)(iii)(B)(1)</b> The unit is floor controlled; <b>1926.406(a)(1)(iii)(B)(2)</b> The unit is within view of the power supply disconnecting means; and <b>1926.406(a)(1)(iii)(B)(3)</b> No fixed work platform has been provided for servicing the unit. <b>1926.406(a)(2)</b> Control. A limit switch or other device shall be provided to prevent the load block from passing the safe upper limit of travel of any hoisting mechanism. <b>1926.406(a)(3)</b> Clearance. The dimension of the working space in the direction of access to live parts which may require examination, adjustment, servicing, or maintenance while alive shall be a minimum of 2 feet 6 inches (762 mm). Where controls are enclosed in cabinets, the door(s) shall open at least 90 degrees or be removable, or the installation shall provide equivalent access. <b>1926.406(a)(4)</b> Grounding. All exposed metal parts of cranes, monorail hoists, hoists and accessories including pendant controls shall be metalically joined together into a continuous electrical conductor so that the entire crane or hoist will be grounded in accordance with <b>1926.404(f)</b> . Moving parts, other than removable accessories or attachments, having metal-to-metal bearing surfaces shall be considered to be electrically connected to each other through the bearing surfaces for grounding purposes. The trolley frame and bridge frame shall be considered as electrically grounded through the bridge and trolley wheels and its respective tracks unless conditions such as paint or other insulating materials prevent reliable metal-to-metal contact. In this case a separate bonding conductor shall be provided. <b>1926.406(b)</b> Elevators, escalators, and moving walks - <b>1926.406(b)(1)</b> Disconnecting means. Elevators, escalators, and moving walks shall have a single means for disconnecting all ungrounded main power supply conductors for each unit. <b>1926.406(b)(2)</b> Control panels. If control panels are not located in the same space as the drive machine, they shall be located in cabinets with doors or panels capable of being locked closed. <b>1926.406(c)</b> Electric welders-disconnecting means - <b>1926.406(c)(1)</b> Motor-generator, AC transformer, and DC rectifier arc welders. A disconnecting means shall be provided in the supply circuit for each motor-generator arc welder, and for each AC transformer and DC rectifier arc welder which is not equipped with a disconnect mounted as an integral part of the welder. <b>1926.406(c)(2)</b> Resistance welders. A switch or circuit breaker shall be provided by which each resistance welder and its control equipment can be isolated from the supply circuit. The ampere rating of this disconnecting means shall not be less than the supply conductor ampacity.	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel. The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	x				



Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
		1926.407 - Hazardous (classified) locations.	<b>1926.407(a)</b> Scope. This section sets forth requirements for electric equipment and wiring in locations which are classified depending on the properties of the flammable vapors, liquids or gases, or combustible dusts or fibers which may be present therein and the likelihood that a flammable or combustible concentration or quantity is present. Each room, section or area shall be considered individually in determining its classification. These hazardous (classified) locations are assigned six designations as follows: Class I, Division 1 Class I, Division 2 Class II, Division 1 Class II, Division 2 Class III, Division 1 Class III, Division 2 For definitions of these locations see 1926.449. All applicable requirements in this subpart apply to all hazardous (classified) locations, unless modified by provisions of this section. <b>1926.407(b)</b> Electrical installations. Equipment, wiring methods, and installations of equipment in hazardous (classified) locations shall be approved as intrinsically safe or approved for the hazardous (classified) location or safe for the hazardous (classified) location. Requirements for each of these options are as follows: <b>1926.407(b)(1)</b> Intrinsically safe. Equipment and associated wiring approved as intrinsically safe is permitted in any hazardous (classified) location included in its listing or labeling. <b>1926.407(b)(2)</b> Approved for the hazardous (classified) location - <b>1926.407(b)(2)(i)</b> General. Equipment shall be approved not only for the class of location but also for the ignitable or combustible properties of the specific gas, vapor, dust, or fiber that will be present. NOTE: NFPA 70, the National Electrical Code, lists or defines hazardous gases, vapors, and dusts by "Groups" characterized by their ignitable or combustible properties. <b>1926.407(b)(2)(ii)</b> Marking. Equipment shall not be used unless it is marked to show the class, group, and operating temperature or temperature range, based on operation in a 40-degree C ambient, for which it is approved. The temperature marking shall not exceed the ignition temperature of the specific gas, vapor, or dust to be encountered. However, the following provisions modify this marking requirement for specific equipment: <b>1926.407(b)(2)(ii)(A)</b> Equipment of the non-heat-producing type (such as junction boxes, conduit, and fitting) and equipment of the heat-producing type having a maximum temperature of not more than 100 degrees C (212 degrees F) need not have a marked operating temperature or temperature range. <b>1926.407(b)(2)(ii)(B)</b> Fixed lighting fixtures marked for use only in Class I, Division 2 locations need not be marked to indicate the group. <b>1926.407(b)(2)(ii)(C)</b> Fixed general-purpose equipment in Class I locations, other than lighting fixtures, which is acceptable for use in Class I, Division 2 locations need not be marked with the class, group, division, or operating temperature. <b>1926.407(b)(3)</b> Safe for the hazardous (classified) location. Equipment which is safe for the location shall be of a type and design which the employer demonstrates will provide protection from the hazards arising from the combustibility and flammability of vapors, liquids, gases, dusts, or fibers. NOTE: The National Electrical Code, NFPA 70, contains guidelines for determining the type and design of equipment and installations which will meet this requirement. The guidelines of this document address electric wiring, equipment, and systems installed in hazardous (classified) locations and contain specific provisions for the following: wiring methods, wiring connections, conductor insulation, flexible cords, sealing and drainage, transformers, capacitors, switches, circuit breakers, fuses, motor controllers, receptacles, attachment plugs, meters, relays, instruments, resistors, generators, motors, lighting fixtures, storage battery charging equipment, electric cranes, electric hoists and similar equipment, utilization equipment, signaling systems, alarm systems, remote control systems, local loud speaker and communication systems, ventilation piping, live parts, lightning surge protection, and grounding. Compliance with these guidelines will constitute one means, but not the only means, of compliance with this paragraph. <b>1926.407(c)</b> Conduits. All conduits shall be threaded and shall be made wrench-tight. Where it is impractical to make a threaded joint tight, a bonding jumper shall be utilized.	n/a						
554		1926.408 - Special systems.	<b>1926.408(a)</b> Systems over 600 volts, nominal. Paragraphs (a)(1) through (a)(4) of this section contain general requirements for all circuits and equipment operated at over 600 volts. <b>1926.408(a)(1)</b> Wiring methods for fixed installations - <b>1926.408(a)(1)(i)</b> Above ground. Above-ground conductors shall be installed in rigid metal conduit, in intermediate metal conduit, in cable trays, in cablebus, in other suitable raceways, or as open runs of metal-clad cable designed for the use and purpose. However, open runs of non-metallic-sheathed cable or of bare conductors or busbars be installed in locations which are accessible only to qualified persons. Metallic shielding components, such as tapes, wires, or braids for conductors, shall be grounded. Open runs of insulated wires and cables having a bare lead sheath or a braided outer covering shall be supported in a manner designed to prevent physical damage to the braid or sheath. <b>1926.408(a)(1)(ii)</b> Installations emerging from the ground. Conductors emerging from the ground shall be enclosed in raceways. Raceways installed on poles shall be of rigid metal conduit, intermediate metal conduit, PVC schedule 40 or equivalent extending from the ground line up to a point 8 feet (2.44 m) above finished grade. Conductors entering a building shall be protected by an enclosure from the ground line to the point of entrance. Metallic enclosures shall be grounded. <b>1926.408(a)(2)</b> Interrupting and isolating devices - <b>1926.408(a)(2)(i)</b> Circuit breakers. Circuit breakers located indoors shall consist of metal-enclosed or fire-resistant, cell-mounted units. In locations accessible only to qualified personnel, open mounting of circuit breakers is permitted. A means of indicating the open and closed position of circuit breakers shall be provided. <b>1926.408(a)(2)(ii)</b> Fused cutouts. Fused cutouts installed in buildings or transformer vaults shall be of a type identified for the purpose. They shall be readily accessible for fuse replacement. <b>1926.408(a)(2)(iii)</b> Equipment isolating means. A means shall be provided to completely isolate equipment for inspection and repairs. Isolating means which are not designed to interrupt the load current of the circuit shall be either interlocked with a circuit interrupter or provided with a sign warning against opening them under load. <b>1926.408(a)(3)</b> Mobile and portable equipment - <b>1926.408(a)(3)(i)</b> Power cable connections to mobile machines. A metallic enclosure shall be provided on the mobile machine for enclosing the terminals of the power cable. The enclosure shall include provisions for a solid connection for the ground wire(s) terminal to ground effectively the machine frame. The method of cable termination used shall prevent any strain or pull on the cable from stressing the electrical connections. The enclosure shall have provision for locking so only authorized qualified persons may open it and shall be marked with a sign warning of the presence of energized parts. <b>1926.408(a)(3)(ii)</b> Guarding live parts. All energized switching and control parts shall be enclosed in effectively grounded metal cabinets or enclosures. Circuit breakers and protective equipment shall have the operating means projecting through the metal cabinet or enclosure so these units can be reset without locked doors being opened. Enclosures and metal cabinets shall be locked so that only authorized qualified persons have access and shall be marked with a sign warning of the presence of energized parts. Collector ring assemblies on revolving-type machines (shovels, draglines, etc.) shall be guarded. <b>1926.408(a)(4)</b> Tunnel installations - <b>1926.408(a)(4)(i)</b> Application. The provisions of this paragraph apply to installation and use of high-voltage power distribution and utilization equipment which is associated with tunnels a which is portable and/or mobile, such as substations, trailers, cars, mobile shovels, draglines, hoists, drills, dredges, compressors, pumps, conveyors, and underground excavator. <b>1926.408(a)(4)(ii)</b> Conductors. Conductors in tunnels shall be installed in one or more of the following: <b>1926.408(a)(4)(ii)(A)</b> Metal conduit or other metal raceway. <b>1926.408(a)(4)(ii)(B)</b> Type MC cable, or <b>1926.408(a)(4)(ii)(C)</b> Other suitable multiconductor cable. Conductors shall also be so located or guarded as to protect them from physical damage. Multiconductor portable cable may supply mobile equipment. An equipment grounding conductor shall be run with circuit conductors inside the metal raceway or inside the multiconductor cable jacket. The equipment grounding conductor may be insulated or bare. <b>1926.408(a)(4)(iii)</b> Guarding live parts. Bare terminals of transformers, switches, motor controllers, and other equipment shall be enclosed to prevent accidental contact with energized parts. Enclosures for use in tunnels shall be drip-proof, weatherproof, or submersible as required by the environmental conditions. <b>1926.408(a)(4)(iv)</b> Disconnecting means. A disconnecting means that simultaneously opens all ungrounded conductors shall be installed at each transformer or motor location. <b>1926.408(a)(4)(v)</b> Grounding and bonding. All nonenergized metal parts of electric equipment and metal raceways and cable sheaths shall be grounded and bonded to all metal pipes and rails at the portal and at intervals not exceeding 1000 feet (305 m) throughout the tunnel. <b>1926.408(b)</b> Class 1, Class 2, and Class 3 remote control, signaling, and power-limited circuits- <b>1926.408(b)(1)</b> Classification. Class 1, Class 2, or Class 3 remote control, signaling, or power-limited circuits are characterized by their usage and electrical power limitation which differentiates them from light and power circuits. These circuits are classified in accordance with their respective voltage and power limitations as summarized in paragraphs (b)(1)(i) through (b)(1)(iii) of this section. <b>1926.408(b)(1)(i)</b> Class 1 circuits - <b>1926.408(b)(1)(i)(A)</b> A Class 1 power-limited circuit is supplied from a source having a rated output of not more than 30 volts and 1000 volt-amperes. <b>1926.408(b)(1)(i)(B)</b> A Class 1 remote control circuit or a Class 1 signaling circuit has a voltage which does not exceed 600 volts; however, the power output of the source need not be limited. <b>1926.408(b)(1)(ii)</b> Class 2 and Class 3 circuits - <b>1926.408(b)(1)(ii)(A)</b> Power for Class 2 and Class 3 circuits is limited either inherently (in which no overcurrent protection is required) or by a combination of a power source and overcurrent protection. <b>1926.408(b)(1)(ii)(B)</b> The maximum circuit voltage is 150 volts AC or DC for a Class 2 inherently limited power source, and 100 volts AC or DC for a Class 3 inherently limited power source. <b>1926.408(b)(1)(ii)(C)</b> The maximum circuit voltage is 30 volts AC and 60 volts DC for a Class 2 power source limited by overcurrent protection, and 150 volts AC or DC for a Class 3 power source limited by overcurrent protection. <b>1926.408(b)(1)(iii)</b> Application. The maximum circuit voltages in paragraphs (b)(1)(i) and (b)(1)(ii) of this section apply to sinusoidal AC or continuous DC power sources, and where wet contact occurrence is not likely. <b>1926.408(b)(2)</b> Marking. A Class 2 or Class 3 power supply unit shall not be used unless it is durably marked where plainly visible to indicate the class of supply and its electrical rating. <b>1926.408(c)</b> Communications systems - <b>1926.408(c)(1)</b> Scope. These provisions for communication systems apply to such systems as central-station-connected and non-central-station-connected telephone circuits, radio receiving and transmitting equipment, and outside wiring for fire and burglar alarm, and similar central station systems. These installations need not comply with the provisions of 1926.403 through 1926.408(b), except 1926.404(c)(1)(ii) and 1926.407. <b>1926.408(c)(2)</b> Protective devices- <b>1926.408(c)(2)(i)</b> Circuits exposed to power conductors.	n/a						
555										
556		1926.409 - [Reserved]	n/a	n/a						
557		1926.410 - [Reserved]	n/a	n/a						
558		1926.411 - [Reserved]	n/a	n/a						
559		1926.412 - [Reserved]	n/a	n/a						
560		1926.413 - [Reserved]	n/a	n/a						
561		1926.414 - [Reserved]	n/a	n/a						
562		1926.415 - [Reserved]	n/a	n/a						
		1926.416 - General requirements.	<b>1926.416(a)</b> Protection of employees - <b>1926.416(a)(1)</b> No employer shall permit an employee to work in such proximity to any part of an electric power circuit that the employee could contact the electric power circuit in the course of work, unless the employee is protected against electric shock by deenergizing the circuit and grounding it or by guarding it effectively by insulation or other means. <b>1926.416(a)(2)</b> In work areas where the exact location of underground electric powerlines is unknown, employees using jack-hammers, bars, or other hand tools which may contact a line shall be provided with insulated protective gloves. <b>1926.416(a)(3)</b> Before work is begun the employer shall ascertain by inquiry or direct observation, or by instruments, whether any part of an energized electric power circuit, exposed or concealed, is so located that the performance of the work may bring any person, tool, or machine into physical or electrical contact with the electric power circuit. The employer shall post and maintain proper warning signs where such a circuit exists. The employer shall advise employees of the location of such lines, the hazards involved, and the protective measures to be taken. <b>1926.416(b)</b> Passageways and open spaces - <b>1926.416(b)(1)</b> Barriers or other means of guarding shall be provided to ensure that workspace for electrical equipment will not be used as a passageway during periods when energized parts of electrical equipment are exposed. <b>1926.416(b)(2)</b> Working spaces, walkways, and similar locations shall be kept clear of cords so as not to create a hazard to employees. <b>1926.416(c)</b> Load ratings. In existing installations, no changes in circuit protection shall be made to increase the load in excess of the load rating of the circuit wiring. <b>1926.416(d)</b> Fuses. When fuses are installed or removed with one or both terminals energized, special tools insulated for the voltage shall be used. <b>1926.416(e)</b> Cords and cables. <b>1926.416(e)(1)</b> Worn or frayed electric cords or cables shall not be used. <b>1926.416(e)(2)</b> Extension cords shall not be fastened with staples, hung from nails, or suspended by wire.	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel. The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
563										
		1926.417 - Lockout and tagging of circuits.	<b>1926.417(a)</b> Controls. Controls that are to be deactivated during the course of work on energized or deenergized equipment or circuits shall be tagged. <b>1926.417(b)</b> Equipment and circuits. Equipment or circuits that are deenergized shall be rendered inoperative and shall have tags attached at all points where such equipment or circuits can be energized. <b>1926.417(c)</b> Tags. Tags shall be placed to identify plainly the equipment or circuits being worked on.	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel. The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
564										
565		1926.418 - [Reserved]	n/a	n/a						
566		1926.419 - [Reserved]	n/a	n/a						
567		1926.420 - [Reserved]	n/a	n/a						
568		1926.421 - [Reserved]	n/a	n/a						
569		1926.422 - [Reserved]	n/a	n/a						
570		1926.423 - [Reserved]	n/a	n/a						
571		1926.424 - [Reserved]	n/a	n/a						
572		1926.425 - [Reserved]	n/a	n/a						
573		1926.426 - [Reserved]	n/a	n/a						
574		1926.427 - [Reserved]	n/a	n/a						
575		1926.428 - [Reserved]	n/a	n/a						
576		1926.429 - [Reserved]	n/a	n/a						
577		1926.430 - [Reserved]	n/a	n/a						
		1926.431 - Maintenance of equipment.	The employer shall ensure that all wiring components and utilization equipment in hazardous locations are maintained in a dust-tight, dust-ignition-proof, or explosion-proof condition, as appropriate. There shall be no loose or missing screws, gaskets, threaded connections, seals, or other impairments to a tight condition.	Partial	Policy states that ONLY licensed electricians are allowed to work on energized equipment. Subsection covers common situations that may be encountered by general site personnel. The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
578										

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
		1926.432 - Environmental deterioration of equipment.	1926.432(a) Deteriorating agents - 1926.432(a)(1) Unless identified for use in the operating environment, no conductors or equipment shall be located: 1926.432(a)(1)(i) In damp or wet locations; 1926.432(a)(1)(ii) Where exposed to gases, fumes, vapors, liquids, or other agents having a deteriorating effect on the conductors or equipment; or 1926.432(a)(1)(iii) Where exposed to excessive temperatures. 1926.432(a)(2) Control equipment, utilization equipment, and busways approved for use in dry locations only shall be protected against damage from the weather during building construction. 1926.432(b) Protection against corrosion. Metal raceways, cable armor, boxes, cable sheathing, cabinets, elbows, couplings, fittings, supports, and support hardware shall be of materials appropriate for the environment in which they are to be installed.	Partial	Policy covers common situations that may be encountered by general site personnel. The policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
579										
580		1926.433 - [Reserved]	n/a	n/a						
581		1926.434 - [Reserved]	n/a	n/a						
582		1926.435 - [Reserved]	n/a	n/a						
583		1926.436 - [Reserved]	n/a	n/a						
584		1926.437 - [Reserved]	n/a	n/a						
585		1926.438 - [Reserved]	n/a	n/a						
586		1926.439 - [Reserved]	n/a	n/a						
587		1926.440 - [Reserved]	n/a	n/a						
		1926.441 - Batteries and battery charging.	1926.441(a) General requirements -1926.441(a)(1) Batteries of the unsealed type shall be located in enclosures with outside vents or in well ventilated rooms and shall be arranged so as to prevent the escape of fumes, gases, or electrolyte spray into other areas.1926.441(a)(2) Ventilation shall be provided to ensure diffusion of the gases from the battery and to prevent the accumulation of an explosive mixture.1926.441(a)(3) Racks and trays shall be substantial and shall be treated to make them resistant to the electrolyte.1926.441(a)(4) Floors shall be of acid resistant construction unless protected from acid accumulations.1926.441(a)(5) Face shields, aprons, and rubber gloves shall be provided for workers handling acids or batteries.1926.441(a)(6) Facilities for quick drenching of the eyes and body shall be provided within 25 feet (7.62 m) of battery handling areas. 1926.441(a)(7) Facilities shall be provided for flushing and neutralizing spilled electrolyte and for fire protection.1926.441(b) Charging - 1926.441(b)(1) Battery charging installations shall be located in areas designated for that purpose.1926.441(b)(2) Charging apparatus shall be protected from damage by trucks. 1926.441(b)(3) When batteries are being charged, the vent caps shall be kept in place to avoid electrolyte spray. Vent caps shall be maintained in functioning condition.	n/a						
588										
589		1926.442 - [Reserved]	n/a	n/a						
590		1926.443 - [Reserved]	n/a	n/a						
591		1926.444 - [Reserved]	n/a	n/a						
592		1926.445 - [Reserved]	n/a	n/a						
593		1926.446 - [Reserved]	n/a	n/a						
594		1926.447 - [Reserved]	n/a	n/a						
595		1926.448 - [Reserved]	n/a	n/a						
	1910 Subpart T - Commercial Diving Operations			n/a						
596										
597		1910.401 - Scope and application.	n/a	n/a						
598		1910.402 - Definitions.	n/a	n/a						
599		1910.410 - Qualifications of dive team.	n/a	n/a						
600		1910.420 - Safe practices manual.	n/a	n/a						
601		1910.421 - Pre-dive procedures.	n/a	n/a						
602		1910.422 - Procedures during dive.	n/a	n/a						
603		1910.423 - Post-dive procedures.	n/a	n/a						
604		1910.424 - SCUBA diving.	n/a	n/a						
605		1910.425 - Surface-supplied air diving.	n/a	n/a						
606		1910.426 - Mixed-gas diving.	n/a	n/a						
607		1910.427 - Liveboating.	n/a	n/a						
608		1910.430 - Equipment.	n/a	n/a						
609		1910.440 - Recordkeeping requirements.	n/a	n/a						
		1910 Subpart T App A - Examples of conditions which may restrict or limit exposure to hyperbaric conditions	n/a	n/a						
610										
611		1910 Subpart T App B - Guidelines for scientific diving	n/a	n/a						
		1910 Subpart T App C - Alternative Conditions Under 1910.401(a)(3) for Recreational Diving Instructors and Diving Guides (Mandatory)	n/a	n/a						
612										
	1926 Subpart Y - Commercial Diving Operations			n/a						
613										
614		1926.1071 - Scope and application.	n/a	n/a						
615		1926.1072 - Definitions	n/a	n/a						
616		1926.1076 - Qualifications of dive team.	n/a	n/a						
617		1926.1080 - Safe practices manual.	n/a	n/a						
618		1926.1081 - Pre-dive procedures.	n/a	n/a						
619		1926.1082 - Procedures during dive.	n/a	n/a						
620		1926.1083 - Post-dive procedures.	n/a	n/a						
621		1926.1084 - SCUBA diving.	n/a	n/a						
622		1926.1085 - Surface-supplied air diving.	n/a	n/a						
623		1926.1086 - Mixed-gas diving.	n/a	n/a						
624		1926.1087 - Liveboating.	n/a	n/a						
625		1926.1090 - Equipment.	n/a	n/a						
626		1926.1091 - Recordkeeping requirements.	n/a	n/a						
		1926 Subpart Y App A - Examples of Conditions Which May Restrict or Limit Exposure to Hyperbaric Conditions	n/a	n/a						
627										
628		1926 Subpart Y App B - Guidelines for Scientific Diving	n/a	n/a						
629		1910 Subpart U - [Reserved]	n/a	n/a						
630		1910 Subpart V - [Reserved]	n/a	n/a						
631		1910 Subpart W - Program Standard	n/a	n/a						
632		1910 Subpart X - [Reserved]	n/a	n/a						
633		1910 Subpart Y - [Reserved]	n/a	n/a						
	1910 Subpart Z - Toxic and Hazardous Substances									
634										
		1910.1000 - Air contaminants.	An employee's exposure to any substance listed in Tables Z-1, Z-2, or Z-3 of this section shall be limited in accordance with the requirements of the following paragraphs of this section.	No	With the respiratory program currently in abeyance, there is no governing policy/SOP.	X				
635										
		1910.1000 TABLE Z-1 - TABLE Z-1 Limits for Air Contaminants.		No	With the respiratory program currently in abeyance, there is no governing policy/SOP.	X				
636										

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
637		1910.1000 TABLE Z-2 - TABLE Z-2		No	With the respiratory program currently in abeyance, there is no governing policy/SOP.	X				
638		1910.1000 TABLE Z-3 - TABLE Z-3 Mineral Dusts		No	With the respiratory program currently in abeyance, there is no governing policy/SOP.	X				
639		1910.1001 - Asbestos.	1910.1001(a)(1) This section applies to all occupational exposures to asbestos in all industries covered by the Occupational Safety and Health Act, except as provided in paragraph (a)(2) and (3) of this section. 1910.1001(a)(2) This section does not apply to construction work as defined in 29 CFR 1910.12(b). (Exposure to asbestos in construction work is covered by 29 CFR 1926.1101.)	No	With the respiratory program currently in abeyance, there is no governing policy/SOP.	X				
640		1910.1001 App A - OSHA Reference Method - Mandatory		No	With the respiratory program currently in abeyance, there is no governing policy/SOP.	X				
641		1910.1001 App B - Detailed procedure for asbestos sampling and analysis - Non-Mandatory		n/a						
642		1910.1001 App C - Qualitative and quantitative fit testing procedures - Mandatory		n/a						
643		1910.1001 App D - Medical questionnaires; Mandatory		n/a						
644		1910.1001 App E - Interpretation and classification of chest roentgenograms - Mandatory		n/a						
645		1910.1001 App F - Work practices and engineering controls for automotive brake and clutch inspection, disassembly, repair and assembly -- Mandatory		n/a						
646		1910.1001 App G - Substance Technical Information for Asbestos-Non-Mandatory		n/a						
647		1910.1001 App H - Medical surveillance guidelines for asbestos - Non-Mandatory		n/a						
648		1910.1001 App I - Smoking Cessation Program Information For Asbestos - Non-Mandatory.		n/a						
649		1910.1001 App J - Polarized Light Microscopy of Asbestos -- Non-Mandatory		n/a						
650		1910.1002 - Coal tar pitch volatiles; interpretation of term.	n/a	n/a						
651		1910.1003 - 13 Carcinogens (4-Nitrobiphenyl, etc.).	n/a	n/a						
652		1910.1004 - alpha-Naphthylamine.	n/a	n/a						
653		1910.1005 - [Reserved]	n/a	n/a						
654		1910.1006 - Methyl chloromethyl ether.	n/a	n/a						
655		1910.1007 - 3',5'-Dichlorobenzidine (and its salts).	n/a	n/a						
656		1910.1008 - bis-Chloromethyl ether.	n/a	n/a						
657		1910.1009 - beta-Naphthylamine.	n/a	n/a						
658		1910.1010 - Benzidine.	n/a	n/a						
659		1910.1011 - 4-Aminodiphenyl.	n/a	n/a						
660		1910.1012 - Ethyleneimine.	n/a	n/a						
661		1910.1013 - beta-Propiolactone.	n/a	n/a						
662		1910.1014 - 2-Acetylaminofluorene.	n/a	n/a						
663		1910.1015 - 4-Dimethylaminoazobenzene.	n/a	n/a						
664		1910.1016 - N-Nitrosodimethylamine.	n/a	n/a						
665		1910.1017 - Vinyl chloride	n/a	n/a						
666		1910.1017 App A - Supplemental medical information	n/a	n/a						
667		1910.1018 - Inorganic arsenic.	1910.1018 (a) Scope and application. This section applies to all occupational exposures to inorganic arsenic except that this section does not apply to employee exposures in agriculture or resulting from pesticide application, the treatment of wood with preservatives or the utilization of arsenically preserved wood.1910.1018 (g)(2) Compliance Program.	n/a						
668		1910.1020 - Access to employee exposure and medical records.	1910.1020(a) "Purpose." The purpose of this section is to provide employees and their designated representatives a right of access to relevant exposure and medical records; and to provide representatives of the Assistant Secretary a right of access to these records in order to fulfill responsibilities under the Occupational Safety and Health Act. Access by employees, their representatives, and the Assistant Secretary is necessary to yield both direct and indirect improvements in the detection, treatment, and prevention of occupational disease. Each employer is responsible for assuring compliance with this section, but the activities involved in complying with the access to medical records provisions can be carried out, on behalf of the employer, by the physician or other health care personnel in charge of employee medical records. Except as expressly provided, nothing in this section is intended to affect existing legal and ethical obligations concerning the maintenance and confidentiality of employee medical information, the duty to disclose information to a patient/employee or any other aspect of the medical-care relationship, or affect existing legal obligations concerning the protection of trade secret information.	No	No governing policy/SOP found.	X				
669		1910.1020 App A - Sample authorization letter for the release of employee medical record information to a designated representative (Non-mandatory)		No	No governing policy/SOP found.	X				
670		1910.1020 App B - Availability of NIOSH registry of toxic effects of chemical substances (RTECS)(Non-mandatory)	The final standard, 29 CFR 1910.1020, applies to all employee exposure and medical records, and analyses thereof, of employees exposed to toxic substances or harmful physical agents (paragraph (b)(2)). The term "toxic substance or harmful physical agent" is defined by paragraph (c)(13) to encompass chemical substances, biological agents, and physical stresses for which there is evidence of harmful health effects. The regulation uses the latest printed edition of the National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS) as one of the chief sources of information as to whether evidence of harmful health effects exists. If a substance is listed in the latest printed RTECS, the regulation applies to exposure and medical records (and analyses of these records) relevant to employees exposed to the substance.	n/a						
671		1910.1024 - Beryllium.	1910.1024(a)(1) This standard applies to occupational exposure to beryllium in all forms, compounds, and mixtures in general industry, except those articles and materials exempted by paragraphs (a)(2) and (a)(3) of this standard.1910.1024(f)(1) Written exposure control plan .1910.1024(f)(1)(i) The employer must establish, implement, and maintain a written exposure control plan, which must contain:1910.1024(f)(1)(i)(A) A list of operations and job titles reasonably expected to involve airborne exposure to or dermal contact with beryllium1910.1024(f)(1)(i)(B) A list of operations and job titles reasonably expected to involve airborne exposure at or above the action level1910.1024(f)(1)(i)(C) A list of operations and job titles reasonably expected to involve airborne exposure above the TWA PEL or STEL1910.1024(f)(1)(i)(D) Procedures for minimizing cross-contamination, including preventing the transfer of beryllium between surfaces, equipment, clothing, materials, and articles within beryllium work areas1910.1024(f)(1)(i)(E) Procedures for keeping surfaces as free as practicable of beryllium1910.1024(f)(1)(i)(F) Procedures for minimizing the migration of beryllium from beryllium work areas to other locations within or outside the workplace1910.1024(f)(1)(i)(G) A list of engineering controls, work practices, and respiratory protection required by paragraph (f)(2) of this standard1910.1024(f)(1)(i)(H) A list of personal protective clothing and equipment required by paragraph (h) of this standard; and1910.1024(f)(1)(i)(I) Procedures for removing, laundering, storing, cleaning, repairing, and disposing of beryllium-contaminated personal protective clothing and equipment, including respirators.1910.1024(f)(1)(ii) The employer must review and evaluate the effectiveness of each written exposure control plan at least annually and update it, as necessary, when:1910.1024(f)(1)(ii)(A) Any change in production processes, materials, equipment, personnel, work practices, or control methods results, or can reasonably be expected to result, in new or additional airborne exposure to beryllium1910.1024(f)(1)(ii)(B) The employer is notified that an employee is eligible for medical removal in accordance with paragraph (l)(1) of this standard, referred for evaluation at a CBD diagnostic center, or shows signs or symptoms associated with airborne exposure to or dermal contact with beryllium; or1910.1024(f)(1)(ii)(C) The employer has any reason to believe that new or additional airborne exposure is occurring or will occur1910.1024(f)(1)(iii) The employer must make a copy of the written exposure control plan accessible to each employee who is, or can reasonably be expected to be, exposed to airborne beryllium in accordance with OSHA's Access to Employee Exposure and Medical Records (Records Access) standard (§ 1910.1024(e)).	n/a						

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1			Occupational Safety & Health							
	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
		1910.1024 App A - Appendix A to § 1910.1024-Control Strategies To Minimize Beryllium Exposure (Non-Mandatory)		n/a						
672		1910.1025 - Lead.	1910.1025(a)(1) This section applies to all occupational exposure to lead, except as provided in paragraph (a)(2).	n/a						
673		1910.1025 App A - Substance data sheet for occupational exposure to lead		n/a						
674		1910.1025 App B - Employee standard summary		n/a						
675		1910.1025 App C - Medical surveillance guidelines		n/a						
676		1910.1025 App D - Qualitative fit test protocols		n/a						
677		1910.1026 - Chromium (VI)	1910.1026(a)(1) This standard applies to occupational exposures to chromium (VI) in all forms and compounds in general industry, except agency (e.g., the treatment of wood with preservatives)1910.1026(a)(3) Exposures to portland cement; or 1910.1026(a)(4) Where the employer has objective data demonstrating that a material containing chromium or a specific process, operation, or activity involving chromium cannot release dusts, fumes, or mists of chromium (VI) in concentrations at or above 0.5 µg/m3 as an 8-hour time-weighted average (TWA) under any expected conditions of use.	n/a						
678		1910.1026 App A - Chromium (VI)		n/a						
679		1910.1027 - Cadmium	Scope. This standard applies to all occupational exposures to cadmium and cadmium compounds, in all forms, and in all industries covered by the Occupational Safety and Health Act, except the construction-related industries, which are covered under 29 CFR 1926.63.	n/a						
680		1910.1027 App A - Substance Safety Data Sheet - Cadmium		n/a						
681		1910.1027 App B - Substances Technical Guidelines for Cadmium		n/a						
682		1910.1027 App C - Qualitative and Quantitative Fit Testing Procedures		n/a						
683		1910.1027 App D - Occupational Health History Interview With Reference to Cadmium Exposure		n/a						
684		1910.1027 App E - Cadmium in Workplace Atmospheres		n/a						
685		1910.1027 App F - Nonmandatory Protocol for Biological Monitoring		n/a						
686		1910.1028 - Benzene.	n/a	n/a						
687		1910.1028 App A - Substance safety data sheet, Benzene	n/a	n/a						
688		1910.1028 App B - Substance technical guidelines, Benzene	n/a	n/a						
689		1910.1028 App C - Medical surveillance guidelines for Benzene	n/a	n/a						
690		1910.1028 App D - Sampling and analytical methods for Benzene monitoring and measurement procedures	n/a	n/a						
691		1910.1028 App E - Qualitative and Quantitative fit testing procedures	n/a	n/a						
692		1910.1029 - Coke oven emissions.	n/a	n/a						
693		1910.1029 App A - Coke oven emissions substance information sheet	n/a	n/a						
694		1910.1029 App B - Industrial hygiene and medical surveillance guidelines	n/a	n/a						
695		1910.1030 - Bloodborne pathogens.	Scope and Application . This section applies to all occupational exposure to blood or other potentially infectious materials as defined by paragraph (b) of this section.	Partial	Policy requires the use of Universal Precautions when exposed to bloodborne pathogens, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including needlestick/sharps injuries and recordkeeping of incidents.	X				
696		1910.1030 App A - Hepatitis B Vaccine Declination (Mandatory)	I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.	Partial	Policy requires the use of Universal Precautions when exposed to bloodborne pathogens, however policy is too brief/high-level and is silent on many individual provisions of the regulation, including Hepatitis B Vaccine availability.	X				
697		1910.1043 - Cotton dust.	n/a	n/a						
698		1910.1043 App A - Air sampling and analytical procedures for determining concentrations of cotton dust	n/a	n/a						
699		1910.1043 App B-I - Respiratory questionnaire	n/a	n/a						
700		1910.1043 App B-II - Respiratory questionnaire for non-textile workers for the cotton industry	n/a	n/a						
701		1910.1043 App B-III - Abbreviated respiratory questionnaire	n/a	n/a						
702		1910.1043 App C - Spirometry prediction tables for normal males and females	n/a	n/a						
703		1910.1043 App D - Pulmonary function standards for cotton dust standard	n/a	n/a						
704		1910.1043 App E - Vertical elutriator equivalency protocol	n/a	n/a						
705		1910.1044 - 1,2-dibromo-3-chloropropane.	n/a	n/a						
706		1910.1044 App A - Substance safety data sheet for DBCP	n/a	n/a						
707		1910.1044 App B - Substance technical guidelines for DBCP	n/a	n/a						
708		1910.1044 App C - Medical surveillance guidelines for DBCP	n/a	n/a						
709		1910.1045 - Acrylonitrile.	n/a	n/a						
710		1910.1045 App A - Substance safety data sheet for acrylonitrile	n/a	n/a						
711		1910.1045 App B - Substance technical guidelines for acrylonitrile	n/a	n/a						
712										

Appendix C - Unfiltered  
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	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
713		1910.1045 App C - Medical surveillance guidelines for acrylonitrile	n/a	n/a						
714		1910.1045 App D - Sampling and analytical methods for acrylonitrile	n/a	n/a						
715		1910.1047 - Ethylene oxide.	n/a	n/a						
716		1910.1047 App A - Substance safety data sheet for ethylene oxide (non-mandatory)	n/a	n/a						
717		1910.1047 App B - Substance technical guidelines for ethylene oxide (Non-mandatory)	n/a	n/a						
718		1910.1047 App C - Medical surveillance guidelines for ethylene oxide (Non-mandatory)	n/a	n/a						
719		1910.1047 App D - Sampling and analytical methods for ethylene oxide (Non-mandatory)	n/a	n/a						
720		1910.1048 - Formaldehyde.	n/a	n/a						
721		1910.1048 App A - Substance technical guidelines for formalin	n/a	n/a						
722		1910.1048 App B - Sampling strategy and analytical methods for formaldehyde	n/a	n/a						
723		1910.1048 App C - Medical surveillance - Formaldehyde	n/a	n/a						
724		1910.1048 App D - Nonmandatory medical disease questionnaire	n/a	n/a						
725		1910.1048 App E - Qualitative and quantitative fit testing procedures	n/a	n/a						
726		1910.1050 - Methylenedianiline	n/a	n/a						
727		1910.1050 App A - Substance Data Sheet, for 4,4'-Methylenedianiline	n/a	n/a						
728		1910.1050 App B - Substance Technical Guidelines, MDA	n/a	n/a						
729		1910.1050 App C - Medical Surveillance Guidelines for MDA	n/a	n/a						
730		1910.1050 App D - Sampling and Analytical Methods for MDA Monitoring and Measurement Procedures	n/a	n/a						
731		1910.1050 App E - Qualitative and Quantitative Fit Testing Procedures	n/a	n/a						
732		1910.1051 - 1,3-Butadiene.	n/a	n/a						
733		1910.1051 App A - Substance Safety Data Sheet For 1,3-Butadiene (Non-Mandatory)	n/a	n/a						
734		1910.1051 App B - Substance Technical Guidelines for 1,3-Butadiene (Non-Mandatory)	n/a	n/a						
735		1910.1051 App C - Medical Screening and Surveillance for 1,3-Butadiene (Non-Mandatory)	n/a	n/a						
736		1910.1051 App D - Sampling and Analytical Method for 1,3-Butadiene (Non-Mandatory)	n/a	n/a						
737		1910.1051 App E - Respirator Fit Testing Procedures (Mandatory)	n/a	n/a						
738		1910.1051 App F - Medical Questionnaires, (Non-mandatory)	n/a	n/a						
739		1910.1052 - Methylene Chloride.	n/a	n/a						
740		1910.1052 App A - Substance Safety Data Sheet and Technical Guidelines for Methylene Chloride.	n/a	n/a						
741		1910.1052 App B - Medical Surveillance for Methylene Chloride.	n/a	n/a						
742		1910.1052 App C - Questions and Answers - Methylene Chloride Control in Furniture Stripping.	n/a	n/a						
743		1910.1053 - Respirable crystalline silica.	<b>1910.1053(a)(1)</b> This section applies to all occupational exposures to respirable crystalline silica, except <b>1910.1053(a)(1)(i)</b> Construction work as defined in 29 CFR 1910.12(b) (occupational exposures to respirable crystalline silica in construction work are covered under 29 CFR 1926.1153) <b>1910.1053(f) Methods of compliance . - 1910.1053(f)(1) Engineering and work practice controls .</b> The employer shall use engineering and work practice controls to reduce and maintain employee exposure to respirable crystalline silica to or below the PEL, unless the employer can demonstrate that such controls are not feasible. Wherever such feasible engineering and work practice controls are not sufficient to reduce employee exposure to or below the PEL, the employer shall nonetheless use them to reduce employee exposure to the lowest feasible level and shall supplement them with the use of respiratory protection that complies with the requirements of paragraph (g) of this section <b>1910.1053(f)(2) Written exposure control plan . 1910.1053(f)(2)(i)</b> The employer shall establish and implement a written exposure control plan that contains at least the following elements: <b>1910.1053(f)(2)(i)(A)</b> A description of the tasks in the workplace that involve exposure to respirable crystalline silica <b>1910.1053(f)(2)(i)(B)</b> A description of the engineering controls, work practices, and respiratory protection used to limit employee exposure to respirable crystalline silica for each task; and <b>1910.1053(f)(2)(i)(C)</b> A description of the housekeeping measures used to limit employee exposure to respirable crystalline silica <b>1910.1053(f)(2)(ii)</b> The employer shall review and evaluate the effectiveness of the written exposure control plan at least annually and update it as necessary. <b>1910.1053(f)(2)(iii)</b> The employer shall make the written exposure control plan readily available for examination and copying, upon request, to each employee covered by this section, their designated representatives, the Assistant Secretary and the Director.	n/a						
744		1910.1053 App A - Methods of Sample Analysis.	Appendix A to § 1910.1053-Methods of Sample Analysis	n/a						
745		1910.1053 App B - Medical Surveillance Guidelines	Appendix B to § 1910.1053-Medical Surveillance Guidelines	n/a						



## Appendix C - Unfiltered Crosswalk of OSHA Obligation Gaps

		A	B	D		E	F	G	H	I	J	K						
1	Occupational Safety & Health											Consolidated Deficiency Groupings						
	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements				Requirement Met by HMC?	Comments				1	2	3	4	5		
		1910.1096 - Ionizing radiation.	<b>1910.1096(a)(1) <i>Radiation</i></b> includes alpha rays, beta rays, gamma rays, X-rays, neutrons, high-speed electrons, high-speed protons, and other atomic particles; but such term does not include sound or radio waves, or visible light, or infrared or ultraviolet light. <b>1910.1096(a)(2) <i>Radioactive material</i></b> means any material which emits, by spontaneous nuclear disintegration, corpuscular or electromagnetic emanation. <b>1910.1096(b)(2)</b> (i) During any calendar quarter the dose to the whole body shall not exceed 3 rems; and (ii) The dose to the whole body, when added to the accumulated occupational dose to the whole body, shall not exceed 5 (N-18) rems, where "N" equals the individual's age in years at his last birthday; and (iii) The employer maintains adequate past and current exposure records which show that the addition of such a dose will not cause the individual to exceed the amount authorized in this subparagraph. As used in this subparagraph <i>Dose to the whole body</i> shall be deemed to include any dose to the whole body, gonad, active bloodforming organs, head and trunk, or lens of the eye. <b>1910.1096(b)(3)</b> No employer shall permit any employee who is under 18 years of age to receive in any period of one calendar quarter a dose in excess of 10 percent of the limits specified in Table G-18. <b>1910.1096(b)(4) <i>Calendar quarter</i></b> means any 3-month period determined as follows: <b>1910.1096(b)(4)(i)</b> The first period of any year may begin on any date in January. <i>Provided</i> , That the second, third, and fourth periods accordingly begin on the same date in April, July, and October, respectively, and that the fourth period extends into January of the succeeding year, if necessary to complete a 3-month quarter. During the first year of use of this method of determination, the first period for that year shall also include any additional days in January preceding the starting date for the first period; and <b>1910.1096(b)(4)(ii)</b> The first period in a calendar year of 13 complete, consecutive calendar weeks; the second period in a calendar year of 13 complete, consecutive weeks; the third period in a calendar year of 13 complete, consecutive calendar weeks; the fourth period in a calendar year of 13 complete, consecutive calendar weeks. If at the end of a calendar year there are any days not falling within a complete calendar week of that year, such days shall be included within the last complete calendar week of that year. If at the beginning of any calendar year there are days not falling within a complete calendar week of that year, such days shall be included within the last complete calendar week of the previous year. <b>1910.1096(b)(4)(iii)</b> The four periods in a calendar year may consist of the first 14 complete, consecutive calendar weeks; the next 12 complete, consecutive calendar weeks, the next 14 complete, consecutive calendar weeks, and the last 12 complete, consecutive calendar weeks. If at the end of a calendar year there are any days not falling within a complete calendar week of that year, such days shall be included (for purposes of this section) within the last complete calendar week of the year. If at the beginning of any calendar year there are days not falling within a complete calendar week of that year, such days shall be included (for purposes of this section) within the last complete week of the previous year. <b>1910.1096(c) <i>Exposure to airborne radioactive material</i></b> . <b>1910.1096(c)(1)</b> No employer shall possess, use or transport radioactive material in such a manner as to cause any employee, within a restricted area, to be exposed to airborne radioactive material in an average concentration in excess of the limits specified in Table 1 of appendix B to 10 CFR part 20. The limits given in Table 1 are for exposure to the concentrations specified for 40 hours in any workweek of 7 consecutive days. In any such period where the number of hours of exposure is less than 40, the limits specified in the table may be increased proportionately. In any such period where the number of hours of exposure is greater than 40, the limits specified in the table shall be decreased proportionately. <b>1910.1096(c)(2)</b> No employer shall possess, use, or transfer radioactive material in such a manner as to cause any individual within a restricted area, who is under 18 years of age, to be exposed to airborne radioactive material in an average concentration in excess of the limits specified in Table II of appendix B to 10 CFR part 20. For purposes of this paragraph, concentrations may be averaged over periods not greater than 1 week. <b>1910.1096(c)(3) <i>Exposed</i></b> as used in this paragraph means that the individual is present in an airborne concentration. No allowance shall be made for the use of protective clothing or equipment, or particle size. <b>1910.1096(d) <i>Precautionary procedures and personal monitoring</i></b> . <b>1910.1096(d)(1)</b> Every employer shall make such surveys as may be necessary for him to comply with the provisions in this section. <b>1910.1096(d)(2)</b> Every employer shall supply appropriate personnel monitoring equipment, such as film badges, pocket chambers, pocket dosimeters, or film rings, and shall require the use of such equipment. <b>1910.1096(d)(2)(i)</b> Each employee who enters a restricted area under such circumstances that he receives, or is likely to receive, a dose in any calendar quarter in excess of 25 percent of the applicable value specified in paragraph (b)(1) of this section; and <b>1910.1096(d)(2)(ii)</b> Each employee under 18 years of age who enters a restricted area under such circumstances that he receives, or is likely to receive, a dose in any calendar quarter in excess of 5 percent of the applicable value specified in paragraph (b)(1) of this section; and <b>1910.1096(d)(3)</b> As used in this section: <b>1910.1096(d)(3)(i) <i>Personnel monitoring equipment</i></b> means devices designed to be worn or carried by an individual for the purpose of measuring the dose received (e.g., film badges, pocket chambers, pocket dosimeters, film rings, etc.) <b>1910.1096(d)(3)(ii) <i>Radiation area</i></b> means any area, accessible to personnel, in which there exists radiation at such levels that a major portion of the body could receive in any 1 hour a dose in excess of 5 millirem, or in any 5 consecutive days a dose in excess of 100 millirem; and <b>1910.1096(d)(3)(iii) <i>High radiation area</i></b> means any area, accessible to personnel, in which there exists radiation at such levels that a major portion of the body could receive in any one hour a dose in excess of 100 millirem. <b>1910.1096(e) <i>Caution signs, labels, and signals</i></b> - <b>1910.1096(e)(1) <i>General</i></b> . <b>1910.1096(e)(1)(i)</b> Symbols prescribed by this paragraph shall use the conventional radiation caution colors (magenta or purple on yellow background). The symbol prescribed by this paragraph is the conventional three-bladed design. <b>1910.1096(e)(2) <i>Radiation area</i></b> . Each radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol described in subparagraph (1) of this paragraph and the words: <b>1910.1096(e)(3) <i>High radiation area</i></b> . <b>1910.1096(e)(3)(i)</b> Each high radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words:															
746							Yes											
		1910.1200 - Hazard Communication.	<b>1910.1200(a)(1)</b> The purpose of this section is to ensure that the hazards of all chemicals produced or imported are classified, and that information concerning the classified hazards is transmitted to employers and employees. The requirements of this section are intended to be consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Revision 3. The transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, safety data sheets and employee training. <b>1910.1200(a)(2)</b> This occupational safety and health standard is intended to address comprehensively the issue of classifying the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, and to preempt any legislative or regulatory enactments of a state, or political subdivision of a state, pertaining to this subject. Classifying the potential hazards of chemicals and communicating information concerning hazards and appropriate protective measures to employees, may include, for example, but is not limited to, provisions for: developing and maintaining a written hazard communication program for the workplace, including lists of hazardous chemicals present; labeling of containers of chemicals in the workplace, as well as of containers of chemicals being shipped to other workplaces; preparation and distribution of safety data sheets to employees and downstream employers; and development and implementation of employee training programs regarding hazards of chemicals and protective measures. Under section 18 of the Act, no state or political subdivision of a state may adopt or enforce any requirement relating to the issue addressed by this Federal standard, except pursuant to a Federally-approved state plan. 1910.1200(e) Written hazard communication program. 1910.1200(e)(1) Employers shall develop, implement, and maintain at each workplace, a written hazard communication program which at least describes how the criteria specified in paragraphs (f), (g), and (h) of this section for labels and other forms of warning, safety data sheets, and employee information and training will be met, and which also includes the following: 1910.1200(e)(1)(i) A list of the hazardous chemicals known to be present using a product identifier that is referenced on the appropriate safety data sheet (the list may be compiled for the workplace as a whole or for individual work areas); and, 1910.1200(e)(1)(ii) The methods the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels), and the hazards associated with chemicals contained in unlabeled pipes in their work areas.				Partial	Policies discuss hazard communication and hazardous material exposure prevention, however policy is too brief/high-level and is silent on some individual provisions of the regulation including a written training program documentation and recordkeeping.				X	X					
747																		
748		1910.1200 App A - Health Hazard Criteria (Mandatory)					Yes											
749		1910.1200 App B - Physical Criteria (Mandatory)					Yes											
750		1910.1200 App C - Allocation Of Label Elements (Mandatory)					Yes											
751		1910.1200 App D - Safety Data Sheets (Mandatory)					Yes											
752		1910.1200 App E - Definition of "Trade Secret" (Mandatory)					n/a											
753		1910.1200 App F - Guidance for Hazard Classifications Re: Carcinogenicity (Non-Mandatory)					n/a											
		1910.1201 - Retention of DOT markings, placards and labels.	<b>1910.1201(a)</b> Any employer who receives a package of hazardous material which is required to be marked, labeled or placarded in accordance with the U. S. Department of Transportation's Hazardous Materials Regulations (49 CFR Parts 171 through 180) shall retain those markings, labels and placards on the package until the packaging is sufficiently cleaned of residue and purged of vapors to remove any potential hazards. <b>1910.1201(b)</b> Any employer who receives a freight container, rail freight car, motor vehicle, or transport vehicle that is required to be marked or placarded in accordance with the Hazardous Materials Regulations shall retain those markings and placards on the freight container, rail freight car, motor vehicle or transport vehicle until the hazardous materials which require the marking or placarding are sufficiently removed to prevent any potential hazards. <b>1910.1201(c)</b> Markings, placards and labels shall be maintained in a manner that ensures that they are readily visible. <b>1910.1201(d)</b> For non-bulk packages which will not be reshipped, the provisions of this section are met if a label or other acceptable marking is affixed in accordance with the Hazard Communication Standard (29 CFR 1910.1200). <b>1910.1201(e)</b> For the purposes of this section, the term "hazardous material" and any other terms not defined in this section have the same definition as in the Hazardous Materials Regulations (49 CFR Parts 171 through 180).				No	Policies discuss hazard communication and hazardous material exposure prevention, however policy is too brief/high-level and is silent on some individual provisions of the regulation including specific requirements for retention of DOT marking, placards, and labels.				X	X					
754																		
755		1+737:753910.1450 - Occupational exposure to hazardous chemicals in laboratories.	n/a				n/a											
		1910.1450 App A - National Research Council Recommendations Concerning Chemical Hygiene in Laboratories (Non-Mandatory)	n/a				n/a											
756																		
757		1910.1450 App B - References (Non-Mandatory)	n/a				n/a											
		1926 Subpart Z - Toxic and Hazardous Substances					n/a											
758																		
759		1926.1100 - [Reserved]	n/a				n/a											
		1926.1101 - Asbestos	<i>Scope and application.</i> This section regulates asbestos exposure in all work as defined in 29 CFR 1910.12(b), including but not limited to the following: <b>1926.1101(a)(1)</b> Demolition or salvage of structures where asbestos is present; <b>1926.1101(a)(2)</b> Removal or encapsulation of materials containing asbestos; <b>1926.1101(a)(3)</b> Construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof, that contain asbestos; <b>1926.1101(a)(4)</b> Installation of products containing asbestos; <b>1926.1101(a)(5)</b> Asbestos spill/emergency cleanup; and <b>1926.1101(a)(6)</b> Transportation, disposal, storage, containment of and housekeeping activities involving asbestos or products containing asbestos, on the site or location at which construction activities are performed; <b>1926.1101(a)(7)</b> Coverage under this standard shall be based on the nature of the work operation involving asbestos exposure. <b>1926.1101(a)(8)</b> This section does not apply to asbestos-containing asphalt roof coatings, cements and mastics.				n/a											
760																		
761		1926.1101 App A - OSHA Reference Method - Mandatory					n/a											
762		1926.1101 App B - Sampling and Analysis - Non-mandatory					n/a											
763		1926.1101 App C - Qualitative and quantitative fit testing procedures - Mandatory					n/a											
764		1926.1101 App D - Medical questionnaires; mandatory					n/a											

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1			Occupational Safety & Health							
	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
765		1926.1101 App E - Interpretation and classification of chest roentgenograms - mandatory		n/a						
766		1926.1101 App F - Work practices and engineering controls for Class I Asbestos Operations - non-mandatory		n/a						
767		1926.1101 App G - [Reserved]	n/a	n/a						
768		1926.1101 App H - Substance Technical Information for Asbestos - Non-Mandatory		n/a						
769		1926.1101 App I - Medical surveillance guidelines for asbestos, non-mandatory		n/a						
770		1926.1101 App J - Smoking cessation program information for asbestos, non-mandatory		n/a						
771		1926.1101 App K - Polarized Light Microscopy of Asbestos - Non-Mandatory		n/a						
772		1926.1102 - Coal tar pitch volatiles; interpretation of term.	n/a	n/a						
773		1926.1103 - 13 Carcinogens (4-Nitrobiphenyl, etc.).	n/a	n/a						
774		1926.1104 - alpha-Naphthylamine.	n/a	n/a						
775		1926.1105 - [Reserved]	n/a	n/a						
776		1926.1106 - Methyl chloromethyl ether.	n/a	n/a						
777		1926.1107 - 3,3'-Dichlorobenzidine (and its salts).	n/a	n/a						
778		1926.1108 - bis-Chloromethyl ether.	n/a	n/a						
779		1926.1109 - beta-Naphthylamine.	n/a	n/a						
780		1926.1110 - Benzidine.	n/a	n/a						
781		1926.1111 - 4-Aminodiphenyl.	n/a	n/a						
782		1926.1112 - Ethyleneimine.	n/a	n/a						
783		1926.1113 - beta-Propiolactone.	n/a	n/a						
784		1926.1114 - 2-Acetylaminofluorene.	n/a	n/a						
785		1926.1115 - 4-Dimethylaminoazobenzene.	n/a	n/a						
786		1926.1116 - N-Nitrosodimethylamine.	n/a	n/a						
787		1926.1117 - Vinyl chloride.	n/a	n/a						
788		1926.1118 - Inorganic arsenic.	Note: The requirements applicable to construction work under this section are identical to those set forth at 1910.1018 of this chapter.	n/a						
789		1926.1124 - Beryllium.	<b>1926.1124(a)(1)</b> This standard applies to occupational exposure to beryllium in all forms, compounds, and mixtures in construction, except those articles and materials exempted by paragraphs (a)(2) and (a)(3) of this standard.	n/a						
790		1926.1126 - Chromium (VI)	<b>1926.1126(a)(1)</b> This standard applies to occupational exposures to chromium (VI) in all forms and compounds in construction, except <b>1926.1126(a)(2)</b> Exposures that occur in the application of pesticides regulated by the Environmental Protection Agency or another Federal government agency (e.g., the treatment of wood with preservatives) <b>1926.1126(a)(3)</b> Exposures to portland cement; or <b>1926.1126(a)(4)</b> Where the employer has objective data demonstrating that a material containing chromium or a specific process, operation, or activity involving chromium cannot release dusts, fumes, or mists of chromium (VI) in concentrations at or above 0.5 µg/m³ as an 8-hour time-weighted average (TWA) under any expected conditions of use.	n/a						
791		1926.1127 - Cadmium	<b>1926.1127(a)</b> Scope. This standard applies to all occupational exposures to cadmium and cadmium compounds, in all forms, in all construction work where an employee may potentially be exposed to cadmium. Construction work is defined as work involving construction, alteration and/or repair, including but not limited to the following: <b>1926.1127(a)(1)</b> Wrecking, demolition or salvage of structures where cadmium or materials containing cadmium are present <b>1926.1127(a)(2)</b> Use of cadmium containing-paints and cutting, brazing, burning, grinding or welding on surfaces that were painted with cadmium-containing paints <b>1926.1127(a)(3)</b> Construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof, that contain cadmium, or materials containing cadmium <b>1926.1127(a)(4)</b> Cadmium welding; cutting and welding cadmium-plated steel; brazing or welding with cadmium alloys <b>1926.1127(a)(5)</b> Installation of products containing cadmium <b>1926.1127(a)(6)</b> Electrical grounding with cadmium welding, or electrical work using cadmium-coated conduit <b>1926.1127(a)(7)</b> Maintaining or retrofitting cadmium-coated equipment; <b>1926.1127(a)(8)</b> Cadmium contamination/emergency cleanup; and <b>1926.1127(a)(9)</b> Transportation, disposal, storage, or containment of cadmium or materials containing cadmium on the site or location at which construction activities are performed.	n/a						
792		1926.1127 App A - Substance Safety Data Sheet - Cadmium		n/a						
793		1926.1127 App B - Substance Technical Guidelines for Cadmium		n/a						
794		1926.1127 App C - Qualitative and Quantitative Fit Testing Procedures		n/a						
795		1926.1127 App D - Occupational Health History Interview With Reference to Cadmium Exposure		n/a						
796		1926.1127 App E - Cadmium in Workplace Atmospheres		n/a						
797		1926.1127 App F - Nonmandatory Protocol for Biological Monitoring		n/a						
798		1926.1128 - Benzene.	n/a	n/a						
799		1926.1129 - Coke oven emissions.	n/a	n/a						
800		1926.1144 - 1,2-dibromo-3-chloropropane.	n/a	n/a						
801		1926.1145 - Acrylonitrile.	n/a	n/a						
802		1926.1147 - Ethylene oxide	n/a	n/a						
803		1926.1148 - Formaldehyde	n/a	n/a						
804		1926.1152 - Methylene Chloride.	n/a	n/a						
805		1926.1153 - Respirable crystalline silica.	<b>1926.1153(a)</b> <i>Scope and application</i> . This section applies to all occupational exposures to respirable crystalline silica in construction work, except where employee exposure will remain below 25 micrograms per cubic meter of air (25 µg/m³) as an 8-hour time-weighted average (TWA) under any foreseeable conditions.	n/a						
806		1926.1153 App A - Methods of Sample Analysis	n/a	n/a						
807		1926.1153 App B - Medical Surveillance Guidelines	n/a	n/a						
808		1926 Subpart Z App A - Designations for General Industry Standards Incorporated Into Body of Construction Standards	n/a	n/a						
809	1926 Subpart N - Helicopters, Hoists, Elevators, and Conveyors									
810		1926.550 - [Reserved], Redesignated 1926.1501 by new standard issued August 9, 2010, in the Federal Register, 75 FR 48134	n/a	n/a						
811		1926.551 - Helicopters.	n/a	n/a						

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
812		1926.552 - Material hoists, personnel hoists, and elevators.	1926.552(a)(1) The employer shall comply with the manufacturer's specifications and limitations applicable to the operation of all hoists and elevators. Where manufacturer's specifications are not available, the limitations assigned to the equipment shall be based on the determinations of a professional engineer competent in the field.	n/a						
813		1926.553 - Base-mounted drum hoists.	1926.553(a) General requirements. 1926.553(a)(1) Exposed moving parts such as gears, projecting screws, setscrews, chain, cables, chain sprockets, and reciprocating or rotating parts, which constitute a hazard, shall be guarded.1926.553(a)(2) All controls used during the normal operation cycle shall be located within easy reach of the operator's station.1926.553(a)(3) Electric motor operated hoists shall be provided with1926.553(a)(3)(i) A device to disconnect all motors from the line upon power failure and not permit any motor to be restarted until the controller handle is brought to the "off" position.1926.553(a)(3)(iii) A means whereby remotely operated hoists stop when any control is ineffective.1926.553(a)(4) All base-mounted drum hoists in use shall meet the applicable requirements for design, construction, installation, testing, inspection, maintenance, and operations, as prescribed by the manufacturer.1926.553(b) This section does not apply to base-mounted drum hoists used in conjunction with derricks. Base-mounted drum hoists used in conjunction with derricks must conform to § 1926.1436(e).	n/a						
814		1926.554 - Overhead hoists.	1926.554(a) General requirements. 1926.554(a)(1) The safe working load of the overhead hoist, as determined by the manufacturer, shall be indicated on the hoist, and this safe working load shall not be exceed.1926.554(a)(2) The supporting structure to which the hoist is attached shall have a safe working load equal to that of the hoist.1926.554(a)(3) The support shall be arranged so as to provide for free movement of the hoist and shall not restrict the hoist from lining itself up with the load.1926.554(a)(4) The hoist shall be installed only in locations that will permit the operator to stand clear of the load at all times.1926.554(a)(5) Air hoists shall be connected to an air supply of sufficient capacity and pressure to safely operate the hoist. All air hoses supplying air shall be positively connected to prevent their becoming disconnected during use.1926.554(a)(6) All overhead hoists in use shall meet the applicable requirements for construction, design, installation, testing, inspection, maintenance, and operation, as prescribed by the manufacturer.	n/a						
815		1926.555 - Conveyors.	1926.555(a) General requirements. 1926.555(a)(1) Means for stopping the motor or engine shall be provided at the operator's station. Conveyor systems shall be equipped with an audible warning signal to be sounded immediately before starting up the conveyor. 1926.555(a)(2) If the operator's station is at a remote point, similar provisions for stopping the motor or engine shall be provided at the motor or engine location. 1926.555(a)(3) Emergency stop switches shall be arranged so that the conveyor cannot be started again until the actuating stop switch has been reset to running or "on" position. 1926.555(a)(4) Screw conveyors shall be guarded to prevent employee contact with turning flights. 1926.555(a)(5) Where a conveyor passes over work areas, aisles, or thoroughfares, suitable guards shall be provided to protect employees required to work below the conveyors. 1926.555(a)(6) All crossovers, aisles, and passageways shall be conspicuously marked by suitable signs, as required by Subpart G of this part. 1926.555(a)(7) Conveyors shall be locked out or otherwise rendered inoperable, and tagged out with a "Do Not Operate" tag during repairs and when operation is hazardous to employees performing maintenance work. 1926.555(a)(8) All conveyors in use shall meet the applicable requirements for design, construction, inspection, testing, maintenance, and operation, as prescribed in the ANSI B20.1-1957, Safety Code for Conveyors, Cableways, and Related Equipment.	Partial	Policy requires machine guarding to be in place, however the policy is too brief/high-level and is silent on many individual provisions of the regulation including specific requirements including means for stopping conveyor in an emergency.	X				
816		1926.556 - Aerial lifts.	removed	n/a						
817	1926 Subpart O - Motor Vehicles, Mechanized Equipment, and Marine Operations									
818		1926.600 - Equipment.	1926.600(a) General Requirements . 1926.600(a)(1) All equipment left unattended at night, adjacent to a highway in normal use, or adjacent to construction areas where work is in progress, shall have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, to identify the location of the equipment. 1926.600(a)(2) A safety tire rack, cage, or equivalent protection shall be provided and used when inflating, mounting, or dismounting tires installed on split rims, or rims equipped with locking rings or similar devices. 1926.600(a)(3)(i) Heavy machinery, equipment, or parts thereof, which are suspended or held aloft by use of slings, hoists, or jacks shall be substantially blocked or cribbed to prevent falling or shifting before employees are permitted to work under or between them. Bulldozer and scraper blades, end-loader buckets, dump bodies, and similar equipment, shall be either fully lowered or blocked when being repaired or when not in use. All controls shall be in a neutral position, with the motors stopped and brakes set, unless work being performed requires otherwise. 1926.600(a)(3)(ii) Whenever the equipment is parked, the parking brake shall be set. Equipment parked on inclines shall have the wheels chocked and the parking brake set. 1926.600(a)(4) The use, care and charging of all batteries shall conform to the requirements of Subpart K of this part. 1926.600(a)(5) All cab glass shall be safety glass, or equivalent, that introduces no visible distortion affecting the safe operation of any machine covered by this subpart. 1926.600(a)(6) All equipment covered by this subpart shall comply with the following requirements when working or being moved in the vicinity of power lines or energized transmitters, except where electrical distribution and transmission lines have been deenergized and visibly grounded at point of work or where insulating barriers, not a part of or an attachment to the equipment or machinery, have been erected to prevent physical contact with the lines: 1926.600(a)(6)(i) For lines rated 50 kV or below, minimum clearance between the lines and any part of the crane or load shall be 10 feet; 1926.600(a)(6)(ii) For lines rated over 50 kV, minimum clearance between the lines and any part of the crane or load shall be 10 feet plus 0.4 inch for each 1 kV over 50 kV, or twice the length of the line insulator, but never less than 10 feet; 1926.600(a)(6)(iii) In transit with no load and boom lowered, the equipment clearance shall be a minimum of 4 feet for voltages less than 50 kV, and 10 feet for voltages over 50 kV, up to and including 345 kV, and 16 feet for voltages up to and including 750 kV; 1926.600(a)(6)(iv) A person shall be designated to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means; 1926.600(a)(6)(v) Cage-type boom guards, insulating links, or proximity warning devices may be used on cranes, but the use of such devices shall not alter the requirements of any other regulation of this part even if such device is required by law or regulation; 1926.600(a)(6)(vi) Any overhead wire shall be considered to be an energized line unless and until the person owning such line or the electrical utility authorities indicate that it is not an energized line and it has been visibly grounded; 1926.600(a)(6)(vii) Prior to work near transmitter towers where an electrical charge can be induced in the equipment or materials being handled, the transmitter shall be de-energized or tests shall be made to determine if electrical charge is induced on the crane. The following precautions shall be taken when necessary to dissipate induced voltages: 1926.600(a)(6)(vii)(A) The equipment shall be provided with an electrical ground directly to the upper rotating structure supporting the boom; and 1926.600(a)(6)(vii)(B) Ground jumper cables shall be attached to materials being handled by boom equipment when electrical charge is induced while working near energized transmitters. Crews shall be provided with nonconductive poles having large alligator clips or other similar protection to attach the ground cable to the load. 1926.600(a)(6)(vii)(C) Combustible and flammable materials shall be removed from the immediate area prior to operations. 1926.600(a)(7) Rolling railroad cars . Derrail and/or bumper blocks shall be provided on spur railroad tracks where a rolling car could contact other cars being worked, enter a building, work or traffic area.	Partial	Policies reference mobile equipment use policies, however the policies are too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				
819		1926.601 - Motor vehicles.	1926.601(a) Coverage. Motor vehicles as covered by this part are those vehicles that operate within an off-highway jobsite, not open to public traffic. The requirements of this section do not apply to equipment for which rules are prescribed in 1926.602. 1926.601(b) General requirements. 1926.601(b)(1) All vehicles shall have a service brake system, an emergency brake system, and a parking brake system. These systems may use common components, and shall be maintained in operable condition. 1926.601(b)(2)(i) Whenever visibility conditions warrant additional light, all vehicles, or combinations of vehicles, in use shall be equipped with at least two headlights and two taillights in operable condition. 1926.601(b)(2)(ii) All vehicles, or combination of vehicles, shall have brake lights in operable condition regardless of light conditions. 1926.601(b)(3) All vehicles shall be equipped with an adequate audible warning device at the operator's station and in an operable condition. 1926.601(b)(4) No employer shall use any motor vehicle equipment having an obstructed view to the rear unless: 1926.601(b)(4)(i) The vehicle has a reverse signal alarm audible above the surrounding noise level or: 1926.601(b)(4)(ii) The vehicle is backed up only when an observer signals that it is safe to do so. 1926.601(b)(5) All vehicles with cabs shall be equipped with windshields and powered wipers. Cracked and broken glass shall be replaced. Vehicles operating in areas or under conditions that cause fogging or frosting of the windshields shall be equipped with operable defogging or defrosting devices. 1926.601(b)(6) All haulage vehicles, whose pay load is loaded by means of cranes, power shovels, loaders, or similar equipment, shall have a cab shield and/or canopy adequate to protect the operator from shifting or falling materials. 1926.601(b)(7) Tools and material shall be secured to prevent movement when transported in the same compartment with employees. 1926.601(b)(8) Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried. 1926.601(b)(9) Seat belts and anchorages meeting the requirements of 49 CFR Part 571 (Department of Transportation, Federal Motor Vehicle Safety Standards) shall be installed in all motor vehicles. 1926.601(b)(10) Trucks with dump bodies shall be equipped with positive means of support, permanently attached, and capable of being locked in position to prevent accidental lowering of the body while maintenance or inspection work is being done. 1926.601(b)(11) Operating levers controlling hoisting or dumping devices on haulage bodies shall be equipped with a latch or other device which will prevent accidental starting or tripping of the mechanism. 1926.601(b)(12) Trip handles for tailgates of dump trucks shall be so arranged that, in dumping, the operator will be in the clear. 1926.601(b)(13)(i) All rubber-tired motor vehicle equipment manufactured on or after May 1, 1972, shall be equipped with fenders. All rubber-tired motor vehicle equipment manufactured before May 1, 1972, shall be equipped with fenders not later than May 1, 1973. 1926.601(b)(13)(ii) Mud flaps may be used in lieu of fenders whenever motor vehicle equipment is not designed for fenders. 1926.601(b)(14) All vehicles in use shall be checked at the beginning of each shift to assure that the following parts, equipment, and accessories are in safe operating condition and free of apparent damage that could cause failure while in use: service brakes, including trailer brake connections; parking system (hand brake); emergency stopping system (brakes); tires; horn; steering mechanism; coupling devices; seat belts; operating controls; and safety devices. All defects shall be corrected before the vehicle is placed in service. These requirements also apply to equipment such as lights, reflectors, windshield wipers, defrosters, fire extinguishers, etc., where such equipment is necessary.	n/a						
820		1926.602 - Material handling equipment.	1926.602(a) Earthmoving equipment; General. 1926.602(a)(1) These rules apply to the following types of earthmoving equipment: scrapers, loaders, crawler or wheel tractors, bulldozers, off-highway trucks, graders, agricultural and industrial tractors, and similar equipment. The promulgation of specific rules for compactors and rubber-tired "skid-steer" equipment is reserved pending consideration of standards currently being developed. 1926.602(a)(2) Seat belts. 1926.602(a)(2)(i) Seat belts shall be provided on all equipment covered by this section and shall meet the requirements of the Society of Automotive Engineers, J386-1969, Seat Belts for Construction Equipment. Seat belts for agricultural and light industrial tractors shall meet the seat belt requirements of Society of Automotive Engineers J333a-1970, Operator Protection for Agricultural and Light Industrial Tractors. 1926.602(a)(2)(ii) Seat belts need not be provided for equipment which is designed only for standup operation. 1926.602(a)(2)(iii) Seat belts need not be provided for equipment which does not have roll-over protective structure (ROPS) or adequate canopy protection. 1926.602(a)(3) Access roadways and grades.1926.602(a)(3)(i) No employer shall move or cause to be moved construction equipment or vehicles upon any access roadway or grade unless the access roadway or grade is constructed and maintained to accommodate safely the movement of the equipment and vehicles involved. 1926.602(a)(3)(ii) Every emergency access ramp and berm used by an employer shall be constructed to restrain and control runaway vehicles. 1926.602(a)(4) Brakes. All earthmoving equipment mentioned in this 1926.602(a) shall have a service braking system capable of stopping and holding the equipment fully loaded, as specified in Society of Automotive Engineers SAE-J237, Loader Dozer-1971, J236, Graders-1971, and J319b, Scrapers-1971. Brake systems for self-propelled rubber-tired off-highway equipment manufactured after January 1, 1972 shall meet the applicable minimum performance criteria set forth in the following Society of Automotive Engineers Recommended Practices:1926.602(a)(5) Fenders. Pneumatic-tired earth-moving haulage equipment (trucks, scrapers, tractors, and trailing units) whose maximum speed exceeds 15 miles per hour, shall be equipped with fenders on all wheels to meet the requirements of Society of Automotive Engineers SAE J321a-1970, Fenders for Pneumatic-Tired Earthmoving Haulage Equipment. An employer may, of course, at any time seek to show under 1926.2, that the uncovered wheels present no hazard to personnel from flying materials. 1926.602(a)(6) Rollover protective structures (ROPS). See Subpart W of this part for requirements for rollover protective structures and overhead protection. 1926.602(a)(7) Rollover protective structures for off-highway trucks. The promulgation of standards for rollover protective structures for off-highway trucks is reserved pending further study and development. 1926.602(a)(8) Specific effective dates-brakes and fenders. 1926.602(a)(8)(i) Equipment mentioned in paragraph (a)(4) and (5) of this section, and manufactured after January 1, 1972, which is used by any employer after that date, shall comply with the applicable rules prescribed therein concerning brakes and fenders. Equipment mentioned in paragraphs (a) (4) and (5) of this section, and manufactured before January 1, 1972, which is used by any employer after that date, shall meet the applicable rules prescribed herein not later than June 30, 1973. It should be noted that, as permitted under 1926.2, employers may request variations from the applicable brakes and fender standards required by this subpart. Employers wishing to seek variations from the applicable brakes and fenders rules may submit any requests for variations after the publication of this document in the Federal Register. Any statements intending to meet the requirements of 1926.2(b)(4), should specify how the variation would protect the safety of the employees by providing for any compensating restrictions on the operation of equipment. 1926.602(a)(8)(ii) Notwithstanding the provisions of paragraphs (a)(5) and (a)(8)(i) of this section, the requirement that fenders be installed on pneumatic-tired earthmoving haulage equipment, is suspended pending reconsideration of the requirement. 1926.602(a)(9) Audible alarms. 1926.602(a)(9)(i) All bidirectional machines, such as rollers, compactors, front-end loaders, bulldozers, and similar equipment, shall be equipped with a horn, distinguishable from the surrounding noise level, which shall be operated as needed when the machine is moving in either direction. The horn shall be maintained in an operative condition. 1926.602(a)(9)(ii) No employer shall permit earthmoving or compacting equipment which has an obstructed view to the rear to be used in reverse gear unless the equipment has in operation a reverse signal alarm distinguishable from the surrounding noise level or an employee signals that it is safe to do so. 1926.602(a)(10) Scissor points. Scissor points on all front-end loaders, which constitute a hazard to the operator during normal operation, shall be guarded. 1926.602(b) Excavating and other equipment. 1926.602(b)(1) Tractors covered in paragraph (a) of this section shall have seat belts as required for the operators when seated in the normal seating arrangement for tractor operation, even though back-hoes, breakers, or other similar attachments are used on these machines for excavating or other work. 1926.602(b)(2) For the purposes of this subpart and of Subpart N of this part, the nomenclatures and descriptions for measurement of dimensions of machinery and attachments shall be as described in Society of Automotive	Partial	Policies reference mobile equipment use policies, however the policies are too brief/high-level and is silent on many individual provisions of the regulation including specific requirements.	X				

Appendix C - Unfiltered  
Crosswalk of OSHA Obligation Gaps

	A	B	D	E	F	G	H	I	J	K
1	Occupational Safety & Health					Consolidated Deficiency Groupings				
	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
821			Engineers 1970 Handbook, pages 1088 through 1103. <b>1926.602(b)(3)</b> The safety requirements, ratios, or limitations applicable to machines or attachment usage covered in Power Crane and Shovel Associations Standards No. 1 and No. 2 of 1968, and No. 3 of 1969, shall be complied with, and shall apply to cranes, machines, and attachments under this part. <b>1926.602(c)</b> Lifting and hauling equipment (other than equipment covered under Subpart N of this part). <b>1926.602(c)(1)</b> Industrial trucks shall meet the requirements of 1926.600 and the following: <b>1926.602(c)(1)(i)</b> Lift trucks, stackers, etc., shall have the rated capacity clearly posted on the vehicle so as to be clearly visible to the operator. When auxiliary removable counterweights are provided by the manufacturer, corresponding alternate rated capacities also shall be clearly shown on the vehicle. These ratings shall not be exceeded. <b>1926.602(c)(1)(ii)</b> No modifications or additions which affect the capacity or safe operation of the equipment shall be made without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly. In no case shall the original safety factor of the equipment be reduced. <b>1926.602(c)(1)(iii)</b> If a load is lifted by two or more trucks working in unison, the proportion of the total load carried by any one truck shall not exceed its capacity. <b>1926.602(c)(1)(iv)</b> Steering or spinner knobs shall not be attached to the steering wheel unless the steering mechanism is of a type that prevents road reactions from causing the steering handwheel to spin. The steering knob shall be mounted within the periphery of the wheel. <b>1926.602(c)(1)(v)</b> All high lift rider industrial trucks shall be equipped with overhead guards which meet the configuration and structural requirements as defined in paragraph 421 of American National Standards Institute B56.1-1969, Safety Standards for Powered Industrial Trucks. <b>1926.602(c)(1)(vi)</b> All industrial trucks in use shall meet the applicable requirements of design, construction, stability, inspection, testing, maintenance, and operation, as defined in American National Standards Institute B56.1-1969, Safety Standards for Powered Industrial Trucks. <b>1926.602(c)(1)(vii)</b> Unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized. <b>1926.602(c)(1)(viii)</b> Whenever a truck is equipped with vertical only, or vertical and horizontal controls elevatable with the lifting carriage or forks for lifting personnel, the following additional precautions shall be taken for the protection of personnel being elevated. <b>1926.602(c)(1)(viii)(A)</b> Use of a safety platform firmly secured to the lifting carriage and/or forks. <b>1926.602(c)(1)(viii)(B)</b> Means shall be provided whereby personnel on the platform can shut off power to the truck. <b>1926.602(c)(1)(viii)(C)</b> Such protection from falling objects as indicated necessary by the operating conditions shall be provided. <b>1926.602(d) Powered industrial truck operator training.</b>							
822										
823		1926.604 - Site clearing.	<b>1926.604(a)</b> General requirements. <b>1926.604(a)(1)</b> Employees engaged in site clearing shall be protected from hazards of irritant and toxic plants and suitably instructed in the first aid treatment available. <b>1926.604(a)(2)</b> All equipment used in site clearing operations shall be equipped with rollover guards meeting the requirements of this subpart. In addition, rider-operated equipment shall be equipped with an overhead and rear canopy guard meeting the following requirements: <b>1926.604(a)(2)(i)</b> The overhead covering on this canopy structure shall be of not less than 1/8-inch steel plate or 1/4-inch woven wire mesh with openings no greater than 1 inch, or equivalent. <b>1926.604(a)(2)(ii)</b> The opening in the rear of the canopy structure shall be covered with not less than 1/4-inch woven wire mesh with openings no greater than 1 inch.	No	No governing policy/SOP found.	X				
824		1926.605 - Marine operations and equipment.	n/a	n/a						
825	1926 Subpart P - Excavations			n/a						
826		1926.651 - Specific Excavation Requirements.	<b>1926.651(a)</b> Surface encumbrances. All surface encumbrances that are located so as to create a hazard to employees shall be removed or supported, as necessary, to safeguard employees. <b>1926.651(b)</b> Underground installations. <b>1926.651(b)(1)</b> The estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installations that reasonably may be expected to be encountered during excavation work, shall be determined prior to opening an excavation. <b>1926.651(b)(2)</b> Utility companies or owners shall be contacted within established or customary local response times, advised of the proposed work, and asked to establish the location of the utility underground installations prior to the start of actual excavation. When utility companies or owners cannot respond to a request to locate underground utility installations within 24 hours (unless a longer period is required by state or local law), or cannot establish the exact location of these installations, the employer may proceed, provided the employer does so with caution, and provided detection equipment or other acceptable means to locate utility installations are used. <b>1926.651(b)(3)</b> When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means. <b>1926.651(b)(4)</b> While the excavation is open, underground installations shall be protected, supported or removed as necessary to safeguard employees. <b>1926.651(c)</b> Access and egress - <b>1926.651(c)(1)</b> Structural ramps. <b>1926.651(c)(1)(i)</b> Structural ramps that are used solely by employees as a means of access or egress from excavations shall be designed by a competent person. Structural ramps used for access or egress of equipment shall be designed by a competent person qualified in structural design, and shall be constructed in accordance with the design. <b>1926.651(c)(1)(ii)</b> Ramps and runways constructed of two or more structural members shall have the structural members connected together to prevent displacement. <b>1926.651(c)(1)(iii)</b> Structural members used for ramps and runways shall be of uniform thickness. <b>1926.651(c)(1)(iv)</b> Cleats or other appropriate means used to connect runway structural members shall be attached to the bottom of the runway or shall be attached in a manner to prevent tripping. <b>1926.651(c)(1)(v)</b> Structural ramps used in lieu of steps shall be provided with cleats or other surface treatments on the top surface to prevent slipping. <b>1926.651(c)(2)</b> Means of egress from trench excavations. A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are 4 feet (1.22 m) or more in depth so as to require no more than 25 feet (7.62 m) of lateral travel for employees. <b>1926.651(d)</b> Exposure to vehicular traffic. Employees exposed to public vehicular traffic shall be provided with, and shall wear, warning vests or other suitable garments marked with or made of reflectorized or high-visibility material. <b>1926.651(e)</b> Exposure to falling loads. No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles are equipped, in accordance with §1926.601(b)(6), to provide adequate protection for the operator during loading and unloading operations. <b>1926.651(f)</b> Warning system for mobile equipment. When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system shall be used such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation. <b>1926.651(g)</b> Hazardous atmospheres - <b>1926.651(g)(1)</b> Testing and controls. In addition to the requirements set forth in subparts D and E of this part (29 CFR 1926.50 - 1926.107) to prevent exposure to harmful levels of atmospheric contaminants and to assure acceptable atmospheric conditions, the following requirements shall apply: <b>1926.651(g)(1)(i)</b> Where oxygen deficiency (atmospheres containing less than 19.5 percent oxygen) or a hazardous atmosphere exists or could reasonably be expected to exist, such as in excavations in landfill areas or excavations in areas where hazardous substances are stored nearby, the atmospheres in the excavation shall be tested before employees enter excavations greater than 4 feet (1.22 m) in depth. <b>1926.651(g)(1)(ii)</b> Adequate precautions shall be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. These precautions include providing proper respiratory protection or ventilation in accordance with subparts D and E of this part respectively. <b>1926.651(g)(1)(iii)</b> Adequate precaution shall be taken such as providing ventilation, to prevent employee exposure to an atmosphere containing a concentration of a flammable gas in excess of 20 percent of the lower flammable limit of the gas. <b>1926.651(g)(1)(iv)</b> When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable levels, testing shall be conducted as often as necessary to ensure that the atmosphere remains safe. <b>1926.651(g)(2)</b> Emergency rescue equipment. <b>1926.651(g)(2)(i)</b> Emergency rescue equipment, such as breathing apparatus, a safety harness and line, or a basket stretcher, shall be readily available where hazardous atmospheric conditions exist or may reasonably be expected to develop during work in an excavation. This equipment shall be attended when in use. <b>1926.651(g)(2)(ii)</b> Employees entering bell-bottom pier holes, or other similar deep and confined footing excavations, shall wear a harness with a life-line securely attached to it. The lifeline shall be separate any line used to handle materials, and shall be individually attended at all times while the employee wearing the lifeline is in the excavation. <b>1926.651(h)</b> Protection from hazards associated with water accumulation. <b>1926.651(h)(1)</b> Employees shall not work in excavations in which there is accumulated water, or in excavations in which water is accumulating, unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation. The precautions necessary to protect employees adequately vary with each situation, but could include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline. <b>1926.651(h)(2)</b> If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operations shall be monitored by a competent person to ensure proper operation. <b>1926.651(h)(3)</b> If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation. Excavations subject to runoff from heavy rains will require an inspection by a competent person and compliance with paragraphs (b)(1) and (h)(2) of this section. <b>1926.651(i)</b> Stability of adjacent structures. <b>1926.651(i)(1)</b> Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning shall be provided to ensure the stability of the structures.	n/a						
827		1926.652 - Requirements for protective systems.	<b>1926.652(a)</b> Protection of employees in excavations. <b>1926.652(a)(1)</b> Each employee in an excavation shall be protected from cave-ins by an adequate protective system designed in accordance with paragraph (b) or (c) of this section except where the excavation is made entirely in stable rock; or <b>1926.652(a)(1)(ii)</b> Excavations are less than 5 feet (1.52m) in depth and examination of the ground by a competent person provides no indication of a potential cave-in. <b>1926.652(a)(2)</b> Protective systems shall have the capacity to resist without failure all loads that are intended or could reasonably be expected to be applied or transmitted to the system. <b>1926.652(b)</b> Design of sloping and benching systems. The slopes and configurations of sloping and benching systems shall be selected and constructed by the employer or his designee and shall be in accordance with the requirements of paragraph (b)(1); or, in the alternative, paragraph (b)(2); or, in the alternative, paragraph (b)(3); or, in the alternative, paragraph (b)(4), as follows: <b>1926.652(b)(1)</b> <b>Option (1)-Allowable configurations and slopes</b> <b>1926.652(b)(1)(i)</b> Excavations shall be sloped at an angle not steeper than one and one-half horizontal to one vertical (34 degrees measured from the horizontal), unless the employer uses one of the other options listed below. <b>1926.652(b)(1)(ii)</b> Slopes specified in paragraph (b)(1)(i) of this section, shall be excavated to form configurations that are in accordance with the slopes shown for Type C soil in appendix B to this subpart. <b>1926.652(b)(2)</b> <b>Option (2)-Determination of slopes and configurations using Appendices A and B</b> . Maximum allowable slopes, and allowable configurations for sloping and benching systems, shall be determined in accordance with the conditions and requirements set forth in appendices A and B to this subpart. <b>1926.652(b)(3)</b> <b>Option (3)-Designs using other tabulated data</b> . <b>1926.652(b)(3)(i)</b> Designs of sloping or benching systems shall be selected from and be in accordance with tabulated data, such as tables and charts. <b>1926.652(b)(3)(ii)</b> The tabulated data shall be in written form and shall include all of the following: <b>1926.652(b)(3)(ii)(A)</b> Identification of the parameters that affect the selection of a sloping or benching system drawn from such data. <b>1926.652(b)(3)(ii)(B)</b> Identification of the limits of use of the data, to include the magnitude and configuration of slopes determined to be safe. <b>1926.652(b)(3)(ii)(C)</b> Explanatory information as may be necessary to aid the user in making a correct selection of a protective system from the data. <b>1926.652(b)(3)(iii)</b> At least one copy of the tabulated data which identifies the registered professional engineer who approved the data, shall be maintained at the jobsite during construction of the protective system. After that time the data may be stored off the jobsite, but a copy of the data shall be made available to the Secretary upon request. <b>1926.652(b)(4)</b> <b>Option (4)-Design by a registered professional engineer</b> . <b>1926.652(b)(4)(i)</b> Sloping and benching systems not utilizing Option (1) or Option (2) or Option (3) under paragraph (b) of this section shall be approved by a registered professional engineer. <b>1926.652(b)(4)(ii)</b> Designs shall be in written form and shall include at least the following: <b>1926.652(b)(4)(ii)(A)</b> The magnitude of the slopes that were determined to be safe for the particular project. <b>1926.652(b)(4)(ii)(B)</b> The configurations that were determined to be safe for the particular project; and <b>1926.652(b)(4)(ii)(C)</b> The identity of the registered professional engineer approving the design. <b>1926.652(b)(4)(iii)</b> At least one copy of the design shall be maintained at the jobsite while the slope is being constructed. After that time the design need not be at the jobsite, but a copy shall be made available to the Secretary upon request. <b>1926.652(c)</b> Design of support systems, shield systems, and other protective systems. Designs of support systems shield systems, and other protective systems shall be selected and constructed by the employer or his designee and shall be in accordance with the requirements of paragraph (c)(1); or, in the alternative, paragraph (c)(2); or, in the alternative, paragraph (c)(3); or, in the alternative, paragraph (c)(4) as follows: <b>1926.652(c)(1)</b> <b>Option (1)-Designs using appendices A, C and D</b> . Designs for timber shoring in trenches shall be determined in accordance with the conditions and requirements set forth in appendices A and C to this subpart. Designs for aluminum hydraulic shoring shall be in accordance with paragraph (c)(2) of this section, but if manufacturer's tabulated data cannot be utilized, designs shall be in accordance with appendix D. <b>1926.652(c)(2)</b> <b>Option (2)-Designs Using Manufacturer's Tabulated Data</b> . <b>1926.652(c)(2)(i)</b> Design of support systems, shield systems, or other protective systems that are drawn from manufacturer's tabulated data shall be in accordance with all specifications, recommendations, and limitations issued or made by the manufacturer. <b>1926.652(c)(2)(ii)</b> Deviation from the specifications, recommendations, and limitations issued or made by the manufacturer shall only be allowed after the manufacturer issues specific written approval. <b>1926.652(c)(2)(iii)</b> Manufacturer's specifications, recommendations, and limitations, and manufacturer's approval to deviate from the specifications, recommendations, and limitations shall be in written form at the jobsite during construction of the protective system. After that time this data may be stored off the jobsite, but a copy shall be made available to the Secretary upon request. <b>1926.652(c)(3)</b> <b>Option (3)-Designs using other tabulated data</b> . <b>1926.652(c)(3)(i)</b> Designs of support systems, shield systems, or other protective systems shall be selected from and be in accordance with tabulated data, such as tables and charts. <b>1926.652(c)(3)(ii)</b> The tabulated data shall be in written form and include all of the following: <b>1926.652(c)(3)(ii)(A)</b> Identification of the parameters that affect the selection of a protective system drawn from such data. <b>1926.652(c)(3)(ii)(B)</b> Identification of the limits of use of the data; <b>1926.652(c)(3)(ii)(C)</b> Explanatory information as may be necessary to aid the user in making a correct selection of a protective system from the data. <b>1926.652(c)(3)(iii)</b> At least one copy of the tabulated data, which identifies the registered professional engineer who approved the data, shall be maintained at the jobsite during construction of the protective system. After that time the data may be stored off the jobsite, but a copy of the data shall be made available to the Secretary upon request. <b>1926.652(c)(4)</b> <b>Option (4)-Design by a registered professional engineer</b> . <b>1926.652(c)(4)(i)</b> Support systems, shield systems, and other protective systems not utilizing Option 1, Option 2 or Option 3, above, shall be approved by a registered professional engineer. <b>1926.652(c)(4)(ii)</b> Designs shall be in written form and shall include the following: <b>1926.652(c)(4)(ii)(A)</b> A plan indicating the sizes, types, and configurations of the materials to be used in the protective system; and <b>1926.652(c)(4)(ii)(B)</b> The identity of the registered professional engineer approving the design. <b>1926.652(c)(4)(iii)</b> At least one copy of the design shall be maintained at the jobsite during construction of the protective system. After that time, the design may be stored off the jobsite, but a copy of the design shall be made available to the Secretary upon request. <b>1926.652(d)</b> <b>Materials and equipment</b> . <b>1926.652(d)(1)</b> Materials and equipment used for protective systems shall be free from damage or defects that might impair their proper function. <b>1926.652(d)(2)</b> Manufactured materials and equipment used for protective systems shall be used and maintained in a manner that is consistent with the recommendations of the manufacturer, and in a manner that will prevent	n/a						



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1	Occupational Safety & Health					Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
		1926 Subpart P App A - Soil Classification	(a) Scope and application - (1) Scope. This appendix describes a method of classifying soil and rock deposits based on site and environmental conditions, and on the structure and composition of the earth deposits. The appendix contains definitions, sets forth requirements, and describes acceptable visual and manual tests for use in classifying soils. (2) Application. This appendix applies when a sloping or benching system is designed in accordance with the requirements set forth in 1926.652(b)(2) as a method of protection for employees from cave-ins. This appendix also applies when timber shoring for excavations is designed as a method of protection from cave-ins in accordance with appendix C to subpart P of part 1926, and when aluminum hydraulic shoring is designed in accordance with appendix D. This Appendix also applies if other protective systems are designed and selected for use from data prepared in accordance with the requirements set forth in 1926.652(c), and the use of the data is predicated on the use of the soil classification system set forth in this appendix. (b) Definitions. The definitions and examples given below are based on, in whole or in part, the following: American Society for Testing Materials (ASTM) Standards D653-85 and D2488; The Unified Soils Classification System; The U.S. Department of Agriculture (USDA) Textural Classification Scheme; and The National Bureau of Standards Report BSS-121. (c) Requirements - (1) Classification of soil and rock deposits. Each soil and rock deposit shall be classified by a competent person as Stable Rock, Type A, Type B, or Type C in accordance with the definitions set forth in paragraph (b) of this appendix. (2) Basis of classification. The classification of the deposits shall be made based on the results of at least one visual and at least one manual analysis. Such analyses shall be conducted by a competent person using tests described in paragraph (d) below, or in other recognized methods of soil classification and testing such as those adopted by the American Society for Testing Materials, or the U.S. Department of Agriculture textural classification system. (3) Visual and manual analyses. The visual and manual analyses, such as those noted as being acceptable in paragraph (d) of this appendix, shall be designed and conducted to provide sufficient quantitative and qualitative information as may be necessary to identify properly the properties, factors, and conditions affecting the classification of the deposits. (4) Layered systems. In a layered system, the system shall be classified in accordance with its weakest layer. However, each layer may be classified individually where a more stable layer lies under a less stable layer. (5) Reclassification. If, after classifying a deposit, the properties, factors, or conditions affecting its classification change in any way, the changes shall be evaluated by a competent person. The deposit shall be reclassified as necessary to reflect the changed circumstances. (d) Acceptable visual and manual tests. - (1) Visual tests. Visual analysis is conducted to determine qualitative information regarding the excavation site in general, the soil adjacent to the excavation, the soil forming the sides of the open excavation, and the soil taken as samples from excavated material. (i) Observe samples of soil that are excavated and soil in the sides of the excavation. Estimate the range of particle sizes and the relative amounts of the particle sizes. Soil that is primarily composed of fine-grained material is cohesive material. Soil composed primarily of coarse-grained sand or gravel is granular material. (ii) Observe soil as it is excavated. Soil that remains in clumps when excavated is cohesive. Soil that breaks up easily and does not stay in clumps is granular. (iii) Observe the side of the opened excavation and the surface area adjacent to the excavation. Crack-like openings such as tension cracks could indicate fissured material. If chunks of soil spall off a vertical side, the soil could be fissured. Small spalls are evidence of moving ground and are indications of potentially hazardous situations. (iv) Observe the area adjacent to the excavation and the excavation itself for evidence of existing utility and other underground structures, and to identify previously disturbed soil. (v) Observe the opened side of the excavation to identify layered systems. Examine layered systems to identify if the layers slope toward the excavation. Estimate the degree of slope of the layers. (vi) Observe the area adjacent to the excavation and the sides of the opened excavation for evidence of surface water, water seeping from the sides of the excavation, or the location of the level of the water table. (vii) Observe the area adjacent to the excavation and the area within the excavation for sources of vibration that may affect the stability of the excavation face. (2) Manual tests. Manual analysis of soil samples is conducted to determine quantitative as well as qualitative properties of soil and to provide more information in order to classify soil properly. (i) Plasticity. Mold a moist or wet sample of soil into a ball and attempt to roll it into threads as thin as 1/8-inch in diameter. Cohesive material can be successfully rolled into threads without crumbling. For example, if at least a two inch (50 mm) length of 1/8-inch thread can be held on one end without tearing, the soil is cohesive. (ii) Dry strength. If the soil is dry and crumbles on its own or with moderate pressure into individual grains or fine powder, it is granular (any combination of gravel, sand, or silt). If the soil is dry and falls into clumps which break up into smaller clumps, but the smaller clumps can only be broken up with difficulty, it may be clay in any combination with gravel, sand or silt. If the dry soil breaks into clumps which do not break up into small clumps and which can only be broken with difficulty, and there is no visual indication the soil is fissured, the soil may be considered unfissured. (iii) Thumb penetration. The thumb penetration test can be used to estimate the unconfined compressive strength of cohesive soils. (This test is based on the thumb penetration test described in American Society for Testing and Materials (ASTM) Standard designation D2488 - "Standard Recommended Practice for Description of Soils (Visual - Manual Procedure).") Type A soils with an unconfined compressive strength of 1.5 tsf can be readily indented by the thumb; however, they can be penetrated by the thumb only with very great effort. Type C soils with an unconfined compressive strength of 0.5 tsf can be easily penetrated several inches by the thumb, and can be molded by light finger pressure. This test should be conducted on an undisturbed soil sample, such as a large clump of spoil, as soon as practicable after excavation to keep to a minimum the effects of exposure to drying influences. If the excavation is later exposed to wetting influences (rain, flooding), the classification of the soil must be changed accordingly. (iv) Other strength tests. Estimates of unconfined compressive strength of soils can also be obtained by use of a pocket penetrometer or by using a hand-operated shearvane. (v) Drying test. The basic purpose of the drying test is to differentiate between cohesive material with fissures, unfissured cohesive material, and granular material. The procedure for the drying test involves drying a sample of soil that is approximately one inch thick (2.54 cm) and six inches (15.24 cm) in diameter until it is thoroughly dry: (A) If the sample develops cracks as it dries, significant fissures are indicated. (B) Samples that dry without cracking are to be broken by hand. If considerable force is necessary to break a sample, the soil has significant cohesive material content. The soil can be classified as an unfissured cohesive material and the unconfined compressive strength should be determined. (C) If a sample breaks easily by hand, it is either a fissured cohesive material or a granular material. To distinguish between the two, pulverize the dried clumps of the sample by hand or by stepping on them. If the clumps do not pulverize easily, the material is cohesive with fissures.	n/a						
828										
829		1926 Subpart P App B - Sloping and Benching	(a) <b>Scope and application</b> - This appendix contains specifications for sloping and benching when used as methods of protecting employees working in excavations from cave-ins. The requirements of this appendix apply when the design of sloping and benching protective systems is to be performed in accordance with the requirements set forth in § 1926.652(b)(2).	n/a						
830		1926 Subpart P App C - Timber Shoring for Trenches	(a) Scope. This appendix contains information that can be used when timber shoring is provided as a method of protection from cave-ins in trenches that do not exceed 20 feet (6.1 m) in depth. This appendix must be used when design of timber shoring protective systems is to be performed in accordance with 1926.652(c)(1). Other timber shoring configurations; other systems of support such as hydraulic and pneumatic systems; and other protective systems such as sloping, benching, shielding, and freezing systems must be designed in accordance with the requirements set forth in 1926.652(b) and 1926.652(c). (b) Soil Classification. In order to use the data presented in this appendix, the soil type or types in which the excavation is made must first be determined using the soil classification method set forth in appendix A of subpart P of this part.	n/a						
831		1926 Subpart P App D - Aluminum Hydraulic Shoring for Trenches	a) Scope. This appendix contains information that can be used when aluminum hydraulic shoring is provided as a method of protection against cave-ins in trenches that do not exceed 20 feet (6.1m) in depth. This appendix must be used when design of the aluminum hydraulic protective system cannot be performed in accordance with 1926.652(c)(2).	n/a						
832		1926 Subpart P App E - Alternatives to Timber Shoring	Alternatives to Timber Shoring	n/a						
833		1926 Subpart P App F - Selection of Protective Systems	The following figures are a graphic summary of the requirements contained in subpart P for excavations 20 feet or less in depth. Protective systems for use in excavations more than 20 feet in depth must be designed by a registered professional engineer in accordance with 1926.652(b) and (c).	n/a						
834	1926 Subpart Q - Concrete and Masonry Construction			n/a						
835		1926.700 - Scope, application, and definitions applicable to this subpart.	n/a	n/a						
836		1926.701 - General requirements	n/a	n/a						
837		1926.702 - Requirements for equipment and tools.	n/a	n/a						
838		1926.703 - Requirements for cast-in-place Concrete.	n/a	n/a						
839		1926.703 App - General Requirements for Formwork	n/a	n/a						
840		1926.704 - Requirements for precast concrete	n/a	n/a						
841		1926.705 - Requirements for lift-slab operations.	n/a	n/a						
842		1926.705 App - Lift Slab Operations	n/a	n/a						
843		1926.706 - Requirements for masonry construction.	n/a	n/a						
844		1926 Subpart Q App A - References to Subpart Q of Part 1926	n/a	n/a						
845	1926 Subpart R - Steel Erection			n/a						
846		1926.750 - Scope.	n/a	n/a						
847		1926.751 - Definitions.	n/a	n/a						
848		1926.752 - Site layout, site-specific erection plan and construction sequence.	n/a	n/a						
849		1926.753 - Hoisting and rigging.	n/a	n/a						
850		1926.754 - Structural steel assembly.	n/a	n/a						
851		1926.755 - Column anchorage.	n/a	n/a						
852		1926.756 - Beams and columns.	n/a	n/a						
853		1926.757 - Open web steel joists.	n/a	n/a						
854		1926.758 - Systems-engineered metal buildings.	n/a	n/a						
855		1926.759 - Falling object protection.	n/a	n/a						
856		1926.760 - Fall protection.	n/a	n/a						
857		1926.761 - Training.	n/a	n/a						
858		1926 Subpart R App A - Guidelines for establishing the components of a site-specific erection plan; Non-Mandatory Guidelines for Complying with 1926.752(e).	n/a	n/a						
859		1926 Subpart R App B - [Reserved]	n/a	n/a						

Appendix C - Unfiltered  
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	A	B	D	E	F	G	H	I	J	K
1			Occupational Safety & Health			Consolidated Deficiency Groupings				
2	Statutory Requirement (29 CFR)	Subpart Reference	Basic Requirements	Requirement Met by HMC?	Comments	1	2	3	4	5
860		1926 Subpart R App C - Illustrations of Bridging Terminus Points: Non-Mandatory Guidelines for Complying with 1926.757(a)(10) and 1926.757(c)(5).	n/a	n/a						
861		1926 Subpart R App D - Illustration of the Use of Control Lines to Delineate Controlled Decking Zones (CDZs): Non-mandatory Guidelines for Complying with 1926.760(c)(3).	n/a	n/a						
862		1926 Subpart R App E - Training: Non-mandatory Guidelines for Complying with 1926.761.	n/a	n/a						
863		1926 Subpart R App F - Perimeter Columns: Non-Mandatory Guidelines for Complying with 1926.756(c) To Protect the Unprotected Side or Edge of a Walking/Working Surface.	n/a	n/a						
864		1926 Subpart R App G - 1926.502 (b)-(c) Fall Protection Systems Criteria and Practices.	n/a	n/a						
865		1926 Subpart R App H - Double Connections: Illustration of a Clipped End Connection and a Staggered Connection: Non-Mandatory Guidelines for Complying with 1926.756(c)(1).	n/a	n/a						
866	1926 Subpart S - Underground Construction, Caissons, Cofferdams, and			n/a						
867		1926.800 - Underground Construction	n/a	n/a						
868		1926.801 - Caissons.	n/a	n/a						
869		1926.802 - Cofferdams.	n/a	n/a						
870		1926.803 - Compressed air.	n/a	n/a						
871		1926.804 - Definitions applicable to this subpart.	n/a	n/a						
872		1926 Subpart S App A - Decompression Tables	n/a	n/a						
873	1926 Subpart T - Demolition			n/a						
874		1926.850 - Preparatory operations.	n/a	n/a						
875		1926.851 - Stairs, passageways, and ladders.	n/a	n/a						
876		1926.852 - Chutes	n/a	n/a						
877		1926.853 - Removal of materials through floor openings.	n/a	n/a						
878		1926.854 - Removal of walls, masonry sections, and chimneys.	n/a	n/a						
879		1926.855 - Manual removal of floors.	n/a	n/a						
880		1926.856 - Removal of walls, floors, and material with equipment.	n/a	n/a						
881		1926.857 - Storage.	n/a	n/a						
882		1926.858 - Removal of steel construction.	n/a	n/a						
883		1926.859 - Mechanical demolition.	n/a	n/a						
884		1926.860 - Selective demolition by explosives.	n/a	n/a						
885	1926 Subpart U - Blasting and the Use of Explosives			n/a						
886		1926.900 - General provisions.	n/a	n/a						
887		1926.901 - Blaster qualifications.	n/a	n/a						
888		1926.902 - Surface transportation of explosives.	n/a	n/a						
889		1926.903 - Underground transportation of explosives.	n/a	n/a						
890		1926.904 - Storage of explosives and blasting agents.	n/a	n/a						
891		1926.905 - Loading of explosives or blasting agents.	n/a	n/a						
892		1926.906 - Initiation of explosive charges-electric blasting.	n/a	n/a						
893		1926.907 - Use of safety fuse.	n/a	n/a						
894		1926.908 - Use of detonating cord.	n/a	n/a						
895		1926.909 - Firing the blast.	n/a	n/a						
896		1926.910 - Inspection after blasting.	n/a	n/a						
897		1926.911 - Misfires.	n/a	n/a						
898		1926.912 - Underwater blasting.	n/a	n/a						
899		1926.913 - Blasting in excavation work under compressed air.	n/a	n/a						
900		1926.914 - Definitions applicable to this subpart.	n/a	n/a						

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1	Occupational Safety & Health					Consolidated Deficiency Groupings				
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901	1926 Subpart W - Rollover Protective Structures; Overhead Protection									
902		1926 Subpart W App A - Appendix A to Subpart W -- Figures W-14 through W-28	Rollover Protective Structures; Overhead Protection	No	No governing policy/SOP found.	X				
903		1926.1000 - Rollover protective structures (ROPS) for material handling equipment.	<b>1926.1000(a)(1)</b> This section applies to the following types of material handling equipment: To all rubber-tired, self-propelled scrapers, rubber-tired front-end loaders, rubber-tired dozers, wheel-type agricultural and industrial tractors, crawler tractors, crawler-type loaders, and motor graders, with or without attachments, that are used in construction work. This requirement does not apply to sideboom pipe laying tractors. <b>1926.1000(b)</b> Equipment manufactured on or after September 1, 1972. Material handling machinery described in paragraph (a) of this section and manufactured on or after September 1, 1972, shall be equipped with rollover protective structures which meet the minimum performance standards prescribed in 1926.1001 and 1926.1002, as applicable. <b>1926.1000(c)(2)(i)</b> The design objective shall be to minimize the likelihood of a complete overturn and thereby minimize the possibility of the operator being crushed as a result of a rollover or upset. <b>1926.1000(c)(2)(ii)</b> The design shall provide a vertical clearance of at least 52 inches from the work deck to the ROPS at the point of ingress or egress .	No	No governing policy/SOP found.	X				
904		1926.1001 - Minimum performance criteria for rollover protective structures for designated scrapers, loaders, dozers, graders, and crawler tractors.	<b>1926.1001(a)</b> General. This section prescribes minimum performance criteria for rollover protective structures (ROPS) for rubber-tired self-propelled scrapers; rubber-tired front-end loaders and rubber-tired dozers; crawler tractors, and crawler-type loaders, and motor graders. The vehicle and ROPS as a system shall have the structural characteristics prescribed in paragraph (f) of this section for each type of machine described in this paragraph.	No	No governing policy/SOP found.	X				
905		1926.1002 - Protective frames (roll-over protective structures, known as ROPS) for wheel-type agricultural and industrial tractors used in construction.	<b>1926.1002(a)(1)</b> The purpose of this section is to set forth requirements for frames used to protect operators of wheel-type agricultural and industrial tractors that will minimize the possibility of operator injury resulting from accidental upsets during normal operation. With respect to agricultural and industrial tractors, the provisions of 29 CFR 1926.1001 and 1926.1003 for rubber-tired dozers and rubber-tired loaders may be used instead of the requirements of this section. <b>1926.1002(a)(2)</b> The protective frame that is the subject of this standard is a structure mounted to the tractor that extends above the operator's seat and conforms generally to Figure W-14. <b>1926.1002(a)(3)</b> When an overhead weather shield is attached to the protective frame, it may be in place during testing, provided that it does not contribute to the strength of the protective frame. When such an overhead weather shield is attached, it must meet the requirements of paragraph (i) of this section. <b>1926.1002(a)(4)</b> For overhead protection requirements, see 29 CFR 1926.1003. <b>1926.1002(a)(5)</b> The following provisions address requirements for protective enclosures. <b>1926.1002(a)(5)(i)</b> When protective enclosures are used on wheel-type agricultural and industrial tractors, they shall meet the requirements of Society of Automotive Engineers ("SAE") standard J168-1970 ("Protective enclosures -- test procedures and performance requirements"), which is incorporated by reference. The incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51	No	No governing policy/SOP found.	X				
906		1926.1003 - Overhead protection for operators of agricultural and industrial tractors.	<b>1926.1003(a)(1) Purpose</b> . When overhead protection is provided on wheel-type agricultural and industrial tractors, the overhead protection shall be designed and installed according to the requirements contained in this section. The provisions of 29 CFR 1926.1001 for rubber-tired dozers and rubber-tired loaders may be used instead of the standards contained in this section. The purpose of this standard is to minimize the possibility of operator injury resulting from overhead hazards such as flying and falling objects, and at the same time to minimize the possibility of operator injury from the cover itself in the event of accidental upset. <b>1926.1003(a)(2) Applicability</b> . This standard applies to wheel-type agricultural and industrial tractors used in construction work (see 29 CFR 1926.1002(b) and (j)). In the case of machines to which 29 CFR 1926.604 (relating to site clearing) also applies, the overhead protection may be either the type of protection provided in 29 CFR 1926.604, or the type of protection provided by this section. <b>1926.1003(b) Overhead protection</b> . Overhead protection. When overhead protection is installed on wheel-type agricultural or industrial tractors used in construction work, it shall meet the requirements of this paragraph. The overhead protection may be constructed of a solid material. When grid or mesh is used, the largest permissible opening shall be such that the maximum circle that can be inscribed between the elements of the grid or mesh is 1.5 in. (38 mm) in diameter. The overhead protection shall not be installed in such a way as to become a hazard in the case of upset.	No	No governing policy/SOP found.	X				