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MPA Checklist

R 425.101 et. seq. - Mining Permit Application Checklist

Rule 425.101 Seq.	Rule 425.101 Seq. Requirements	Location in Application
Part 1	General Provisions	
Rule 101	Purpose	Applied throughout MPA
Rule 102	Definitions (A to L)	Used throughout MPA
Rule 103	Definitions (M to Z)	Used throughout MPA
Part 2	Permits	
Rule 201	Permit Requirements	
1a	Application form	Volume I - Appendix A
1b	Application fee	included with cover letter
1c	Environmental Impact Assessment (EIA)	Volume II
1d	Mining, reclamation, environmental protection plan	Sections 4, 7 and 5 respectively
1e	Contingency plan	Section 8
1f	Financial assurance	Section 9
1g	List of other permits and licenses	Section 1.3
1h	Organization report	Volume I - Appendix B
2a/b	Beneficiation	No part of the MPA
3	10 paper copies, and electronic format	Included with cover letter
4a - f	MDEQ MPA review timeframes defined	Not repeated in MIA
5	MDEQ impose permit conditions	From MDEQ
6	Percolation leaching	Not applicable to this project
7a - b	MDEQ approval of mining permit	MDEQ responsibility
8	MDEQ denial of mining permit	MDEQ responsibility
9	Permit issuance non-issuance	MDEQ responsibility
Rule 202	Environmental Impact Assessment	
1a	EIA requirements for each condition and feature listed in subrule (2)	Volume II Section 2-3 and Appendices
1a(i)	Description of condition or feature	Volume II Section 2-3 and Appendices
1a(ii)	Mining activity that may affect the condition or feature	Volume II Section 2-3
1a(iii)	Potential impacts and effects on the condition or feature and, where applicable, the effects of the conditions or feature on the mining activity	Volume II Section 2-3
1a(iv)	Mitigation measures	Volume II Section 2-3
1a(v)	Maps and photographs	Volume II and Appendices
1b	Cumulative impacts for each condition or feature listed in subrule (2)	Volume II Section 2-3
1c(i) - (iii)	Alternatives	Volume II Section 4
1d	Name of person(s) who prepared EIA	Volume II Section 1
1e	Methodologies	Volume II and Appendices

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1e(i)	QA/QC	Volume II and Appendices
1e(ii)	Demonstrated appropriate and effective methodologies	Volume II and Appendices
1f	Reference sources of information	Volume II and Appendices
2	Requirements in Rule 202(2) for the following conditions and features	Volume II Section 3 and Appendices
2a	Topography	Volume II Section 3 and Appendices
2b	Soils series	Volume II Section 3 and Appendices
2c	Geology of bedrock and unconsolidated materials	Volume II Section 3 and Appendices
2d	Groundwater occurrence	Volume II Section 3 and Appendices
2d(i)	Thickness, k, connections between aquifers and surface water	Volume II Section 3 and Appendices
2d(ii)	Depth, recharge, flow direction, gradients, velocity, 3-D flow paths	Volume II Section 3 and Appendices
2d(iii)	Seasonal variations of d(ii) items	Volume II Section 3 and Appendices
2e	Surface water features (lakes, ponds, streams, etc.)	Volume II Section 3 and Appendices
2e(i)	Levels and/or discharge rates	Volume II Section 3 and Appendices
2e(ii)	Seasonal and long-term variations of levels and/or discharge rates	Volume II Section 3 and Appendices
2f	Water balance	Volume II Section 3 and Appendices
2g	Groundwater and surface water quality	Volume II Section 3 and Appendices
2g(i)	Specific conductance	Volume II Section 3 and Appendices
2g(ii)	Temperature	Volume II Section 3 and Appendices
2g(iii)	Hydrogen ion concentration	Volume II Section 3 and Appendices
2g(iv)	Dissolved oxygen	Volume II Section 3 and Appendices
g(v)	Concentrations of the following:	Volume II Section 3 and Appendices
2g(v)(A)	Cations of calcium, sodium, magnesium, potassium and iron	Volume II Section 3 and Appendices
2g(v)(B)	Anions of chloride, sulfate, and bicarbonate	Volume II Section 3 and Appendices
2g(v)(C)	Other dissolved elements and compounds associated with the mining activity	Volume II Section 3 and Appendices
2g(vi)	Predicted seasonal variations of parameters - 2g(i) - (v)	Volume II Section 3 and Appendices
2h	Existing, known groundwater contamination	Volume II Section 3 and Appendices
2i	Private water supply wells	Volume II Section 3 and Appendices
2j	Public water supply wells	Volume II Section 3 and Appendices
k	Irrigation and disposal wells	Volume II Section 3 and Appendices
2l	Designated wellhead protection areas	Volume II Section 3 and Appendices
2m	Floodplains, Great Lakes shorelines, wetlands	Volume II Section 3 and Appendices
n	Natural Rivers, as defined in Section 30501	Volume II Section 3 and Appendices
2o	Wild and Scenic Rivers, per 1968 Public Law 90-542, 82 Stat. 906	Volume II Section 3 and Appendices
2p	Dwellings and other buildings for human occupancy all or part of year	Volume II Section 3 and Appendices
2q	Existing and proposed infrastructure and utilities	Volume II Section 3 and Appendices
2r	Public recreation areas	Volume II Section 3 and Appendices

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2s	Natural areas, per R 324.35101	Volume II Section 3 and Appendices
2t	State Wilderness Areas, per MCL 324.35101	Volume II Section 3 and Appendices
2u	Federal Wilderness Areas, per 78 Stat. 890, 16 U.S.C. 1131	Volume II Section 3 and Appendices
2v	Wild areas, per MCL 324.35101	Volume II Section 3 and Appendices
2w	Research natural areas, per CFR Title 36, Section 251.23	Volume II Section 3 and Appendices
2x	Land uses, access, size/shape, current and historic trends	Volume II Section 3 and Appendices
2y	Aquatic and terrestrial flora/fauna species, variations (2 yrs of information)	Volume II Section 3 and Appendices
2z	Fish and wildlife habitats	Volume II Section 3 and Appendices
2aa	T & E species, per Act 365, per 1973 Act, and per Public Law 93-205, 87 Stat. 884	Volume II Section 3 and Appendices
2bb	Special concern species, per US Forest Service Region 9	Volume II Section 3 and Appendices
2cc	Non-native or invasive plants and animals	Volume II Section 3 and Appendices
2dd	Ecological systems recognized in sources published	Volume II Section 3 and Appendices
2ee	Cultural, historical archaeological resources	Volume II Section 3 and Appendices
2ff	Air quality	Volume II Section 3 and Appendices
2gg	Meteorology, and predicted seasonal and long-term variations	Volume II Section 3 and Appendices
2hh	Visual resources	Volume II Section 3 and Appendices
2ii	Noise	Volume II Section 3 and Appendices
2jj	Light	Volume II Section 3 and Appendices
2kk	Seismicity	Volume II Section 3 and Appendices
3	For (d) groundwater, (e) surface water, (g) water quality, and (gg) meteorology, 2 yrs data and statistical analysis	Volume II Section 3 and Appendices
4	Description of Public involvement	Volume II Section 1
5	Information required by other parts of the Act may be used in the EIA	NA
Rule 203	Mining Plan	
a	Mining methods, operating life, rate and schedule of mining	Section 4.1.2
b	Number of employees and variations over life	Section 4.1.3
c	Text descriptions including maps, photos, drawings, related to mining activities for items c(i) - c(xxiv):	
c(i)	Topsoil areas, thickness and characteristics, Plans for stockpiling and stabilizing until used for reclamation	Section 4.2.1
c(ii)	Development rock areas, volumes, characteristics, stockpiles, final placement	Section 4.2.4
c(iii)	Ore area, volumes, types and mineralogy. Schedule for mining and stockpiling	Sections 4.2.5, 4.1.2
c(iv)	Plans to prevent disposal of unauthorized materials (limit access to stockpiles)	Sections 4.2.7
c(v)	Geochemistry of ore, development rock, overburden and peripheral rock exposed for items c(v)(A) - c(v)(D)	
c(v)(A)	Chemical and physical testing and modeling to predict potential acid generation, dissolved metals, etc	Volume I - Appendices D1-D5
c(v)(B)	Testing and modeling methods	Volume I - Appendices D1-D5
c(v)(C)	Monitoring during operations to calibrate modeling	Sections 6.1.3 and 6.2

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Rule 425.101 Seq.	Rule 425.101 Seq. Requirements	Location in Application
c(v)(D)	Identification of ore, development rock and peripheral rocks that are reactive	Volume I - Appendices D1-D5
c(vi)	Lithology and thickness of rock surrounding and overlying the ore body	Section 4.2.5 and Volume I App C
c(vii)	Locations, depths and contours of open pits	Not applicable
c(viii)	Locations of shafts, portals and other openings between the surface and underground mine	Figure 4-2
c(ix)	Areal extent, depth and dimensions of underground workings	Figures 4-5 and 4-20 through 4-30
c(x)	Types and uses of grouting	TBD
c(xi)	Subsidence - Plan to prevent damage to environment or H&S to public containing items c(xi)(A) - c(xi)(D)	Section 4.6.1 and Volume I, App C
c(xi)(A)	Description of planned or intentional caving/subsidence	Not a part of the mining plan
c(xi)(B)	Provisions to prevent adverse impacts to water supply wells or aquifers	Section 6.2
c(xi)(C)	Provisions to assure u/g mining will not impact structures not owned by the Mine Operator	Section 8.1.11
c(xi)(D)	Provisions to assure underground mining will not cause material damage to natural features on lands not owned by Mine Operator	Section 8.1.11
c(xii)	Water usage during mining, sources, rates diversion or withdrawal	Sections 4.3.11.4, 4.3.12.2 and Fig 4-18
c(xiii)	Water storage, transfer and discharge including items c(xiii)(A) and c(xiii)(B)	
c(xiii)(A)	Location, size, capacity of dewatering, diversions, storage, and treatment facilities	Sections 4.3.10.1, 4.3.10.2, 4.3.11.4, 4.3.12.3
c(xiii)(B)	Volumes, rates and water quality of discharges and discharge locations	Figs 4-2, 4-18
c(xiv)	Storage areas for equipment and vehicles	Section 4.3 and Fig 4-2
c(xv)	Buildings and other facilities/structures	Section 4.3 and Fig 4-2
c(xvi)	Areas for storage/transfer of chemicals, fuel and explosives	Sections 4.3.17, 4.3.16 and Fig 4-2
c(xvii)	Truck and mining equipment wash down areas	Section 4.3.3 and Fig 4-2
c(xviii)	Roads, railroads, other transportation infrastructure and provisions to prevent release of contaminants from transport of ore and waste rock	Section 4.3.7
c(xix)	Beneficiation processes including items c(xix)(A) - c(xix)(F)	Section 4.3.5; crushing
c(xix)(A)	Types, extent and sequence of beneficiation - physical and chemical characterization of all materials	to maximum 6" size is the only ore processing
c(xix)(B)	Description of all beneficiation equipment/processes	included in the MPA
c(xix)(C)	Types/amounts of chemicals	Section 8.1.8
c(xix)(D)	Waste rock types, amounts, sequence, schedule and means of disposal	Dev rock is covered in Sect 4.2.4 and 4.3.9
c(xix)(E)	Provisions to prevent contamination release from beneficiation	Section 4.3.5; crushing
c(xix)(F)	Tailings transport systems	Not applicable
c(xx)	Control of water drainage from tailings disposal areas (24 hr, 100 yr precipitation event)	Not applicable
c(xxi)	Plans/schedules for contact water - reasonably minimize adverse impacts to groundwater and surface water	Section 4.3.10
c(xxii)	SESC that meets standards of Part 91 including items c(xxii)(A) - c(xxii)(G)	
c(xxii)(A)	Location, description and schedule for temporary SESC measures	Sections 4.2.1, 4.3.10.4, 4.3.10.3
c(xxii)(B)	Location, description and schedule for permanent SESC measures, established as soon as possible after an earth	Sections 4.3.10.3, 4.3.10.5
c(xxii)(C)	Provisions to limit disturbed area exposure to shortest feasible time	Section 4.3.10.3, 4.3.10.4
c(xxii)(D)	Provisions to remove sediment caused by accelerated soil erosion before it leaves the mine site	Fig. 4-15

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c(xxii)(E)	Temporary/permanent controls for conveyance of storm water, limit to non-erosive velocities	Section 4.3.10 and Volume I, App E
c(xxii)(F)	Provisions for temporary SESC measures before earth change, daily maintenance, and removal once stabilized	Sections 4.3.10.3, 4.3.10.4
c(xxii)(G)	Provisions for stabilizing earth change areas with permanent SESC measures as soon as possible	Sections 3.4.3.10.3, 4.3.10.5
c(xxiii)	Plans for concurrent reclamation with mining operations to extent feasible	Sections 7.1, 7.3
c(xxiv)	Plans for inspecting, monitoring, maintaining liners, covers, leachate collection systems, leak detection systems, berms and embankments. Defined frequency (> monthly)	Sections 6.1, 6.2, 6.4, 6.5, 6.7 and Table 6-5
d	Maps and ownership of all tracts of land in the mining area and within 1320 ft of mining boundary including items	
d(i)	Ownership of surface rights	Section 2.3 and Fig 2-4
d(ii)	Ownership of mineral rights	Section 2.3 and Fig 203
d(iii)	Conservation easements per Section 2140 of Act	Section 2.4
d(iv)	Historic preservation easements per Section 2140 of Act	Section 2.4
e	Measure taken to prevent damage to property not owned by the operator within and adjacent to the mining area	Sections 2.5
f	Measures to minimize impacts to volume/rate of recharge, flow, discharge of g/w and s/w (accommodate seasonal and l/t variations)	Sections 4.3.10.1, 4.3.10.2, 4.3.12.2, 4.3.12.3 and Fig 4-18
g	Monitoring plan for monitoring of g/w & s/w quality, g/w levels, s/w stage and discharge during mining and post-closure - Need not include monitoring required in other permits	Section 6
g(i)	Monitoring location considerations to include items g(i)(E)	
g(i)(A)	Proximity to mining activity	Sections 6.2.2, 6.2.3, 6.2.4 and Fig 6-1
g(i)(B)	Potential for diffusion/dispersion	Section 6.3 and Figs 6-2, 6-3
g(i)(C)	Horizontal/vertical g/w gradients	Sections 6.2, 6.3.2, Table 6-3, Figs 6-1, 6-3
g(i)(D)	Seasonal variations in flow	Section 6.3.1
g(i)(E)	Topography and access limitations	Section 6
g(ii)	Monitoring Plan shall comply with R406	see that part of this checklist
g(iii)	Monitoring Plan shall include items g(iii)(A) - g(iii)(G)	
g(iii)(A)	Number and locations of monitoring wells/structures	Sections 6.1., 6.2, 6.3, 6.3.2, 6.5, 6.6, Figs 6-1 - 6-6, 7-3, 7-4, and Table 6-5
g(iii)(B)	Frequency of sampling and procedures including items g(iii)(B)(aa) - g(iii)(B)(gg)	
g(iii)(B)(aa)	Sampling method/volume removed from each sampling point	Section 6A, Tables 6-1 - 6-5, 7-4
g(iii)(B)(bb)	Steps taken to prevent cross contamination	Section 6.4
g(iii)(B)(cc)	Sample handling/preservation methods	Section 6.4
g(iii)(B)(dd)	Lab analysis methods	Tables 6-1 - 6-4, 7-4, 7-5
g(iii)(B)(ee)	Lab method detection level	Tables 6-1 - 6-4, 7-4, 7-5
g(iii)(B)(ff)	QA/QC as approved by Department (MDEQ)	Section 6.4
g(iii)(B)(gg)	Provisions for routine monitoring at least every 3 months	Tables 6-2, 6-3, 6-4, 7-4, 7-5
g(iii)(C)	Sampling parameters including items g(iii)(C)(aa) - g(iii)(C)(gg)	
g(iii)(C)(aa-gg)	Specific conductance, temp, pH, DO, Ca, Na, Mg, K, Fe, Cl, SO4, CO3, and other parameters identified in the EIA	Tables 6-2, 6-3, 6-4, 7-4, 7-5

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g(iii)(D)	Description of techniques used to present and evaluate presentation of water quality data	Section 6.4
g(iii)(E)	Methods for collection of static water levels (within 0.01 ft) and presentation of gw flow data	Section 6.4
g(iii)(F)	Depth/screen interval for each well	Section 6.4
g(iii)(G)	Design, construction, abandonment comply with R 406 (2)	Section 6.4
h	Treatment and containment plan to prevent contamination to g/w and s/w from leaching of acidic water or dissolved metals	Section 5
h(i)	T&C plan applies to earth materials determined to be reactive under R203 (3)(e), and includes h(i)(A) and h(i)(B):	
h(i)(A)	Design, construction, and operations of stockpiles and storage facilities for ore, development rock and overburden	Sections 5.4, 4.3.5 - 4.3.7, 5.1, 4.2.1 - 4.2.3
h(i)(B)	Management of peripheral rock determined in the EIA to have potential to contaminate g/w or s/w	Not expected to cause contamination (Volume I, App
h(ii)	Account for volume, rate and movement of leachate, weather influence, including extreme conditions	Sections 4.3.9, 4.3.10, 4.3.10.1
h(iii)	T&C plan shall meet R 409	see that part of this checklist
i	A general description of blasting materials and methods	Sections 4.4.3 and 4.4.4
j	If T&E species may be impacted, a plan to protect the species that conforms to state and federal T&E species laws	Section 6.6
k	Plans to minimize and mitigate adverse impacts of mining operation on flora, fauna, fish or wildlife habitats, and biodiversity	MPA
l	If percolation leaching is proposed, demonstrate compliance with R 403	Not applicable
m	Plan for inspection or monitoring (or both) of all mine related facilities at least monthly	Section 6
n	Name/qualifications of person(s) who prepare the mine plan	Section 1.4
Rule 204	Reclamation Plan	
a	Information in items a(i) - a(iv), including maps, appropriate scale, topo base maps, references to nearest section/1/4 section, cross sections, and engineering drawings, as appropriate	
a(i)	Final land contours	Fig. 7-1
a(ii)	Proposed final land use and relationship to surrounding land use	Section 7.2
a(iii)	Ponds, streams, wetlands, roads, dikes, ditches, SESC structures that will remain after reclamation	Section 7.2
a(iv)	Plans to stabilize waste rock piles, settling ponds, overburden banks, roads and plant site, including items a(iv)(A) - a(iv)(C).	
a(iv)(A)	Sloping/terracing of open pits	not applicable
a(iv)(B)	Topsoil replacement for disturbed surface areas	Section 7.4.1.9
a(iv)(C)	Vegetation species/quantities, seedbed prep, seeding/planting methods, mulching, fertilization, maintenance, plant	Section 7.4.1.10
b	Evidence satisfactory to the Department that reclamation will conform to the following items b(i) - b(vi):	
b(i)	Final disposition of wastes, refuse, shall be managed to protect H&S and environment, in accordance with state/federal laws	Sections 7, 7.4, 7.5
b(ii)	Shafts, portals and openings between surface and u/g workings shall be sealed to protect HSE in accordance with applicable laws/regs	Sections 7.4.2.3, 7.4.2.8

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b(iii)	Surface structures, infrastructure, stockpiles shall be removed unless converted to alternate use, per final use plan	Section 7.2
b(iv)	Protect disturbed areas to prevent accelerated erosion by wind or water	Section 7.4.1.11
b(v)	Disturbed areas to be revegetated with a variety of native plants (non-native plants can be use if consistent with final land use)	Section 7.4.1.10
b(vi)	Goal to reclaim to self-sustaining ecosystem that does not require perpetual care, and to return to pre-mining conditions	Sections 7.2, 7.4.1.10
c	Post closure g/w and s/w monitoring plans	Section 7.5
d	Name and qualifications of person(s) who prepared the reclamation plan	Section 1.4
Rule 205	Contingency Plan	
1a	Assessment of risk to HSE and response measures for the following cases (items a(i) - a(xii):	
1a(i)	Release or threat of release of toxic or acid-forming materials	Section 8.1.1
1a(ii)	Storage, transport and handling of explosives	Section 8.1.2
1a(iii)	Fuel storage and distribution	Section 8.1.3
a(iv)	Fires	Section 8.1.4
1a(v)	Wastewater collection and treatment system	Section 8.1.5
1a(vi)	Settling pond or tailings disposal embankment failure	Section 8.1.6
1a(vii)	Air emissions	Section 8.1.7
1a(viii)	Spills of hazardous substances	Section 8.1.8
1a(ix)	Other natural risks identified in the EIA	Section 8.1.9
1a(x)	Power disruption	Section 8.1.10
1a(xi)	Unplanned subsidence	Section 8.1.11
1a(xii)	Leaks from containment systems for stockpiles or disposal/storage facilities	Section 8.1.12
1b	The contingency plan to include the following information (items b(i) - b(v)):	
1b(i)	Procedures for notifying public, authorities and safety agencies in the event of an emergency	Section 8.2
1b(ii)	A list, by title, of personnel to be contacted and their duties	Section 8.2
1b(iii)	Actions to limit nonessential personnel to the area	Section 8.2
1b(iv)	Procedures for evacuation of public, if needed	Section 8.2
1b(v)	List of emergency equipment and location	Section 8.2
1c	Emergency telephone numbers (including items c(i) and c(x)):	
1c(i)	Representatives of the operator (KEMC)	Section 8.2
1c(ii)	Emergency management coordinator (KEMC)	Section 8.2
1c(iii)	Local ambulance services	Section 8.2
1c(iv)	Local hospitals	Section 8.2
1c(v)	Local fire and police depts.	Section 8.2
1c(vi)	Dept of Environmental Quality	Section 8.2

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1c(vii)	Pollution emergency alerting system	Section 8.2
1c(viii)	Federal regulatory agencies, as necessary	Section 8.2
1c(ix)	Dept. of Natural Resources	Section 8.2
1c(x)	Local unit of government (Michigamme Co.)	Section 8.2
1d	A plan for testing the Contingency Plan	Section 8.2
2	Applicant to submit copies of contingency plan to each emergency management coordinator with jurisdiction over the affected area at the time the application is submitted to the Dept., MDEQ	Will be submitted
Rule 206	Amendment of Permits	Not applicable
1	Permit to be amended to address changes or oversights including items 1a - 1f	Not applicable
1a	EIA	Not applicable
1b	Mining, reclamation and environmental protection plan	Not applicable
1c	Contingency plan	Not applicable
1d	Federal, state and local permits and licenses	Not applicable
1e	Provisions for financial assurance	Not applicable
1f	Other terms and conditions of the mining permit	Not applicable
2	Permittee may submit an application for amendment	Will be submitted
3	Dept may require an application for amendment if conditions of the mining permit are not meeting the intended protections	Not applicable
4	Within 30 days of request to amend a mining permit, the Dept shall determine if the request is a significant change; if it is a significant change then Dept review follows R201 (4)	Not applicable
Rule 207	Transfer of Permit	Not applicable
Part 3	Financial Assurance	
Rule 301	Financial Assurance Requirements	
1	Mining Permit not effective until Permittee establishes FA	Section 9
2	FA applies to mining and reclamation, covers 3rd Party cost to implement reclamation, remediation and post closure monitoring. Amount of FA determined as follows (items 2a - 2d):	Section 9
a	Itemized list of reclamation, remediation and post closure monitoring activities and costs associated with the following (items 2(a)(i) - 2a(ii)):	
a(i)	Mining activities where reclamation is not completed	Section 7.6, Tables 7-6, 7-7
a(ii)	Mining activities anticipated to occur under the mining permit	Section 7.6, Tables 7-6, 7-7
b	Dept may require FA larger than calculated under (a), based on projected costs under 2c.	
c	Cost estimate based on equipment, materials normally available to a third party contractor, and includes the following (items 2(c)(i) - 2(c)(v)):	

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c(i)	Reclamation	Section 7.6, 9.1, Tables 7-6, 7-7
c(ii)	Remediation of air, s/w or g/w contamination	Section 9.3
c(iii)	Administrative oversight costs	Section 9.2
c(iv)	Reasonable contingency	Table 7-7
c(v)	Other necessary environmental protection measures	Table 7-6
d	The amount of an assurance instrument shall cover potential assessment fees by the issuing institution	Discussion w/ MDEQ
3	FA shall cover at least 75% of total required. Balance covered by statement of financial responsibility. Dept will consider (items 3(a) - 3(c)):	TBD
3a	Ability of operator to pay for remediation costs, as demonstrated by the statement of financial responsibility	MDEQ
3b	Whether operator carries pollution prevention or environmental liability insurance and what amounts	MDEQ
3c	Whether the operator has received third-party certification of an environmental management system	
Rule 302	Assurance Instruments	TBD
Part 4	Mining Operations	
Rule 401	Notice of Commencement of Mining	Not required with MPA
Rule 402	Safety Measures	Not required with MPA
Rule 403	Percolation Leaching Requirements	Not required with MPA, Not applicable
Rule 404	Commencement of Reclamation	Not required with MPA
Rule 405	Notice and Approval of Completed Reclamation	Not required with MPA
Rule 406	Protection of Water	
1	Permittee shall conduct g/w and s/w monitoring per R 203 (g) during mining operations and post closure	Section 6
2	Operator shall design, construct and abandon monitoring wells per R 323.2223	KEMC to comply
3	Water monitoring shall include g/w and s/w levels and discharge rates. Water monitoring systems based on the following items 3(a) - 3(c):	section 6.4
3a	EIA	Volume II
3b	Local geology and hydrology	Volume II
3c	G/w and s/w conditions specific to each activity	Section 6
4	S/w monitoring sites designed and located to assess impact of mining activity on s/w	Section 6
5	G/w monitoring sites located as follows:	Section 6
5a	Leachate monitoring wells shall be located within or as close a practicable to storage facility for reactive overburden, ore, waste rock or tailings to determine geochemical conditions of the facility	Section 6
5b	Compliance monitoring wells located as close a practical, but not more than 150 ft from mining activity being monitored	Section 6

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6	Permittee to notify Dept and increase monitoring if concentrations are detected 2 std deviations above long term ave. background	KEMC to comply
7	Action level reached when either of the following is reached:	Per Rules
7a	Concentrations $\geq 1/2$ long-term ave. background and the drinking water standard for 2 consecutive events	Per Rules
7b	pH differs from long-term ave. background by 0.5 units for 2 consecutive events	Per Rules
8	If action level per subrule (7) is exceeded, complete the following:	Per Rules
8a	Implement increased monitoring	Per Rules
8b	Conduct source investigation	Per Rules
8c	Implement plan for response activity per Part 201 of the Act, if change is from mining activities	Per Rules
9	Failure to meet 6 through 8 constitutes violation of this Part.	Per Rules
		Per Rules
Rule 407	Postclosure monitoring (20 yrs after completion of reclamation, subject to following conditions 1-3)	Include requirements in monitoring plans
1	Written request not more than 18 months before termination date, along with technical information demonstrating	Not applicable to this MPA
2	Dept may shorten the post closure monitoring if no significant potential for water contamination	Not applicable to this MPA
3	Extension or shortening of post closure monitoring only after public hearing	Not applicable to this MPA
Rule 408	Inspections by Department	MDEQ Requirement
Rule 409	Treatment and Containment of Reactive Materials (Management of reactive ore, waste rock, periphery rock and tailings under R 203(c)(v) to reasonably minimize actual and potential adverse impacts on g/w and s/w by preventing leaching or runoff of acid-forming waste and other waste products from mining	Section 5
a	Design, construct and operate stockpiles for reactive overburden, ore, waste rock or tailings in accordance with a or b	Section 5
a(i)	Stockpile or storage facility shall meet the following requirements:	
a(i)(A)	Composite liner with 60 mil synthetic liner and 3 ft of clay with max. k of 10-3 cm/sec	Alternate design
a(i)(B)	Alternate liner ok if demonstrated equivalent to (i) above	Section 5.1.5
a(i)(C)	Stockpile or storage facility shall have a leachate collection system to maintain less than 1 ft of head on the liner system at the lowest point, excluding the sump, after construction	Section 5.1.6
a(i)(D)	Stockpile or storage facility shall have a leak detection system	Section 5.1.8
a(i)(E)	The liner, leachate collection system and leak detection system shall be tested before placement of materials into	Section 5.3
a(i)(F)	A cover shall be employed to isolate reactive materials from precipitation and air as soon as practicable	Section 5.2.2
a(i)(G)	Design, construction and testing of liners, covers, leachate collection systems certified by registered PE (or other	Section 5.3
a(ii)	Alternate plan for reactive materials may be approved, if the following is incorporated	Not requesting alternative plan
a(ii)(A)	Measures to prevent leachate generation by adding neutralizing materials	Section 5.1
a(ii)(B)	Measures to neutralize leachate before it migrates outside the storage facility	Not requesting alternative plan
a(ii)(C)	Measures to isolate the reactive materials from oxygen or oxidizing substances	Not requesting alternative plan

R 425.101 et. seq. - Mining Permit Application Checklist

Rule 425.101 Seq.	Rule 425.101 Seq. Requirements	Location in Application
a(ii)(D)	Measures to isolate the reactive materials from g/w or s/w through the use of physical barriers	Section 5
b	Utilized disposal facility	Not requested
c	Stockpile or storage facility shall be monitored per R 406	Section 6
d	Permittee shall maintain grading or diking to assure surface water drains away from the storage or disposal area	Section 3.10
Part 5	Reports	
Rule 501	Mining and Reclamation Report	Not required with the MPA
Rule 502	Update of Contingency Plan	Not required with the MPA
Rule 503	Report of Incident	Not required with the MPA
Part 6	Meetings and Hearings	
Rule 601	Public Meetings on Prospective Mining Operations	MDEQ responsibility
Rule 602	Contested Case Hearing	MDEQ responsibility