

CHAPTER 23  
AIR EMISSION STANDARDS

[Prior to 7/1/83, DEQ Ch 4]

[Prior to 12/3/86, Water, Air and Waste Management[900]]

**567—23.1(455B) Emission standards.**

**23.1(1)** *In general.* The federal standards of performance for new stationary sources (new source performance standards) shall be applicable as specified in 23.1(2). The federal standards for hazardous air pollutants (national emission standards for hazardous air pollutants) shall be applicable as specified in 23.1(3). The federal standards for hazardous air pollutants for source categories (national emission standards for hazardous air pollutants for source categories) shall be applicable as specified in 23.1(4). The federal emission guidelines (emission guidelines) shall be applicable as specified in 23.1(5). Compliance with emission standards specified elsewhere in this chapter shall be in accordance with 567—Chapter 21.

**23.1(2)** *New source performance standards.* The federal standards of performance for new stationary sources, as defined in 40 Code of Federal Regulations Part 60 as amended or corrected through June 28, 2023, are adopted by reference, except §60.530 through §60.539b (Part 60, Subpart AAA), and shall apply to the following affected facilities. The corresponding 40 CFR Part 60 subpart designation is provided in the table below. A different date for adoption by reference may be included with the subpart designation in the table. Reference test methods (Appendix A), performance specifications (Appendix B), determination of emission rate change (Appendix C), quality assurance procedures (Appendix F) and the general provisions (Subpart A) of 40 CFR Part 60 also apply to the affected facilities.

**Federal New Source Performance Standards (NSPS)  
Adopted by Reference in 23.1(2)**

<b>23.1(2) paragraph</b>	<b>Affected source category</b>	<b>40 CFR Part 60 Subpart</b>	<b>Date of adoption (if different than 23.1(2) introductory paragraph) or note if federal standard is not adopted</b>
a	Fossil fuel-fired steam generators	D	1/20/2011
b	Incinerators	E	N/A
c	Portland cement plants	F	N/A
d	Nitric acid plants	G	N/A
e	Sulfuric acid plants	H	N/A
f	Hot mix asphalt plants	I	N/A
g	Petroleum refineries	J - Ja	Not adopted. No facilities in Iowa. Paragraph reserved.
h	Secondary lead smelters	L	Not adopted. No facilities in Iowa. Paragraph reserved.
i	Secondary brass and bronze ingot production plants	M	N/A
j	Iron and steel plants	N	N/A
k	Sewage treatment plants	O and Subpart E of 40 CFR 503	N/A
l	Steel plants	AA	N/A
m	Primary copper smelters	P	Not adopted. No facilities in Iowa. Paragraph reserved.

23.1(2) paragraph	Affected source category	40 CFR Part 60 Subpart	Date of adoption (if different than 23.1(2) introductory paragraph) or note if federal standard is not adopted
n	Primary zinc smelters	Q	Not adopted. No facilities in Iowa. Paragraph reserved.
o	Primary lead smelters	R	Not adopted. No facilities in Iowa. Paragraph reserved.
p	Primary aluminum reduction plants	S	Not adopted. No facilities in Iowa. Paragraph reserved.
q	Wet process phosphoric acid plants in the phosphate fertilizer industry	T	N/A
r	Superphosphoric acid plants in the phosphate fertilizer industry	U	N/A
s	Diammonium phosphate plants in the phosphate fertilizer industry	V	N/A
t	Triple super phosphate plants in the phosphate fertilizer industry	W	N/A
u	Granular triple superphosphate storage facilities in the phosphate fertilizer industry	X	N/A
v	Coal preparation plants	Y	N/A
w	Ferroalloy production	Z	N/A
x	Kraft pulp mills	BB	February 27, 2014
y	Lime manufacturing plants	HH	N/A
z	Electric utility steam generating units	Da	January 20, 2011
aa	Stationary gas turbines	GG	N/A
bb	Petroleum storage vessels	K	N/A
cc	Petroleum storage vessels	Ka	N/A
dd	Glass manufacturing plants	CC	N/A
ee	Automobile and light-duty truck surface coating operations at assembly plants	MM	N/A
ff	Ammonium sulfate manufacture	PP	N/A
gg	Surface coating of metal furniture	EE	N/A
hh	Lead-acid battery manufacturing plants	KK	February 27, 2014
ii	Phosphate rock plants	NN	N/A
jj	Graphic arts industry	QQ	N/A
kk	Industrial surface coating	SS	N/A
ll	Metal coil surface coating	TT	N/A

23.1(2) paragraph	Affected source category	40 CFR Part 60 Subpart	Date of adoption (if different than 23.1(2) introductory paragraph) or note if federal standard is not adopted
mm	Asphalt processing and asphalt roofing manufacturing	UU	N/A
nn	Equipment leaks of volatile organic compounds (VOC) in the synthetic organic chemicals manufacturing industry	VV and VVa	N/A
oo	Beverage can surface coating	WW	N/A
pp	Bulk gasoline terminals	XX	N/A
qq	Pressure sensitive tape and label surface coating operations	RR	N/A
rr	Metallic mineral processing plants	LL	N/A
ss	Synthetic fiber production facilities	HHH	N/A
tt	Equipment leaks of VOC in petroleum refineries	GGG	N/A
uu	Flexible vinyl and urethane coating and printing	FFF	N/A
vv	Petroleum dry cleaners	JJJ	N/A
ww	Electric arc furnaces and argon-oxygen decarburization vessels constructed after August 17, 1983	AAa	N/A
xx	Wool fiberglass insulation manufacturing plants	PPP	N/A
yy	Iron and steel plants	Na	N/A
zz	Equipment leaks of VOC from on-shore natural gas processing plants	KKK	N/A
aaa	On-shore natural gas processing: SO <sub>2</sub> emissions	LLL	N/A
bbb	Nonmetallic mineral processing plants	OOO	N/A
ccc	Industrial-commercial-institutional steam generating units	Db	January 20, 2011
ddd	Volatile organic liquid storage vessels	Kb	N/A
eee	Rubber tire manufacturing plants	BBB	N/A
fff	Industrial surface coating: surface coating of plastic parts for business machines	TTT and TTTa	N/A
ggg	VOC emissions from petroleum refinery wastewater systems	QQQ	N/A
hhh	Magnetic tape coating facilities	SSS	N/A

23.1(2) paragraph	Affected source category	40 CFR Part 60 Subpart	Date of adoption (if different than 23.1(2) introductory paragraph) or note if federal standard is not adopted
iii	Polymeric coating of supporting substrates	VVV	N/A
jjj	VOC emissions from synthetic organic chemical manufacturing industry air oxidation unit processes	III	N/A
kkk	VOC emissions from synthetic organic chemical manufacturing industry distillation operations	NNN	N/A
lll	Small industrial-commercial-institutional steam generating units	Dc	January 20, 2011
mmm	VOC emissions from the polymer manufacturing industry	DDD	N/A
nnn	Municipal waste combustors	Ea	N/A
ooo	Grain elevators	DD	N/A
ppp	Mineral processing plants	UUU	N/A
qqq	VOC emissions from synthetic organic chemical manufacturing industry reactor processes	RRR	N/A
rrr	Municipal solid waste landfills, as defined by 40 CFR 60.751	WWW	April 10, 2000
sss	Municipal waste combustors	Eb	N/A
ttt	Hospital/medical/infectious waste incinerators (HMIWI)	Ec (partial adoption)*	N/A
uuu	New small municipal waste combustion units	AAAA	N/A
vvv	Commercial and industrial solid waste incineration	CCCC	December 1, 2000
www	Other solid waste incineration (OSWI) units	EEEE	N/A
xxx	Reserved	N/A	N/A
yyy	Stationary compression ignition internal combustion engines	III	N/A
zzz	Stationary spark ignition internal combustion engines	JJJ	N/A
aaaa	Stationary combustion turbines	KKKK	N/A
bbbb	Nitric acid plants	Ga	N/A
cccc	Sewage sludge incineration units	LLLL	N/A

\*The provisions in 60.50c(a) through (h) (exceptions to Subpart Ec requirements) and 60.51(c) (Subpart Ec definitions) are adopted by reference. No other provisions of Subpart Ec are adopted.

**23.1(3)** *Emission standards for hazardous air pollutants.* The federal standards for emissions of hazardous air pollutants, 40 Code of Federal Regulations Part 61 as amended or corrected through October 7, 2020, and 40 CFR Part 503 as adopted on August 4, 1999, are adopted by reference, except 40 CFR §61.20 to §61.26, §61.90 to §61.97, §61.100 to §61.108, §61.120 to §61.127, §61.190 to §61.193, §61.200 to §61.205, §61.220 to §61.225, and §61.250 to §61.256, and shall apply to the following affected pollutants and facilities and activities listed below. The corresponding 40 CFR Part 61 subpart designation is provided in the table below. A different date for adoption by reference may be included with the subpart designation in the table. Reference test methods (Appendix B), compliance status information requirements (Appendix A), quality assurance procedures (Appendix C) and the general provisions (Subpart A) of Part 61 also apply to the affected activities or facilities.

**Federal Emission Standards for Hazardous Air Pollutants (NESHAP)  
Adopted by Reference in 23.1(3)**

<b>23.1(3) paragraph</b>	<b>Affected source category</b>	<b>40 CFR Part 61 Subpart Adopted</b>	<b>Date of adoption (if different than 23.1(3) introductory paragraph) or note if standard is not adopted</b>
a	Asbestos	M	N/A
b	Beryllium	C	Not adopted. No facilities in Iowa. Paragraph reserved.
c	Beryllium rocket motor firing	D	Not adopted. No facilities in Iowa. Paragraph reserved.
d	Mercury	E	N/A
e	Vinyl chloride	F	N/A
f	Equipment leaks of benzene (fugitive emission sources)	J	N/A
g	Equipment leaks of volatile hazardous air pollutants (fugitive emission sources)	V	N/A
h	Inorganic arsenic emissions from arsenic trioxide and metallic arsenic production facilities	P	Not adopted. No facilities in Iowa. Paragraph reserved.
i	Inorganic arsenic emissions from glass manufacturing plants	N	N/A
j	Inorganic arsenic emissions from primary copper smelters	O	Not adopted. No facilities in Iowa. Paragraph reserved.
k	Benzene emissions from coke by-product recovery plants	L	N/A
l	Benzene emissions from benzene storage vessels	Y	N/A
m	Benzene emissions from benzene transfer operations	BB	N/A
n	Benzene waste operations	FF	N/A

**23.1(4)** *Emission standards for hazardous air pollutants for source categories.* The federal standards for emissions of hazardous air pollutants for source categories, 40 Code of Federal Regulations Part 63 as amended or corrected through March 29, 2023, are adopted by reference, except those provisions that cannot be delegated to the states. The corresponding 40 CFR Part 63 subpart designation is provided in the

table below. A different date for adoption by reference may be included with the subpart designation in the table. 40 CFR Part 63, Subpart B, incorporates the requirements of Clean Air Act Sections 112(g) and 112(j) and does not adopt standards for a specific affected facility. Test methods (Appendix A), sources defined for early reduction provisions (Appendix B), and determination of the fraction biodegraded (Fbio) in the biological treatment unit (Appendix C) of Part 63 also apply to the affected activities or facilities.

For the purpose of this subrule and the rules in 567—Chapters 20 through 35, the following terms shall, unless otherwise noted, have the meaning indicated in this subrule.

“*Hazardous air pollutant*” or “*HAP*” means the same as “hazardous air pollutant” set forth in 567—24.100(455B).

“*Major source*” means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless a lesser quantity is established, or in the case of radionuclides, where different criteria are employed. “*Area source*” means any stationary source of hazardous air pollutants that is not a “major source.”

“*Maximum achievable control technology (MACT) emission limitation for existing sources*,” as this definition is set forth in 40 CFR Subpart B, section 63.51, is adopted by reference.

“*Maximum achievable control technology (MACT) emission limitation for new sources*,” as this definition is set forth in 40 CFR Subpart B, section 63.51, is adopted by reference.

“*Maximum achievable control technology (MACT) floor*,” as this definition is set forth in 40 CFR Subpart B, section 63.51, is adopted by reference.

23.1(4) “*a*,” general provisions (Subpart A) of Part 63, shall apply to owners or operators who are subject to subsequent subparts of 40 CFR Part 63 (except when otherwise specified in a particular subpart or in a relevant standard) as adopted by reference in the table below.

**Federal Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories  
Adopted by Reference in 23.1(4)**

<b>23.1(4) paragraph</b>	<b>Affected source category</b>	<b>40 CFR Part 63 Subpart Adopted</b>	<b>Date of adoption (if different than 23.1(4) introductory paragraph) or note if standard is not adopted</b>
a	General provisions	A	N/A
b	Requirements for control technology determinations for major sources in accordance with Clean Air Act Sections 112(g) and 112(j)	B	N/A
c	Reserved	N/A	N/A
d	Compliance extensions for early reductions of hazardous air pollutants	D	N/A
e	Reserved	N/A	N/A
f	Emission standards for organic hazardous air pollutants from the synthetic chemical manufacturing industry	F	N/A
g	Emission standards for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry for process	G	N/A

23.1(4) paragraph	Affected source category	40 CFR Part 63 Subpart Adopted	Date of adoption (if different than 23.1(4) introductory paragraph) or note if standard is not adopted
	vents, storage vessels, transfer operations, and wastewater		
h	Emission standards for organic hazardous air pollutants for equipment leaks	H	N/A
i	Emission standards for organic hazardous air pollutants for certain processes subject to negotiated regulation for equipment leaks	I	N/A
j	Emission standards for hazardous air pollutants for polyvinyl chloride and copolymers production	Subparts J and HHHHHHH	Not adopted. No facilities in Iowa. Paragraph reserved.
k	Reserved	N/A	N/A
l	Emission standards for coke oven batteries	L	N/A
m	Perchloroethylene air emission standards for dry cleaning facilities	M	N/A
n	Emission standards for chromium emissions from hard and decorative chromium electroplating and chromium anodizing tanks	N	N/A
o	Emission standards for hazardous air pollutants for ethylene oxide commercial sterilization and fumigation operations	O	N/A
p	Reserved	N/A	N/A
q	Emission standards for hazardous air pollutants for industrial process cooling towers	Q	N/A
r	Emission standards for hazardous air pollutants for gasoline distribution: (Stage 1)	R	N/A
s	Emission standards for hazardous air pollutants for pulp and paper (noncombustion)	S	N/A
t	Emission standards for hazardous air pollutants: halogenated solvent cleaning	T	N/A
u	Emission standards for hazardous air pollutants: Group I polymers and resins	U	N/A
v	Reserved	N/A	N/A

<b>23.1(4) paragraph</b>	<b>Affected source category</b>	<b>40 CFR Part 63 Subpart Adopted</b>	<b>Date of adoption (if different than 23.1(4) introductory paragraph) or note if standard is not adopted</b>
w	Emission standards for hazardous air pollutants for epoxy resins production and nonnylon polyamides production	W	N/A
x	National emission standards for hazardous air pollutants from secondary lead smelting	X	Not adopted. No facilities in Iowa. Paragraph reserved.
y	Emission standards for marine tank vessel loading operations	Y	N/A
z	Reserved	N/A	N/A
aa	Emission standards for hazardous air pollutants for phosphoric acid manufacturing	AA	N/A
ab	Emission standards for hazardous air pollutants for phosphate fertilizers production	BB	N/A
ac	National emission standards for hazardous air pollutants: petroleum refineries	CC	Not adopted. No facilities in Iowa. Paragraph reserved.
ad	Emission standards for hazardous air pollutants for off-site waste and recovery operations	DD	N/A
ae	Emission standards for magnetic tape manufacturing operations	EE	N/A
af	Reserved	N/A	N/A
ag	National emission standards for hazardous air pollutants for source categories: aerospace manufacturing and rework facilities	GG	N/A
ah	Emission standards for hazardous air pollutants for oil and natural gas production	HH	N/A
ai	Emission standards for hazardous air pollutants for shipbuilding and ship repair (surface coating) operations	II	Not adopted. No facilities in Iowa. Paragraph reserved.
aj	Emission standards for hazardous air pollutants for HAP emissions from wood furniture manufacturing operations	JJ	N/A

23.1(4) paragraph	Affected source category	40 CFR Part 63 Subpart Adopted	Date of adoption (if different than 23.1(4) introductory paragraph) or note if standard is not adopted
ak	Emission standards for hazardous air pollutants for the printing and publishing industry	KK	N/A
al	Emission standards for hazardous air pollutants for primary aluminum reduction plants	LL	Not adopted. No facilities in Iowa. Paragraph reserved.
am	Emission standards for hazardous air pollutants for chemical recovery combustion sources at kraft, soda, sulfite, and stand-alone semichemical pulp mills	MM	October 11, 2017
an	Reserved	N/A	N/A
ao	Emission standards for tanks—level 1	OO	N/A
ap	Emission standards for containers	PP	N/A
aq	Emission standards for surface impoundments	QQ	N/A
ar	Emission standards for individual drain systems	RR	N/A
as	Emission standards for closed vent systems, control devices, recovery devices and routing to a fuel gas system or a process	SS	N/A
at	Emission standards for equipment leaks—control level 1	TT	N/A
au	Emission standards for equipment leaks—control level 2 standards	UU	N/A
av	Emission standards for oil-water separators and organic-water separators	VV	N/A
aw	Emission standards for storage vessels (tanks)—control level 2	WW	N/A
ax	Emission standards for ethylene manufacturing process units: heat exchange systems and waste operations	XX	N/A
ay	Emission standards for hazardous air pollutants: generic maximum achievable control technology (generic MACT)	YY	October 8, 2014
az to bb	Reserved	N/A	N/A

23.1(4) paragraph	Affected source category	40 CFR Part 63 Subpart Adopted	Date of adoption (if different than 23.1(4) introductory paragraph) or note if standard is not adopted
bc	Emission standards for hazardous air pollutants for steel pickling—HCL process facilities and hydrochloric acid regeneration plants	CCC	Not adopted. No facilities in Iowa. Paragraph reserved.
bd	Emission standards for hazardous air pollutants for mineral wool production	DDD	N/A
be	Emission standards for hazardous air pollutants from hazardous waste combustors	EEE	N/A
bf	Reserved	N/A	N/A
bg	Emission standards for hazardous air pollutants for pharmaceutical manufacturing	GGG	N/A
bh	Emission standards for hazardous air pollutants for natural gas transmission and storage	HHH	N/A
bi	Emission standards for hazardous air pollutants for flexible polyurethane foam production	III	N/A
bj	Emission standards for hazardous air pollutants: Group IV polymers and resins	JJJ	N/A
bk	Reserved	N/A	N/A
bl	Emission standards for hazardous air pollutants for Portland cement manufacturing operations	LLL	N/A
bm	Emission standards for hazardous air pollutants for pesticide active ingredient production	MMM	N/A
bn	Emission standards for hazardous air pollutants for wool fiberglass manufacturing	NNN	N/A
bo	Emission standards for hazardous air pollutants for amino/phenolic resins production	OOO	N/A
bp	Emission standards for hazardous air pollutants for polyether polyols production	PPP	N/A

23.1(4) paragraph	Affected source category	40 CFR Part 63 Subpart Adopted	Date of adoption (if different than 23.1(4) introductory paragraph) or note if standard is not adopted
bq	Emission standards for hazardous air pollutants for primary copper smelting	QQQ	Not adopted. No facilities in Iowa. Paragraph reserved.
br	Emission standards for hazardous air pollutants for secondary aluminum production	RRR	N/A
bs	Reserved	N/A	N/A
bt	Emission standards for hazardous air pollutants for primary lead smelting	TTT	Not adopted. No facilities in Iowa. Paragraph reserved.
bu	Emission standards for hazardous air pollutants for petroleum refineries: catalytic cracking units, catalytic reforming units, and sulfur recovery units	UUU	Not adopted. No facilities in Iowa. Paragraph reserved.
bv	Emission standards for hazardous air pollutants: publicly owned treatment works (POTW)	VVV	N/A
bw	Reserved	N/A	N/A
bx	Emission standards for hazardous air pollutants for ferroalloys production: ferromanganese and silicomanganese	XXX	Not adopted. No facilities in Iowa. Paragraph reserved.
by and bz	Reserved	N/A	N/A
ca	Emission standards for hazardous air pollutants: municipal solid waste landfills	AAAA	April 20, 2006
cb	Reserved	N/A	N/A
cc	Emission standards for hazardous air pollutants for the manufacturing of nutritional yeast	CCCC	N/A
cd	Emission standards for hazardous air pollutants for plywood and composite wood products (formerly plywood and particle board manufacturing)	DDDD	October 29, 2007
ce	Emission standards for hazardous air pollutants for organic liquids distribution (non-gasoline)	EEEE	July 17, 2008
cf	Emission standards for hazardous air pollutants for miscellaneous	FFFF	July 14, 2006

23.1(4) paragraph	Affected source category	40 CFR Part 63 Subpart Adopted	Date of adoption (if different than 23.1(4) introductory paragraph) or note if standard is not adopted
	organic chemical (MON) manufacturing		
cg	Emission standards for hazardous air pollutants for solvent extraction for vegetable oil production	GGGG	N/A
ch	Emission standards for hazardous air pollutants for wet-formed fiberglass mat production	HHHH	N/A
ci	Emission standards for hazardous air pollutants for surface coating of automobiles and light-duty trucks	IIII	N/A
cj	Emission standards for hazardous air pollutants: paper and other web coating	JJJJ	N/A
ck	Emission standards for hazardous air pollutants for surface coating of metal cans	KKKK	N/A
cl	Reserved	N/A	N/A
cm	Emission standards for hazardous air pollutants for surface coating of miscellaneous metal parts and products	MMMM	N/A
cn	Emission standards for hazardous air pollutants: surface coating of large appliances	NNNN	N/A
co	Emission standards for hazardous air pollutants for printing, coating, and dyeing of fabrics and other textiles	OOOO	N/A
cp	Emission standards for surface coating of plastic parts and products	PPPP	N/A
cq	Emission standards for hazardous air pollutants for surface coating of wood building products	QQQQ	N/A
cr	Emission standards for hazardous air pollutants: surface coating of metal furniture	RRRR	N/A
cs	Emission standards for hazardous air pollutants: surface coating of metal coil	SSSS	N/A

<b>23.1(4) paragraph</b>	<b>Affected source category</b>	<b>40 CFR Part 63 Subpart Adopted</b>	<b>Date of adoption (if different than 23.1(4) introductory paragraph) or note if standard is not adopted</b>
ct	Emission standards for hazardous air pollutants for leather finishing operations	TTTT	N/A
cu	Emission standards for hazardous air pollutants for cellulose products manufacturing	UUUU	N/A
cv	Emission standards for hazardous air pollutants for boat manufacturing	VVVV	N/A
cw	Emission standards for hazardous air pollutants: reinforced plastic composites production	WWWW	N/A
cx	Emission standards for hazardous air pollutants: rubber tire manufacturing	XXXX	N/A
cy	Emission standards for hazardous air pollutants for stationary combustion turbines	YYYY	November 19, 2020
cz	Emission standards for stationary reciprocating internal combustion engines	ZZZZ	N/A
da	Emission standards for hazardous air pollutants for lime manufacturing plants	AAAAA	April 20, 2006
db	Emission standards for hazardous air pollutants: semiconductor manufacturing	BBBBB	N/A
dc	Emission standards for hazardous air pollutants for coke ovens: pushing, quenching, and battery stacks	CCCCC	N/A
dd	Emission standards for industrial, commercial and institutional boilers and process heaters	DDDDD	Not adopted. Paragraph reserved.
de	Emission standards for hazardous air pollutants for iron and steel foundries	EEEEE	N/A
df	Emission standards for hazardous air pollutants for integrated iron and steel manufacturing	FFFFF	July 13, 2006
dg	Emission standards for hazardous air pollutants: site remediation	GGGGG	November 29, 2006

23.1(4) paragraph	Affected source category	40 CFR Part 63 Subpart Adopted	Date of adoption (if different than 23.1(4) introductory paragraph) or note if standard is not adopted
dh	Emission standards for hazardous air pollutants for miscellaneous coating manufacturing	HHHHH	N/A
di	Emission standards for mercury emissions from mercury cell chlor-alkali plants	IIIII	N/A
dj	Emission standards for hazardous air pollutants for brick and structural clay products manufacturing	JJJJJ	Not adopted. No facilities in Iowa. Paragraph reserved.
dk	Emission standards for hazardous air pollutants for clay ceramics manufacturing	KKKKK	Not adopted. No facilities in Iowa. Paragraph reserved.
dl	Emission standards for hazardous air pollutants: asphalt processing and asphalt roofing manufacturing	LLLLL	N/A
dm	Emission standards for hazardous air pollutants: flexible polyurethane foam fabrication operations	MMMMM	N/A
dn	Emission standards for hazardous air pollutants: hydrochloric acid production	NNNNN	N/A
do	Reserved	N/A	N/A
dp	Emission standards for hazardous air pollutants: engine test cells/stands	PPPPP	N/A
dq	Emission standards for hazardous air pollutants for friction materials manufacturing facilities	QQQQQ	N/A
dr	Emission standards for hazardous air pollutants: taconite iron ore processing	RRRRR	Not adopted. No facilities in Iowa. Paragraph reserved.
ds	Emission standards for hazardous air pollutants for refractory products manufacturing	SSSSS	N/A
dt	Emission standards for hazardous air pollutants: primary magnesium refining	TTTTT	Not adopted. No facilities in Iowa. Paragraph reserved.
du and dv	Reserved	N/A	N/A
dw	Emission standards for hazardous air pollutants for hospital ethylene oxide sterilizer area sources	WWWWW	N/A

23.1(4) paragraph	Affected source category	40 CFR Part 63 Subpart Adopted	Date of adoption (if different than 23.1(4) introductory paragraph) or note if standard is not adopted
dx	Reserved	N/A	N/A
dy	Emission standards for hazardous air pollutants for electric arc furnace steelmaking area sources	YYYYYY	N/A
dz	Emission standards for hazardous air pollutants for iron and steel foundry area sources	ZZZZZ	N/A
ea	Reserved	N/A	N/A
eb	Emission standards for hazardous air pollutants for gasoline distribution area sources: bulk terminals, bulk plants and pipeline facilities	BBBBBB	N/A
ec	Emission standards for hazardous air pollutants for area sources: gasoline dispensing facilities	CCCCCC	N/A
ed to eg	Reserved	N/A	N/A
eh	Emission standards for hazardous air pollutants for area sources: paint stripping and miscellaneous surface coating operations	HHHHHH	N/A
ei	Reserved	N/A	N/A
ej	Emission standards for hazardous air pollutants for area sources: industrial, commercial, and institutional boilers	JJJJJ	N/A
ek	Reserved	N/A	N/A
el	Emission standards for hazardous air pollutants for acrylic and modacrylic fibers production area sources	LLLLLL	N/A
em	Emission standards for hazardous air pollutants for carbon black production area sources	MMMMMM	N/A
en	Emission standards for hazardous air pollutants for chemical manufacturing of chromium compounds area sources	NNNNNN	N/A
eo	Emission standards for hazardous air pollutants for flexible polyurethane foam production and fabrication area sources	OOOOOO	N/A

23.1(4) paragraph	Affected source category	40 CFR Part 63 Subpart Adopted	Date of adoption (if different than 23.1(4) introductory paragraph) or note if standard is not adopted
ep	Emission standards for hazardous air pollutants for lead acid battery manufacturing area sources	PPPPPP	November 19, 2020
eq	Emission standards for hazardous air pollutants for wood preserving area sources	QQQQQQ	N/A
er	Emission standards for hazardous air pollutants for clay ceramics manufacturing area sources	RRRRRR	N/A
es	Emission standards for hazardous air pollutants for glass manufacturing area sources	SSSSSS	N/A
et	Emissions standards for hazardous air pollutants for secondary nonferrous metals processing area sources	TTTTTT	N/A
eu	Reserved	N/A	N/A
ev	Emission standards for hazardous air pollutants for area sources	VVVVVV	N/A
ew	Emission standards for hazardous air pollutants for area sources: plating and polishing	WWWWWW	N/A
ex	Emission standards for hazardous air pollutants for area sources: metal fabrication and finishing	XXXXXX	N/A
ey	Reserved	N/A	N/A
ez	Emission standards for hazardous air pollutants for area sources: aluminum, copper, and other nonferrous foundries	ZZZZZZ	N/A
fa	Reserved	N/A	N/A
fb	National emission standards for hazardous air pollutants for area sources: chemical preparations industry	BBBBBB	N/A
fc	Emission standards for hazardous air pollutants for area sources: paint and allied products manufacturing	CCCCCC	N/A
fd	Emission standards for hazardous air pollutants for area sources: prepared feeds manufacturing	DDDDDD	N/A

**23.1(5) Emission guidelines.** The emission guidelines and compliance times for existing sources, as defined in 40 Code of Federal Regulations Part 60 as amended through March 21, 2011, shall apply to the following affected facilities. The corresponding 40 CFR Part 60 subpart designation is in parentheses. A different CFR reference and date for adoption by reference may be included with the subpart designation indicated in the paragraphs of this subrule. The control of the designated pollutants will be in accordance with federal standards established in Sections 111 and 129 of the Act and 40 CFR Part 60, Subpart B (Adoption and Submittal of State Plans for Designated Facilities), and the applicable subpart(s) for the existing source. Reference test methods (Appendix A), performance specifications (Appendix B), determination of emission rate change (Appendix C), quality assurance procedures (Appendix F) and the general provisions (Subpart A) of 40 CFR Part 60, as adopted by reference in 23.1(2), also apply to the affected facilities.

*a. Emission guidelines for municipal solid waste landfills (Subpart Cc).* Emission guidelines and compliance times for the control of certain designated pollutants from designated municipal solid waste landfills shall be in accordance with federal standards established in Subparts Cc (Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills) and WWW (Standards of Performance for Municipal Solid Waste Landfills) of 40 CFR Part 60 as amended through April 10, 2000.

(1) Definitions. For the purpose of 23.1(5) "a," the definitions have the same meaning given to them in the Act and 40 CFR Part 60, Subparts A (General Provisions), B, and WWW, if not defined in this subparagraph.

"Municipal solid waste landfill" or "MSW landfill" means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of RCRA Subtitle D wastes such as commercial solid waste, nonhazardous sludge, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill or a lateral expansion.

(2) Designated facilities.

1. The designated facility to which the emission guidelines apply is each existing MSW landfill for which construction, reconstruction or modification was commenced before May 30, 1991.

2. Physical or operational changes made to an existing MSW landfill solely to comply with an emission guideline are not considered a modification or reconstruction and would not subject an existing MSW landfill to the requirements of 40 CFR Part 60, Subpart WWW (40 CFR 60.750).

3. For MSW landfills subject to 567—24.101(455B) only because of applicability to 23.1(5) "a"(2), the following apply for obtaining and maintaining a Title V operating permit under 567—24.104(455B):

- The owner or operator of an MSW landfill with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters is not required to obtain an operating permit for the landfill.

- The owner or operator of an MSW landfill with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters on or before June 22, 1998, becomes subject to the requirements of 567—subrule 24.105(1) on September 20, 1998. This requires the landfill to submit a Title V permit application to the air quality bureau, department of natural resources, no later than September 20, 1999.

- The owner or operator of a closed MSW landfill does not have to maintain an operating permit for the landfill if either of the following conditions are met: the landfill was never subject to the requirement for a control system under 23.1(5) "a"(3), or the owner or operator meets the conditions for control system removal specified in 40 CFR §60.752(b)(2)(v).

(3) Emission guidelines for municipal solid waste landfill emissions.

1. MSW landfill emissions at each MSW landfill meeting the conditions below shall be controlled. A design capacity report must be submitted to the director by November 18, 1997.

The landfill has accepted waste at any time since November 8, 1987, or has additional design capacity available for future waste deposition.

The landfill has a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters. The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions shall be documented and submitted with the report.

All calculations used to determine the maximum design capacity must be included in the design capacity report.

The landfill has a nonmethane organic compound (NMOC) emission rate of 50 megagrams per year or more. If the MSW landfill's design capacity exceeds the established thresholds in 23.1(5)"a"(3)"1," the NMOC emission rate calculations must be provided with the design capacity report.

2. The planning and installation of a collection and control system shall meet the conditions provided in 40 CFR 60.752(b)(2) at each MSW landfill meeting the conditions in 23.1(5)"a"(3)"1."

3. MSW landfill emissions collected through the use of control devices must meet the following requirements, except as provided in 40 CFR 60.24 after approval by the director and U.S. Environmental Protection Agency:

An open flare designed and operated in accordance with the parameters established in 40 CFR 60.18; a control system designed and operated to reduce NMOC by 98 weight percent; or an enclosed combustor designed and operated to reduce the outlet NMOC concentration to 20 parts per million as hexane by volume, dry basis at 3 percent oxygen, or less.

(4) Test methods and procedures. The following must be used:

1. The calculation of the landfill NMOC emission rate listed in 40 CFR 60.754, as applicable, to determine whether the landfill meets the condition in 23.1(5)"a"(3)"3";

2. The operational standards in 40 CFR 60.753;

3. The compliance provisions in 40 CFR 60.755; and

4. The monitoring provisions in 40 CFR 60.756.

(5) Reporting and recordkeeping requirements. The recordkeeping and reporting provisions listed in 40 CFR 60.757 and 60.758, as applicable, except as provided under 40 CFR 60.24 after approval by the director and U.S. Environmental Protection Agency, shall be used.

(6) Compliance times.

1. Except as provided for under 23.1(5)"a"(6)"2," planning, awarding of contracts, and installation of MSW landfill air emission collection and control equipment capable of meeting the emission guidelines established under 23.1(5)"a"(3) shall be accomplished within 30 months after the date the initial NMOC emission rate report shows NMOC emissions greater than or equal to 50 megagrams per year.

2. For each existing MSW landfill meeting the conditions in 23.1(5)"a"(3)"1" whose NMOC emission rate is less than 50 megagrams per year on August 20, 1997, installation of collection and control systems capable of meeting emission guidelines in 23.1(5)"a"(3) shall be accomplished within 30 months of the date when the condition in 23.1(5)"a"(3)"1" is met (i.e., the date of the first annual nonmethane organic compounds emission rate which equals or exceeds 50 megagrams per year).

*b. Emission guidelines for hospital/medical/infectious waste incinerators (40 CFR Part 62, Subpart HHH).* The provisions in 62.14400(b) (exceptions to Subpart HHH requirements) and 62.14490 (Subpart HHH definitions) as amended through May 13, 2013, are adopted by reference. No other provisions of Subpart HHH are adopted.

*c. Emission guidelines and compliance schedules for existing commercial and industrial solid waste incineration units that commenced construction on or before November 30, 1999.* Emission guidelines and compliance schedules for the control of designated pollutants from affected commercial and industrial solid waste incinerators that commenced construction on or before November 30, 1999, shall be in accordance with requirements established in Subpart III of 40 CFR Part 62 and 40 CFR §62.3916 as adopted through August 24, 2004.

*d. Reserved.*

*e. Emission guidelines and compliance times for existing sewage sludge incineration units (40 CFR Part 62, Subpart LLL).* Emission guidelines and compliance times for control of designated pollutants from affected sewage sludge incineration (SSI) units that commenced construction or reconstruction on or before October 14, 2010, shall be in accordance with federal standards established in Subpart LLL of 40 CFR Part 62 as amended through April 29, 2016.

**23.1(6)** *Calculation of emission limitations based upon stack height.* This rule sets limits for the maximum stack height credit to be used in ambient air quality modeling for the purpose of setting an

emission limitation and calculating the air quality impact of a source. The rule does not limit the actual physical stack height for any source.

For the purpose of this subrule, definitions of “stack,” “a stack in existence,” “dispersion technique,” “good engineering practice (GEP) stack height,” “nearby” and “excessive concentration” as set forth in 40 CFR §51.100(ff) through (kk) as amended through June 14, 1996, are adopted by reference.

[ARC 7952C, IAB 5/15/24, effective 6/19/24; Editorial change: IAC Supplement 7/10/24]

**567—23.2(455B) Open burning.** For the purpose of these rules and the rules in 567—Chapters 20 through 35, the following terms shall, unless otherwise noted, have the meaning indicated in this rule. The definitions set out in Iowa Code sections 455B.101, 455B.131, and 455B.411 are incorporated verbatim in these rules.

“*Backyard burning*” means the disposal of residential waste by open burning on the premises of the property where such waste is generated.

“*Garbage*” means all solid and semisolid putrescible and nonputrescible animal and vegetable wastes resulting from the handling, preparing, cooking, storing and serving of food or of material intended for use as food but excluding recognized industrial by-products.

“*Landscape waste*” means any vegetable or plant wastes except garbage. The term includes trees, tree trimmings, branches, stumps, brush, weeds, leaves, grass, shrubbery and yard trimmings.

“*Open burning*” means any burning of combustible materials where the products of combustion are emitted into the open air without passing through a chimney or stack.

“*Refuse*” means garbage, rubbish and all other putrescible and nonputrescible wastes, except sewage and water-carried trade wastes.

“*Residential waste*” means any refuse generated on the premises as a result of residential activities. The term includes landscape waste grown on the premises or deposited thereon by the elements, but excludes garbage, tires, trade wastes, and any locally recyclable goods or plastics.

“*Rubbish*” means all waste materials of nonputrescible nature.

“*Trade waste*” means any refuse resulting from the prosecution of any trade, business, industry, commercial venture (including farming and ranching), or utility or service activity, and any governmental or institutional activity, whether or not for profit.

**23.2(1) Prohibition.** No person shall allow, cause or permit open burning of combustible materials, except as provided in 23.2(2) and 23.2(3).

**23.2(2) Variances from rules.** Any person wishing to conduct open burning of materials not exempted in 23.2(3) may make application for a variance as specified in 567—subrule 21.2(1). In addition to requiring the information specified under 567—subrule 21.2(1), the director may require any person applying for a variance from the open burning rules to submit adequate documentation to allow the director to assess whether granting the variance will hinder attainment or maintenance of a National Ambient Air Quality Standard (NAAQS).

**23.2(3) Exemptions.** The open burning exemptions specified in this subrule do not provide exemptions from any other applicable environmental regulations. In particular, the exemptions contained in this subrule do not absolve any person from compliance with the rules for solid waste disposal, including ash disposal, and solid waste permitting contained in 567—Chapters 100 through 130 or the rules for storm water runoff and storm water permitting contained in 567—Chapters 60 and 64. The following exemptions apply unless prohibited by local ordinances or regulations, except that the exemptions for open burning of trees and tree trimming (23.2(3)“b”), landscape waste (23.2(3)“d”), residential waste (23.2(3)“f”), agricultural structures (23.2(3)“i”), and demolished buildings (23.2(3)“j”) are unavailable within the cities of Cedar Rapids, Marion, Hiawatha, Council Bluffs, Carter Lake, Des Moines, West Des Moines, Clive, Windsor Heights, Urbandale, and Pleasant Hill.

*a. Disaster rubbish.* The open burning of rubbish, including landscape waste, for the duration of the community disaster period in cases where an officially declared emergency condition exists. Burning of any structures or demolished structures shall be conducted in accordance with 40 CFR Section 61.145 as amended through January 16, 1991, which is the “Standard for Demolition and Renovation” of the asbestos National Emission Standard for Hazardous Air Pollutants.

*b. Trees and tree trimmings.* The open burning of trees and tree trimmings not originated on the premises provided that the burning site is operated by a local governmental entity, the burning site is fenced and access is controlled, burning is conducted on a regularly scheduled basis and is supervised at all times, burning is conducted only when weather conditions are favorable with respect to surrounding property, and the burning site is limited to areas at least one-quarter mile from any inhabited building unless a written waiver in the form of an affidavit is submitted by the owner of the building to the department and to the local governmental entity prior to the first instance of open burning at the site which occurs after November 13, 1996. The written waiver shall become effective only upon recording in the office of the recorder of deeds of the county in which the inhabited building is located. However, when the open burning of trees and tree trimmings causes air pollution as defined in Iowa Code section 455B.131(3), the department may take appropriate action to secure relocation of the burning operation. Rubber tires shall not be used to ignite trees and tree trimmings.

This exemption shall not apply within the area classified as the PM10 (inhalable) particulate Group II area of Mason City. This Group II area is described as follows: the area in Cerro Gordo County, Iowa, in Lincoln Township including Sections 13, 24 and 25; in Lime Creek Township including Sections 18, 19, 20, 21, 27, 28, 29, 30, 31, 32, 33, 34 and 35; in Mason Township the W ½ of Section 1, Sections 2, 3, 4, 5, 8, 9, the N ½ of Section 11, the NW ¼ of Section 12, the N ½ of Section 16, the N ½ of Section 17 and the portions of Sections 10 and 15 north and west of the line from U.S. Highway 18 south on Kentucky Avenue to 9th Street SE; thence west on 9th Street SE to the Minneapolis and St. Louis railroad tracks; thence south on Minneapolis and St. Louis railroad tracks to 19th Street SE; thence west on 19th Street SE to the section line between Sections 15 and 16.

*c. Flare stacks.* The open burning or flaring of waste gases, providing such open burning or flaring is conducted in compliance with 23.3(2)“d” and 23.3(3)“e.”

*d. Landscape waste.* The disposal by open burning of landscape waste originating on the premises. However, the burning of landscape waste produced in clearing, grubbing and construction operations shall be limited to areas located at least one-fourth mile from any building inhabited by other than the landowner or tenant conducting the open burning. Rubber tires shall not be used to ignite landscape waste.

*e. Recreational fires.* Open fires for cooking, heating, recreation and ceremonies, provided they comply with 23.3(2)“d.” Burning rubber tires is prohibited from this activity.

*f. Residential waste.* Backyard burning of residential waste at dwellings of four-family units or less. The adoption of more restrictive ordinances or regulations of a governing body of the political subdivision, relating to control of backyard burning, shall not be precluded by these rules.

*g. Training fires.* For purposes of 23.2(3), a “training fire” is a fire set for the purposes of conducting bona fide training of public or industrial employees in firefighting methods. For purposes of this paragraph, “bona fide training” means training that is conducted according to the National Fire Protection Association 1403 Standard on Live Fire Training Evolutions (2002 Edition) or a comparable training fire standard. A training fire may be conducted, provided that all of the following conditions are met:

- (1) A training fire on a building is conducted with the building structurally intact.
- (2) The training fire does not include the controlled burn of a demolished building.
- (3) If the training fire is to be conducted on a building, written notification is provided to the department on DNR Form 542-8010, Notification of an Iowa Training Fire-Demolition or a Controlled Burn of a Demolished Building, and is postmarked or delivered to the director at least ten working days before such action commences.

- (4) Notification shall be made in accordance with 40 CFR Section 61.145, “Standard for Demolition and Renovation” of the asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) as amended through January 16, 1991.

- (5) All asbestos-containing materials shall be removed prior to the training fire.

- (6) Asphalt roofing may be burned in the training fire only if notification to the director contains testing results indicating that none of the layers of asphalt roofing contain asbestos. During each calendar year, each fire department may conduct no more than two training fires on buildings where asphalt roofing has not been removed, provided that for each of those training fires the asphalt roofing material present has been tested to ensure that it does not contain asbestos. Each fire department’s limit on the burning of

asphalt roofing shall include both training fires and the controlled burning of a demolished building, as specified in 23.2(3) “j.”

(7) Rubber tires shall not be burned during a training fire.

*h. Paper or plastic pesticide containers and seed corn bags.* The disposal by open burning of paper or plastic pesticide containers (except those formerly containing organic forms of beryllium, selenium, mercury, lead, cadmium or arsenic) and seed corn bags resulting from farming activities occurring on the premises. Such open burning shall be limited to areas located at least one-fourth mile from any building inhabited by other than the landowner or tenant conducting the open burning, livestock area, wildlife area, or water source. The amount of paper or plastic pesticide containers and seed corn bags that can be disposed of by open burning shall not exceed one day’s accumulation or 50 pounds, whichever is less. However, when the burning of paper or plastic pesticide containers or seed corn bags causes a nuisance, the director may take action to secure relocation of the burning operation. Since the concentration levels of pesticide combustion products near the fire may be hazardous, the person conducting the open burning should take precautions to avoid inhalation of the pesticide combustion products.

*i. Agricultural structures.* The open burning of agricultural structures, provided that the open burning occurs on the premises and, for agricultural structures located within a city or town, at least one-fourth mile from any building inhabited by a person other than the landowner, a tenant, or an employee of the landowner or tenant conducting the open burning unless a written waiver in the form of an affidavit is submitted by the owner of the building to the department prior to the open burning; all chemicals and asphalt roofing are removed; burning is conducted only when weather conditions are favorable with respect to surrounding property; and permission from the local fire chief is secured in advance of the burning. Rubber tires shall not be used to ignite agricultural structures. The asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) as amended through January 16, 1991, requires the burning of agricultural structures to be conducted in accordance with 40 CFR Section 61.145, “Standard for Demolition and Renovation.”

For the purposes of this subrule, “agricultural structures” means barns, machine sheds, storage cribs, animal confinement buildings, and homes located on the premises and used in conjunction with crop production, livestock or poultry raising and feeding operations. “Agricultural structures,” for asbestos NESHAP purposes, includes all of the above, with the exception of a single residential structure on the premises having four or fewer dwelling units, which has been used only for residential purposes.

*j. Controlled burning of a demolished building.* A city, as “city” is defined in Iowa Code section 362.2(4), with approval of its council, as “council” is defined in Iowa Code section 362.2(8), may conduct a controlled burn of a demolished building. A city is the only party that may conduct such a burn and is responsible for ensuring that all of the following conditions are met:

(1) Prohibition. The controlled burning of a demolished building is prohibited within the city limits of Cedar Rapids, Marion, Hiawatha, Council Bluffs, Carter Lake, Des Moines, West Des Moines, Clive, Windsor Heights, Urbandale, Pleasant Hill, Buffalo, Davenport, Mason City or any other area where area-specific state implementation plans require the control of particulate matter.

(2) Notification requirements. For each building proposed to be burned, the city fire department or a city official, on behalf of the city, shall submit to the department a completed notification postmarked at least 10 working days prior to commencing demolition and at least 30 days before the proposed controlled burn commences. Documentation of city council approval shall be submitted with the notification. Information required to be provided shall include the exact location of the burn site; the approximate distance to the nearest neighboring residence or business; the method used by the city to notify nearby residents of the proposed burn; an explanation of why alternative methods of demolition debris management are not being used; and information required by 40 CFR Section 61.145, “Standard for Demolition and Renovation” of the asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP), as amended through January 16, 1991. Notification shall be provided on DNR Form 542-8010, Notification of an Iowa Training Fire-Demolition or a Controlled Burn of a Demolished Building. For burns conducted outside the city limits, the city shall send to the chairperson of the applicable county board a copy of the completed DNR notification Form 542-8010 and documentation of city council approval.

Notification to the county board shall be postmarked, faxed or sent by email at least 30 days before the proposed controlled burn commences.

(3) Asbestos removal requirements. All asbestos-containing materials shall be removed before the building to be burned is demolished. The department may require proof that any applicable inspection, notification, removal and demolition occurred, or will occur, in accordance with 40 CFR Section 61.145, “Standard for Demolition and Renovation” of the asbestos NESHAP, as amended through January 16, 1991.

(4) Requirements for asphalt roofing. During each calendar year, each city shall conduct no more than two controlled burns of a demolished building in which asphalt roofing has not been removed, provided that for each controlled burn of a demolished building the asphalt roofing material present has been tested to ensure that it does not contain asbestos. Each city’s limit on the burning of asphalt roofing shall include both the controlled burning of a demolished building and training fires, as specified in 23.2(3) “g.”

(5) Building size limit. For each proposed controlled burn located within the city limits, more than one demolished building may be included in the burn, provided that the sum total of all building material to be burned at a designated site does not exceed 1,700 square feet in size. For a controlled burn site located outside the city limits, the sum total of all building material to be burned, per day, may not exceed 1,700 square feet in size. For purposes of this subparagraph, “square feet” includes both finished and unfinished basements and excludes unfinished attics, carports, attached garages, and porches that are not protected from weather.

(6) Time of day requirements. The controlled burning of a demolished building may be conducted only between the hours of 6 a.m. and 6 p.m. and only when weather conditions are favorable with respect to surrounding property. The city shall adequately schedule and sufficiently control the burn to ensure that burning is completed by 6 p.m.

(7) Prohibited materials. Rubber tires, chemicals, furniture, carpeting, household appliances, vinyl products (such as flooring or siding), trade waste, garbage, rubbish, landscape waste, residential waste, and other nonstructural materials shall not be burned.

(8) Limits on the number and location of burns. For burns conducted within the city limits, each city may undertake no more than one controlled burn of demolished building material in every 0.6-mile-radius circle during each calendar year. For burn sites established outside the city limits, each city shall undertake no more than one controlled burn of demolished building material per day. A burn site outside the city limits must be located at least 0.6 of a mile from any building inhabited by a person, as “person” is defined in Iowa Code section 362.2(17).

(9) Requirements for burn access and supervision. The city shall control access to all demolished building burn sites. Representatives of the city who are city employees or who are hired by the city shall supervise the burning of demolished building material at all times.

(10) Recordkeeping requirements. The city shall retain at least one copy of all notifications and supplementary information required to be sent to the department under 23.2(3) “j”(2). Additionally, the city shall maintain a map of the exact location of each burn site and supporting documentation showing the date of each demolished building burn and the square feet of building material burned on each date. All maps, notifications and associated records shall be maintained by the city clerk, as “clerk” is defined in Iowa Code section 362.2(7), for a period of at least three years and shall be made available for inspection by the department upon request.

(11) Variance from this paragraph. In accordance with 567—subrules 21.2(1) and 23.2(2), a city may apply for a variance from the specific conditions for controlled burning of a demolished building and may request that the director conduct a review of the ambient air impacts of the request. The director shall approve or deny the request in accordance with 567—subrule 21.2(4).

(12) Compliance with other applicable environmental regulations. Compliance with the exemption requirements in this paragraph shall not absolve a city of the responsibility to comply with any other applicable environmental regulations. In particular, a city conducting a controlled burn of a demolished building shall comply with all applicable solid waste disposal, including ash disposal, and solid waste permitting rules contained in 567—Chapters 100 through 130, as well as all applicable storm water discharge and storm water permitting rules contained in 567—Chapters 60 and 64.

[ARC 7952C, IAB 5/15/24, effective 6/19/24]

**567—23.3(455B) Specific contaminants.**

**23.3(1) General.** The emission standards contained in this rule shall apply to each source operation unless performance standard for the process is specified in 23.1(2) through 23.1(5), in which case the performance standard shall apply.

**23.3(2) Particulate matter.** No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567—Chapter 21.

*a. General emission rate.*

(1) For sources constructed, modified or reconstructed on or after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot (dscf) of exhaust gas.

(2) For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from the equations below, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas.

The process weight rates up to 60,000 lb/hr shall be accomplished by the use of the equation:

$$E=4.10 \times P^{0.67},$$

and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation:

$$E=55.0 \times P^{0.11}-40,$$

where E = rate of emission in lb/hr, and

P = process weight in tons/hr

*b. Combustion for indirect heating.* Emissions of particulate matter from the combustion of fuel for indirect heating or for power generation shall be limited by the ASME Standard APS-1, Second Edition, November 1968, "Recommended Guide for the Control of Dust Emission—Combustion for Indirect Heat Exchangers." For the purpose of this paragraph, the allowable emissions shall be calculated from equation (15) in that standard, with Comax2=50 micrograms per cubic meter. The maximum ground level dust concentrations designated are above the background level. For plants with 4,000 million Btu/hour input or more, the "a" factor shall be 1.0. In plants with less than 4,000 million Btu/hour input, appropriate "a" factors, less than 1.0, shall be applied. Pertinent correction factors, as specified in the standard, shall be applied for installations with multiple stacks. However, for fuel-burning units in operation on January 13, 1976, the maximum allowable emissions calculated under APS-1 for the facility's equipment configuration on January 13, 1976, shall not be increased even if the changes in the equipment or stack configuration would otherwise allow a recalculation and a higher maximum allowable emission under APS-1.

(1) Outside any standard metropolitan statistical area, the maximum allowable emissions from each stack, irrespective of stack height, shall be 0.8 pounds of particulates per million Btu input.

(2) Inside any standard metropolitan statistical area, the maximum allowable emission from each stack, irrespective of stack height, shall be 0.6 pounds of particulates per million Btu input.

(3) For a new fossil fuel-fired steam generating unit of more than 250 million Btu per hour heat input, 23.1(2)"a" shall apply. For a new unit of between 150 million and 250 million (inclusive) Btu per hour heat input, the maximum allowable emissions from such new unit shall be 0.2 pounds of particulates per million Btu of heat input. For a new unit of less than 150 million Btu per hour heat input, the maximum allowable emissions from such new unit shall be 0.6 pounds of particulates per million Btu of heat input.

(4) Measurements of emissions from a particulate source will be made in accordance with the provisions of 567—Chapter 25.

(5) For fuel-burning sources in operation prior to July 29, 1977, which are not subject to 23.1(2) and which significantly impact a primary or secondary particulate standard nonattainment area, the emission limitations specified in this subparagraph apply. A significant impact shall be equal to or exceeding 5 micrograms of particulate matter per cubic meter of air (24-hour average) or 1 microgram of particulate matter per cubic meter of air (annual average) determined by an EPA-approved single source dispersion model using allowable emission rates and five-year worst-case meteorological conditions. In the case where two or more boilers discharge into a common stack, the applicable stack emission limitation shall be based upon the heat input of the largest operating boiler. The plantwide allowable emission limitation shall

be the weighted average of the allowable emission limitations for each stack or the applicable APS-1 plantwide standard as determined under 23.3(2)“b,” whichever is more stringent.

The maximum allowable emission rate for a single stack with a total heat input capacity less than 250 million Btu per hour shall be 0.60 pound of particulate matter per million Btu heat input, the maximum allowable emission rate for a single stack with a total heat input capacity greater than or equal to 250 million Btu per hour and less than 500 million Btu per hour shall be 0.40 pound of particulate matter per million Btu heat input, and the maximum allowable emission rate for a single stack with a total heat input capacity greater than or equal to 500 million Btu per hour shall be 0.30 pound of particulate matter per million Btu heat input. All sources regulated under this subparagraph shall demonstrate compliance by October 1, 1981; however, a source is considered to be in compliance with this subparagraph if by October 1, 1981, it is on a compliance schedule to be completed as expeditiously as possible, but no later than December 31, 1982.

*c. Fugitive dust.*

(1) Attainment and unclassified areas. A person shall take reasonable precautions to prevent particulate matter from becoming airborne in quantities sufficient to cause a nuisance as defined in Iowa Code section 657.1 when the person allows, causes or permits any materials to be handled, transported or stored or a building, its appurtenances or a construction haul road to be used, constructed, altered, repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved roads. Ordinary travel includes routine traffic and road maintenance activities such as scarifying, compacting, transporting road maintenance surfacing material, and scraping of the unpaved public road surface. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The public highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions that require abatement pursuant to this subrule. Reasonable precautions may include but not be limited to the following procedures:

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizer or limestone.
4. Covering, at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.
6. Reducing the speed of vehicles traveling over on-property surfaces as necessary to minimize the generation of airborne dusts.

(2) Nonattainment areas. 23.3(2)“c”(1) notwithstanding, no person shall allow, cause or permit any visible emission of fugitive dust in a nonattainment area for particulate matter to go beyond the lot line of the property on which a traditional source is located without taking reasonable precautions to prevent emission. “Traditional source” means a source category for which a particulate emission standard has been established in 23.1(2), 23.3(2)“a,” 23.3(2)“b” or 567—23.4(455B) and includes a quarry operation, haul road or parking lot associated with a traditional source. This paragraph does not modify the emission standard stated in 23.1(2), 23.3(2)“a,” 23.3(2)“b” or 567—23.4(455B) but rather establishes a separate requirement for fugitive dust from such sources. For guidance on the types of controls which may constitute reasonable precautions, see “Identification of Techniques for the Control of Industrial Fugitive Dust Emissions,” as adopted by the commission on May 19, 1981, which is available from the department upon request.

(3) Redesignated areas. Reasonable precautions implemented pursuant to the nonattainment area provisions of 23.3(2)“c”(2) shall remain in effect if the nonattainment area is redesignated to either attainment or unclassified after March 6, 1980.

*d. Visible emissions.* No person shall allow, cause or permit the emission of visible air contaminants into the atmosphere from any equipment, internal combustion engine, premise fire, open fire or stack, equal to or in excess of 40 percent opacity or that level specified in a construction permit, except as provided below and in 567—Chapter 21.

(1) Residential heating equipment. Residential heating equipment serving dwellings of four family units or less is exempt.

(2) Gasoline-powered vehicles. No person shall allow, cause or permit the emission of visible air contaminants from gasoline-powered motor vehicles for longer than five consecutive seconds.

(3) Diesel-powered vehicles. No person shall allow, cause or permit the emission of visible air contaminants from diesel-powered motor vehicles in excess of 40 percent opacity for longer than five consecutive seconds.

(4) Diesel-powered locomotives. No person shall allow, cause or permit the emission of visible air contaminants from diesel-powered locomotives in excess of 40 percent opacity, except for a maximum period of 40 consecutive seconds during acceleration under load, or for a period of four consecutive minutes when a locomotive is loaded after a period of idling.

(5) Startup and testing. Initial start and warmup of a cold engine; the testing of an engine for trouble, diagnosis or repair; or engine research and development activities, is exempt.

(6) Uncombined water. The provisions of this paragraph shall apply to any emission that would be in violation of these provisions except for the presence of uncombined water, such as condensed water vapor.

**23.3(3) Sulfur compounds.** The provisions of this subrule shall apply to any installation from which sulfur compounds are emitted into the atmosphere.

*a. Sulfur dioxide from use of solid fuels.*

(1) No person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere from an existing solid fuel-burning unit, in an amount greater than 6 pounds, replicated maximum three-hour average, per million Btu of heat input if such unit is located within the following counties: Black Hawk, Clinton, Des Moines, Dubuque, Jackson, Lee, Linn, Louisa, Muscatine and Scott.

(2) No person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere from an existing solid fuel-burning unit, in an amount greater than 5 pounds, replicated maximum three-hour average, per million Btu of heat input if such unit is located within the remaining 89 counties of the state not listed in 23.3(3)“a”(1).

(3) No person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere from any new solid fuel-burning unit that has a capacity of 250 million Btu or less per hour heat input, in an amount greater than 6 pounds, replicated maximum three-hour average, per million Btu of heat input.

*b. Sulfur dioxide from use of liquid fuels.*

(1) No person shall allow, cause, or permit the combustion of number 1 or number 2 fuel oil exceeding a sulfur content of 0.5 percent by weight.

(2) No person shall allow, cause, or permit the emission of sulfur dioxide into the atmosphere in an amount greater than 2.5 pounds of sulfur dioxide, replicated maximum three-hour average, per million Btu of heat input from a liquid fuel-burning unit.

*c. Sulfur dioxide from sulfuric acid manufacture.* After January 1, 1975, no person shall allow, cause or permit the emission of sulfur dioxide from an existing sulfuric acid manufacturing plant in excess of 30 pounds of sulfur dioxide, maximum three-hour average, per ton of product calculated as 100 percent sulfuric acid.

*d. Acid mist from sulfuric acid manufacture.* After January 1, 1974, no person shall allow, cause or permit the emission of acid mist calculated as sulfuric acid from an existing sulfuric acid manufacturing plant in excess of 0.5 pounds, maximum three-hour average, per ton of product calculated as 100 percent sulfuric acid.

*e. Other processes capable of emitting sulfur dioxide.* After January 1, 1974, no person shall allow, cause or permit the emission of sulfur dioxide from any process, other than sulfuric acid manufacture, in

excess of 500 parts per million, based on volume. This paragraph shall not apply to devices which have been installed for air pollution abatement purposes where it is demonstrated by the owner of the source that the ambient air quality standards are not being exceeded.

[ARC 7952C, IAB 5/15/24, effective 6/19/24]

**567—23.4(455B) Specific processes.**

**23.4(1) General.** The provisions of this rule shall not apply to those facilities for which performance standards are specified in 23.1(2). The emission standards specified in this rule shall apply and those specified in 23.3(2)“a” and 23.3(2)“b” shall not apply to each process of the types listed in the following subrules, except as provided below.

EXCEPTION: Whenever the director determines that a process complying with the emission standard prescribed in this rule is causing or will cause air pollution in a specific area of the state, the specific emission standard may be suspended and compliance with the provisions of 567—23.3(455B) may be required in such instance.

**23.4(2) Asphalt batching plants.** No person shall cause, allow or permit the operation of an asphalt batching plant in a manner such that the particulate matter discharged to the atmosphere exceeds 0.15 grain per standard cubic foot of exhaust gas.

**23.4(3) Cement kilns.** Cement kilns shall be equipped with air pollution control devices to reduce the particulate matter in the gas discharged to the atmosphere to no more than 0.3 percent of the particulate matter entering the air pollution control device. Regardless of the degree of efficiency of the air pollution control device, particulate matter discharged from such kilns shall not exceed 0.1 grain per standard cubic foot of exhaust gas.

**23.4(4) Cupolas for metallurgical melting.** The emissions of particulate matter from all new foundry cupolas, and from all existing foundry cupolas with a process weight rate in excess of 20,000 pounds per hour, shall not exceed the amount specified in 23.3(2)“a,” except as provided in 567—Chapter 21.

The emissions of particulate matter from all existing foundry cupolas with a process weight rate less than or equal to 20,000 pounds per hour shall not exceed the amount determined from the table below, except as provided in 567—Chapter 21.

ALLOWABLE EMISSIONS FROM  
EXISTING SMALL FOUNDRY CUPOLAS

Process weight rate (lb/hr)	Allowable emission (lb/hr)
1,000	3.05
2,000	4.70
3,000	6.35
4,000	8.00
5,000	9.58
6,000	11.30
7,000	12.90
8,000	14.30
9,000	15.50
10,000	16.65
12,000	18.70
16,000	21.60
18,000	23.40
20,000	25.10

**23.4(5) Electric furnaces for metallurgical melting.** The emissions of particulate matter to the atmosphere from electric furnaces used for metallurgical melting shall not exceed 0.1 grain per standard cubic foot of exhaust gas.

**23.4(6) Sand handling and surface finishing operations in metal processing.** This subrule shall apply to any new foundry or metal processing operation not properly termed a combustion, melting, baking or

pouring operation. For purposes of this subrule, a new process is any process that has not started operation, or the construction of which has not been commenced, or the components of which have not been ordered or contracts for the construction of which have not been let on August 1, 1977. No person shall allow, cause or permit the operation of any equipment designed for sand shakeout, mulling, molding, cleaning, preparation, reclamation or rejuvenation or any equipment for abrasive cleaning, shot blasting, grinding, cutting, sawing or buffing in such a manner that particulate matter discharged from any stack exceeds 0.05 grains per dry standard cubic foot of exhaust gas, regardless of the types and number of operations that discharge from the stack.

**23.4(7) Grain handling and processing plants.** The owner or operator of equipment at a permanent installation for the handling or processing of grain, grain products and grain by-products shall not cause, allow or permit the particulate matter discharged to the atmosphere to exceed 0.1 grain per dry standard cubic foot of exhaust gas, except as follows:

*a.* The particulate matter discharged to the atmosphere from a grain bin vent at a country grain elevator, as “country grain elevator” is defined in 567—subrule 22.10(1), shall not exceed 1.0 grain per dry standard cubic foot of exhaust gas.

*b.* The particulate matter discharged to the atmosphere from a grain bin vent that was constructed, modified or reconstructed before March 31, 2008, at a country grain terminal elevator, as “country grain terminal elevator” is defined in 567—subrule 22.10(1), or at a grain terminal elevator, as “grain terminal elevator” is defined in 567—subrule 22.10(1), shall not exceed 1.0 grain per dry standard cubic foot of exhaust gas.

*c.* The particulate matter discharged to the atmosphere from a grain bin vent that is constructed or reconstructed on or after March 31, 2008, at a country grain terminal elevator, as “country grain terminal elevator” is defined in 567—subrule 22.10(1), or at a grain terminal elevator, as “grain terminal elevator” is defined in 567—subrule 22.10(1), shall not exceed 0.1 grain per dry standard cubic foot of exhaust gas.

**23.4(8) Lime kilns.** No person shall cause, allow or permit the operation of a kiln for the processing of limestone such that the particulate matter in the gas discharged to the atmosphere exceeds 0.1 grain per standard cubic foot of exhaust gas.

**23.4(9) Meat smokehouses.** No person shall cause, allow or permit the operation of a meat smokehouse or a group of meat smokehouses that consume more than 10 pounds of wood, sawdust or other material per hour such that the particulate matter discharged to the atmosphere exceeds 0.2 grain per standard cubic foot of exhaust gas.

**23.4(10) Phosphate processing plants.**

*a.* and *b.* Reserved.

*c.* Nitrophosphate manufacture. No person shall allow, cause or permit the operation of equipment for the manufacture of nitrophosphate in a manner that produces more than 0.06 pound of fluoride per ton of phosphorus pentoxide or equivalent input.

*d.* No person shall allow, cause or permit the operation of equipment for the processing of phosphate ore, rock or other phosphatic material (other than equipment used for the manufacture of phosphoric acid, diammonium phosphate or nitrophosphate) in a manner that the unit emissions of fluoride exceed 0.4 pound of fluoride per ton of phosphorous pentoxide or its equivalent input.

*e.* Notwithstanding 23.4(10)“*c*” and “*d*,” no person shall allow, cause or permit the operation of equipment for the processing of phosphorous ore, rock or other phosphatic material, including but not limited to phosphoric acid, in a manner that emissions of fluorides exceed 100 pounds per day.

*f.* “Fluoride” means elemental fluorine and all fluoride compounds as measured by reference methods specified in Appendix A to 40 CFR Part 60 as amended through March 12, 1996.

*g.* Calculation. The allowable total emission of fluoride shall be calculated by multiplying the unit emission specified above by the expressed design production capacity of the process equipment.

**23.4(11) Portland cement concrete batching plants.** No person shall cause, allow or permit the operation of a Portland cement concrete batching plant such that the particulate matter discharged to the atmosphere exceeds 0.1 grain per standard cubic foot of exhaust gas.

**23.4(12) Incinerators.** A person shall not cause, allow or permit the operation of an incinerator unless provided with appropriate control of emissions of particulate matter and visible air contaminants.

*a. Particulate matter.* A person shall not cause, allow or permit the operation of an incinerator with a rated refuse burning capacity of 1,000 or more pounds per hour in a manner such that the particulate matter discharged to the atmosphere exceeds 0.2 grain per standard cubic foot of exhaust gas adjusted to 12 percent carbon dioxide.

A person shall not cause, allow or permit the operation of an incinerator with a rated refuse burning capacity of less than 1,000 pounds per hour in a manner such that the particulate matter discharged to the atmosphere exceeds 0.35 grain per standard cubic foot of exhaust gas adjusted to 12 percent carbon dioxide.

*b. Visible emissions.* A person shall not allow, cause or permit the operation of an incinerator in a manner such that it produces visible air contaminants in excess of 40 percent opacity; except that visible air contaminants in excess of 40 percent opacity but less than or equal to 60 percent opacity may be emitted for periods aggregating not more than 3 minutes in any 60-minute period during an operation breakdown or during the cleaning of air pollution control equipment.

**23.4(13) *Painting and surface-coating operations.*** No person shall allow, cause or permit painting and surface-coating operations in a manner such that particulate matter in the gas discharge exceeds 0.01 grain per standard cubic foot of exhaust gas.

[ARC 7952C, IAB 5/15/24, effective 6/19/24]

**567—23.5(455B) Anaerobic lagoons.**

**23.5(1)** Applications for construction permits for animal feeding operations using anaerobic lagoons shall meet the requirements of 567—Chapter 65.

**23.5(2)** Criteria for approval of industrial anaerobic lagoons constructed or expanded on or after July 1, 1982.

*a.* Lagoons designed to treat 100,000 gallons per day (gpd) or less shall be located at least 1,250 feet from a residence not owned by the owner of the lagoon or from a public use area other than a public road.

*b.* Lagoons designed to treat more than 100,000 gpd shall be located at least 1,875 feet from a residence not owned by the owner of the lagoon or from a public use area other than a public road.

*c.* The criteria in 23.5(2) shall apply except in situations in which Iowa Code section 455B.134(3) “e”(2) is successfully invoked.

*d.* Compliance with the requirements of 23.5(2) shall not constitute an exemption from compliance with any other applicable environmental regulations. In particular, compliance with these requirements shall not absolve any person from compliance with the requirements set forth in 567—Chapter 64 that are applicable to industrial anaerobic lagoons.

[ARC 7952C, IAB 5/15/24, effective 6/19/24]

These rules are intended to implement Iowa Code section 455B.133.

[Filed 8/24/70; amended 5/2/72, 12/11/73, 12/17/74]

[Filed 3/1/76, Notice 11/3/75—published 3/22/76, effective 4/26/76]

[Filed 5/28/76, Notice 12/15/75, 1/12/76, 1/26/76, 2/23/76—published 6/14/76, effective 7/19/76]

[Filed 11/24/76, Notice 8/9/76—published 12/15/76, effective 1/19/77]

[Filed 12/22/76, Notice 8/9/76—published 1/12/77, effective 2/16/77]

[Filed 2/25/77, Notice 8/9/76—published 3/23/77, effective 4/27/77]<sup>1</sup>

[Filed 5/27/77, Notice 8/9/76, 12/29/76—published 6/15/77, effective 7/20/77]

[Filed 5/27/77, Notice 1/12/76, 3/9/77—published 6/15/77, effective 1/1/78 and 1/1/79]

[Filed without Notice 10/28/77—published 11/16/77, effective 12/21/77]

[Filed 4/27/78, Notice 11/16/77—published 5/17/78, effective 6/21/78]

[Filed 3/16/79, Notice 10/18/78—published 4/4/79, effective 5/9/79]

[Filed 4/12/79, Notice 9/6/78—published 5/2/79, effective 6/6/79]

[Filed 6/29/79, Notice 2/7/79—published 7/25/79, effective 8/29/79]

[Filed without Notice 6/29/79—published 7/25/79, effective 8/29/79]

[Filed 10/26/79, Notices 5/2/79, 8/8/79—published 11/14/79, effective 12/19/79]

[Filed 4/10/80, Notices 12/26/79, 1/23/80—published 4/30/80, effective 6/4/80]

[Filed 7/31/80, Notice 12/26/79—published 8/20/80, effective 9/24/80]

- [Filed 9/26/80, Notice 5/28/80—published 10/15/80, effective 11/19/80]
- [Filed 12/12/80, Notice 10/15/80—published 1/7/81, effective 2/11/81]
- [Filed 4/23/81, Notice 2/4/81—published 5/13/81, effective 6/17/81]
- [Filed 5/21/81, Notice 3/18/81—published 6/10/81, effective 7/15/81]
- [Filed 7/31/81, Notices 12/10/80, 5/13/81—published 8/19/81, effective 9/23/81]
- [Filed emergency 9/11/81—published 9/30/81, effective 9/23/81]
- [Filed 9/11/81, Notice 7/8/81—published 9/30/81, effective 11/4/81]
- [Filed emergency 6/18/82—published 7/7/82, effective 7/1/82]
- [Filed 9/24/82, Notice 6/23/82—published 10/13/82, effective 11/17/82]
- [Filed emergency 6/3/83—published 6/22/83, effective 7/1/83]
- [Filed 7/28/83, Notice 2/16/83—published 8/17/83, effective 9/21/83]<sup>2</sup>
- [Filed 11/30/83, Notice 9/14/83—published 12/21/83, effective 1/25/84]
- [Filed 8/24/84, Notice 5/9/84—published 9/12/84, effective 10/18/84]
- [Filed 9/20/84, Notice 7/18/84—published 10/10/84, effective 11/14/84]
- [Filed 11/27/85, Notice 7/31/85—published 12/18/85, effective 1/22/86]
- [Filed 5/2/86, Notice 1/15/86—published 5/21/86, effective 6/25/86]
- [Filed emergency 11/14/86—published 12/3/86, effective 12/3/86]
- [Filed 8/21/87, Notice 6/17/87—published 9/9/87, effective 10/14/87]
- [Filed 1/22/88, Notice 11/18/87—published 2/10/88, effective 3/16/88]
- [Filed 3/30/89, Notice 1/11/89—published 4/19/89, effective 5/24/89]
- [Filed 5/24/90, Notice 3/21/90—published 6/13/90, effective 7/18/90]
- [Filed 7/19/90, Notice 4/18/90—published 8/8/90, effective 9/12/90]
- [Filed 3/29/91, Notice 1/9/91—published 4/17/91, effective 5/22/91]
- [Filed 12/30/92, Notice 9/16/92—published 1/20/93, effective 2/24/93]
- [Filed 11/19/93, Notice 9/15/93—published 12/8/93, effective 1/12/94]
- [Filed 2/25/94, Notice 10/13/93—published 3/16/94, effective 4/20/94]
- [Filed 7/29/94, Notice 3/16/94—published 8/17/94, effective 9/21/94]
- [Filed 9/23/94, Notice 6/22/94—published 10/12/94, effective 11/16/94]
- [Filed without Notice 2/24/95—published 3/15/95, effective 4/19/95]
- [Filed 5/19/95, Notice 3/15/95—published 6/7/95, effective 7/12/95]
- [Filed 8/25/95, Notice 6/7/95—published 9/13/95, effective 10/18/95]
- [Filed 4/19/96, Notice 1/17/96—published 5/8/96, effective 6/12/96]
- [Filed 9/20/96, Notice 6/19/96—published 10/9/96, effective 11/13/96]
- [Filed 3/20/97, Notice 11/20/96—published 4/9/97, effective 5/14/97]
- [Filed 6/27/97, Notice 3/12/97—published 7/16/97, effective 8/20/97]
- [Filed 3/19/98, Notice 1/14/98—published 4/8/98, effective 5/13/98]
- [Filed emergency 5/29/98—published 6/17/98, effective 6/29/98]
- [Filed 8/21/98, Notice 6/17/98—published 9/9/98, effective 10/14/98]<sup>o</sup>
- [Filed 10/30/98, Notice 8/26/98—published 11/18/98, effective 12/23/98]
- [Filed 3/19/99, Notice 12/30/98—published 4/7/99, effective 5/12/99]
- [Filed 5/28/99, Notice 3/10/99—published 6/16/99, effective 7/21/99]
- [Filed 3/3/00, Notice 12/15/99—published 3/22/00, effective 4/26/00]
- [Filed 1/19/01, Notice 6/14/00—published 2/7/01, effective 3/14/01]
- [Filed 2/28/02, Notice 12/12/01—published 3/20/02, effective 4/24/02]
- [Filed 8/29/03, Notice 6/11/03—published 9/17/03, effective 10/22/03]
- [Filed 11/19/03, Notice 7/9/03—published 12/10/03, effective 1/14/04]
- [Filed 2/26/04, Notice 12/10/03—published 3/17/04, effective 4/21/04]
- [Filed 10/22/04, Notice 7/21/04—published 11/10/04, effective 12/15/04]
- [Filed 2/25/05, Notice 12/8/04—published 3/16/05, effective 4/20/05]
- [Filed 5/18/05, Notice 3/16/05—published 6/8/05, effective 7/13/05]

- [Filed 8/23/05, Notices 5/11/05, 7/6/05—published 9/14/05, effective 10/19/05]  
 [Filed 10/21/05, Notice 8/17/05—published 11/9/05, effective 12/14/05]  
 [Filed 5/17/06, Notice 1/18/06—published 6/7/06, effective 7/12/06]  
 [Filed 6/28/06, Notice 4/12/06—published 7/19/06, effective 8/23/06]  
 [Filed 2/8/07, Notice 12/6/06—published 2/28/07, effective 4/4/07]  
 [Filed 1/23/08, Notice 8/29/07—published 2/13/08, effective 3/19/08]  
 [Filed 4/18/08, Notice 1/2/08—published 5/7/08, effective 6/11/08]  
 [Filed 8/20/08, Notice 6/4/08—published 9/10/08, effective 10/15/08]  
 [Filed ARC 7565B (Notice ARC 7306B, IAB 11/5/08), IAB 2/11/09, effective 3/18/09]  
 [Filed ARC 7623B (Notice ARC 7395B, IAB 12/3/08), IAB 3/11/09, effective 4/15/09]  
 [Filed ARC 8216B (Notice ARC 7622B, IAB 3/11/09; Amended Notice ARC 7738B, IAB 5/6/09),  
 IAB 10/7/09, effective 11/11/09]  
 [Filed ARC 8215B (Notice ARC 7855B, IAB 6/17/09), IAB 10/7/09, effective 11/11/09]  
 [Filed ARC 9154B (Notice ARC 8845B, IAB 6/16/10), IAB 10/20/10, effective 11/24/10]<sup>3,4</sup>  
 [Editorial change: IAC Supplement 12/1/10]  
 [Editorial change: IAC Supplement 4/20/11]  
 [Filed ARC 0329C (Notice ARC 0165C, IAB 6/13/12), IAB 9/19/12, effective 10/24/12]  
 [Filed ARC 1014C (Notice ARC 0740C, IAB 5/15/13), IAB 9/18/13, effective 10/23/13]  
 [Filed ARC 1561C (Notice ARC 1458C, IAB 5/14/14), IAB 8/6/14, effective 9/10/14]  
 [Filed ARC 1913C (Notice ARC 1795C, IAB 12/24/14), IAB 3/18/15, effective 4/22/15]  
 [Filed Emergency After Notice ARC 2352C (Notice ARC 2222C, IAB 10/28/15), IAB 1/6/16,  
 effective 12/16/15]  
 [Filed ARC 2949C (Notice ARC 2799C, IAB 11/9/16), IAB 2/15/17, effective 3/22/17]  
 [Filed ARC 3679C (Notice ARC 3520C, IAB 12/20/17), IAB 3/14/18, effective 4/18/18]  
 [Filed ARC 4335C (Notice ARC 4178C, IAB 12/19/18), IAB 3/13/19, effective 4/17/19]  
 [Filed ARC 5051C (Notice ARC 4961C, IAB 3/11/20), IAB 6/17/20, effective 7/22/20]  
 [Filed ARC 5898C (Notice ARC 5678C, IAB 6/16/21), IAB 9/8/21, effective 10/13/21]  
 [Filed ARC 6873C (Notice ARC 6631C, IAB 11/2/22), IAB 2/8/23, effective 3/15/23]  
 [Filed ARC 7952C (Notice ARC 7215C, IAB 12/27/23), IAB 5/15/24, effective 6/19/24]  
 [Editorial change: IAC Supplement 7/10/24]

◇ Two or more ARCs

<sup>1</sup> Objection, see filed rule [DEQ, 4.2(4)] published IAC Supp. 1/22/77, 3/9/77.

<sup>2</sup> Effective date of 23.2(4) delayed 70 days by the Administrative Rules Review Committee on 9/14/83.

<sup>3</sup> 11/24/10 effective date of 23.1(4), introductory paragraph, and 23.1(4)“ev” and “fa” to “fd” delayed 70 days by the Administrative Rules Review Committee at its meeting held November 9, 2010.

<sup>4</sup> Amendment to 23.1(4), introductory paragraph, (ARC 9154B, Item 4) rescinded by Executive Order Number 72 on 4/4/11. Amendment removed and prior language restored IAC Supplement 4/20/11.