CHAPTER 63

GENERAL STANDARDS OF PERFORMANCE

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:001. Definitions for 401 Chapter 63.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 24, 1992	OCT 20, 1992	59 FR 32343, JUN 23, 1994 FR Effective: AUG 22, 1994 Conditional Approval
APR 06, 1995	JAN 27, 1995 Submitted for Parallel Processing Final Submittal - May 04, 1995	60 FR 31087, JUN 13, 1995 FR Effective: JUL 28, 1994 Full Approval
JUN 06, 1996	JUN 19, 1996	62 FR 2915, JAN 21, 1997 FR Effective: MAR 24, 1997
JUN 09, 1999	Does not appear to have been submitted	
NOV 08, 2006	DEC 14, 2006	72 FR 52282, SEP 13, 2007 FR Effective: NOV 13, 2007

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:002. 40 C.F.R. Part 63 national emission standards for hazardous air

pollutants

CURRENT STATUS: Federally Enforceable Regulation

MACT-NESHAP 40 C.F.R. Part 63

Replaced: 401 KAR 63:070, 401 KAR 63:100, 401 KAR 63:101, 401 KAR 63:104, 401 KAR 63:110, 401 KAR 63:160, 401 KAR 63:190, 401 KAR 63:300, 401 KAR 63:320, 401 KAR 63:340, 401 KAR 63:360, 401 KAR 63:400, 401 KAR 63:420, 401 KAR 63:460, 401 KAR 63:520, 401 KAR 63:541, 401 KAR 63:560, 401 KAR 63:640, 401 KAR 63:680, 401 KAR 63:701, 401 KAR 63:741, 401 KAR 63:780, 401 KAR 63:800, 401 KAR 63:820, 401 KAR 63:900, 401 KAR 63:920, 401 KAR 63:940, and 401 KAR 63:960.

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUL 14, 1999	No Action Required - Delegation of Authority automatic under Title V	
MAR 18, 2002	No Action Required - Delegation of Authority automatic under Title V	
SEP 10, 2003	No Action Required - Delegation of Authority automatic under Title V	
JAN 04, 2005	No Action Required - Delegation of Authority automatic under Title V	
NOV 14, 2007	No Action Required - Delegation of Authority automatic under Title V	

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:005. Open burning.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 06, 1979	JUN 29, 1979	45 FR 84999, DEC 24, 1980 FR Effective: EC 24, 1980 Conditional Approval
		45 FR 84999, JUL 12, 1982 FR Effective: SEP 10, 1982 Full Approval
MAR 01, 1984	MAY 01, 1984	No Action Required
JAN 12, 1998	FEB 03, 1998	63 FR 67586, DEC 08, 1998 FR Effective: FEB 08, 1999 (VOC 15% Reduction Plan)
JUL 13, 2005	SEP 06, 2005	72 FR 58759, OCT 17, 2007 FR Effective: NOV 16, 2007

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:010. Fugitive emissions.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 29, 1979	JUN 29, 1979	47 FR 30059, JUL 12, 1982 FR Effective: SEP 10, 1982 (Non-Part D SIP)

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:015. Flares.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

RACT Regulation

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 06, 1979	JUN 29, 1979	47 FR 30059, JUL 12, 1982 FR Effective: SEP 10, 1982

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:020. Potentially hazardous matter or toxic substances.

CURRENT STATUS: Erroneously approved to Kentucky SIP on Dec. 24, 1980

EPA removed from SIP on Feb. 16, 2010, but mistakenly references

47 FR 30059 for SIP approval

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 06, 1979	JUN 29, 1979	45 FR 84999, DEC 24, 1980 FR Effective: DEC 24, 1980
FEB 16, 2010	MAY 25, 2007	75 FR 2440, JAN 15, 2010 FR Effective: FEB 16 2010

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:021. Existing sources emitting toxic air pollutants.

CURRENT STATUS: Not Federally Enforceable

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
NOV 11, 1986		
JAN 19, 1999		

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:022. New or modified sources emitting toxic air pollutants.

CURRENT STATUS: Repealed by 401 KAR 63:024 (January 19, 1999)

Not Federally Enforceable

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
NOV 11, 1986		

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:025. Asphalt paving operations.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

RACT/VOC

Based on Group I CTG (EPA-450/2-72037)

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 06, 1979	JUN 29, 1979	47 FR 84999, JUL 12, 1982 FR Effective: SEP 10, 1982
JUN 24, 1992	OCT 20, 1992	59 FR 32343, JUN 23, 1994 FR Effective: AUG 22, 1994

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:031. Leaks from gasoline tank trucks.

CURRENT STATUS: Federally Enforceable Regulation

Approved to Kentucky SIP

RACT/VOC

Based on Group I CTG (EPA-450/XXX)

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 24, 1982	SEP 20, 1982	48 FR 13168, MAR 30, 1983 FR Effective: APR 29, 1982
FEB 08, 1993	FEB 17, 1993	59 FR 32343, JUN 23, 1994 FR Effective: AUG 22, 1994

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:042. Requirements for asbestos abatement entities.

CURRENT STATUS: Not Federally Enforceable

Recodified to 401 KAR 58:040 (June 10, 1997)

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
NOV 06, 1987		

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:045. School asbestos abatement accreditations.

CURRENT STATUS: Recodified to 401 KAR 58:005 (February 24, 1992)

Federally Enforceable Regulation AHERA (40 CFR 763, Subpart F)

No Federal Waiver for Kentucky at Time of Recodification

HISTORY

Submitted to EPA	Federal Register Publication
	Submitted to EPA

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:050. Local education agencies.

CURRENT STATUS: Recodified to 401 KAR 58:010 (February 24, 1992)

Federally Enforceable Regulation AHERA (40 CFR 763, Subpart E)

No Federal Waiver for Kentucky at Time of Recodification

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
OCT 05, 1988 Emergency Regulation 64:050E		
JAN 25, 1989		

FOR REFERENCE ONLY - DO NOT CITE

[63:060]

401 KAR 63:060. List of hazardous air pollutants, petitions process, lesser quantity

designations, and source category list

CURRENT STATUS: Authority Delegated to Kentucky

Under the Title V Program Federally Enforceable Regulation

Recodified from 401 KAR 57:061 (July 02, 1997)

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
NOV 29, 1993 - was 57:061 at this time -	JAN 18, 1994	60 FR 57186, NOV 14, 1995 FR Effective: DEC 14, 1995
JUN 10, 1998	No Action Required - Delegation of Authority automatic under Title V	

FOR REFERENCE ONLY - DO NOT CITE

[63:070]

401 KAR 63:070. Compliance extensions for early reductions of hazardous air

pollutants.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart D

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
FEB 22, 1995	JAN 18, 1995 Submitted for parallel processing APR 14, 1995	60 FR 57186, NOV 14, 1995 FR Effective: DEC 14, 1995

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:100. General provisions.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart A

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
DEC 12, 1994	JAN 25, 1995	60 FR 57186, NOV 14, 1995 FR Effective: DEC 14, 1995
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

[63:101]

401 KAR 63:101. National emission standards for organic hazardous air pollutants

from the synthetic organic chemical manufacturing industry

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart L

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

FOR REFERENCE ONLY - DO NOT CITE

[63:104]

401 KAR 63:104. National emission standards for oil-water separators and organic-

water separators

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart L

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

[63:105]

401 KAR 63:105. Requirements for control technology determinations for major

sources in accordance with Clean Air Act Section 112(g) & (j)

CURRENT STATUS: Repealed by 401 KAR 63:106

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart B

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
APR 14, 1999	No Action Required - Delegation of Authority automatic under Title V	
AUG 13, 2003	No Action Required - Delegation of Authority automatic under Title V	
JAN 04, 2005 REPEALED		

FOR REFERENCE ONLY - DO NOT CITE

[63:110]

401 KAR 63:110. National emission standards for organic hazardous air pollutants

from the synthetic organic chemical manufacturing industry for process vents, storage vessels, transfer operations and wastewater.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart B

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

FOR REFERENCE ONLY - DO NOT CITE

[63:160]

401 KAR 63:160. National emission standards for organic hazardous air pollutants for

equipment leaks.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart B

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

FOR REFERENCE ONLY - DO NOT CITE

[63:190]

401 KAR 63:190. National emission standards for organic hazardous air pollutants for

certain processes subject to the negotiated regulation for equipment

leaks.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart B

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:300. National emission standards for coke ovens.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart L

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
DEC 12, 1994	JAN 25, 1995	60 FR 57186, NOV 14, 1995 FR Effective: DEC 14, 1995

FOR REFERENCE ONLY - DO NOT CITE

[63:320]

401 KAR 63:320. National perchloroethylene air emission standards for dry cleaning

facilities.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
DEC 12, 1994	JAN 25, 1995	60 FR 57186, NOV 14, 1995 FR Effective: DEC 14, 1995

FOR REFERENCE ONLY - DO NOT CITE

[63:340]

401 KAR 63:340. National emission standards for chromium emissions fro hard and

decorative chromium electroplating and chromium anodizing tanks.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:360. Ethylene oxide emissions standards for sterilization facilities.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

FOR REFERENCE ONLY - DO NOT CITE

[63:400]

401 KAR 63:400. National emission standards for hazardous air pollutants for

industrial process cooling towers.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

FOR REFERENCE ONLY - DO NOT CITE

[63:420]

401 KAR 63:420. National emission standards for gasoline distribution facilities (bulk

gasoline terminals and pipeline breakout stations).

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

FOR REFERENCE ONLY - DO NOT CITE

[63:460]

401 KAR 63:460. National emission standards for halogenated solvent cleaning.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

FOR REFERENCE ONLY - DO NOT CITE

[63:520]

401 KAR 63:520. National emission standards for organic hazardous air pollutants for

certain processes subject to the negotiated regulation for equipment

leaks.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:520. National emission standards for organic hazardous air pollutants from lead

smelting.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:560. National emission standards for marine tank vessel loading operations.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

[63:640]

401 KAR 63:640. National emission standards for hazardous air pollutants from

petroleum refineries.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

[63:680]

401 KAR 63:680. National emission standards for hazardous air pollutants from off-

site waste and recovery operations.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

[63:701]

401 KAR 63:701. National emission standards for magnetic tape manufacturing

operations.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
AUG 13, 1997	AUG 20, 1997	

FOR REFERENCE ONLY - DO NOT CITE

[63:741]

401 KAR 63:741. National emission standards for aerospace manufacturing and

rework facilities.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

[63:780]

401 KAR 63:640. National emission standards for shipbuilding and ship repair (surface

coating).

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

[63:800]

401 KAR 63:800. National emission standards for wood furniture manufacturing

operations.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

[63:820]

401 KAR 63:820. National emission standards for the printing and publishing industry.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:900. National emission standards for tanks - Level 1.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

401 KAR 63:920. National emission standards for containers.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

[63:940]

401 KAR 63:940. National emission standards for hazardous air pollutants from off-

site waste and recovery operations.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE

[63:960]

401 KAR 63:960. National emission standards for individual drain systems.

CURRENT STATUS: Repealed by 401 KAR 57:019 &

Incorporated by Reference in 401 KAR 63:002 (July 14, 1999)

Federally Enforceable Regulation

MACT NESHAP - 40 CFR 63, Subpart M

Authority Delegated to Kentucky

HISTORY

KY Effective Date	Submitted to EPA	Federal Register Publication
JUN 10, 1998		

FOR REFERENCE ONLY - DO NOT CITE