

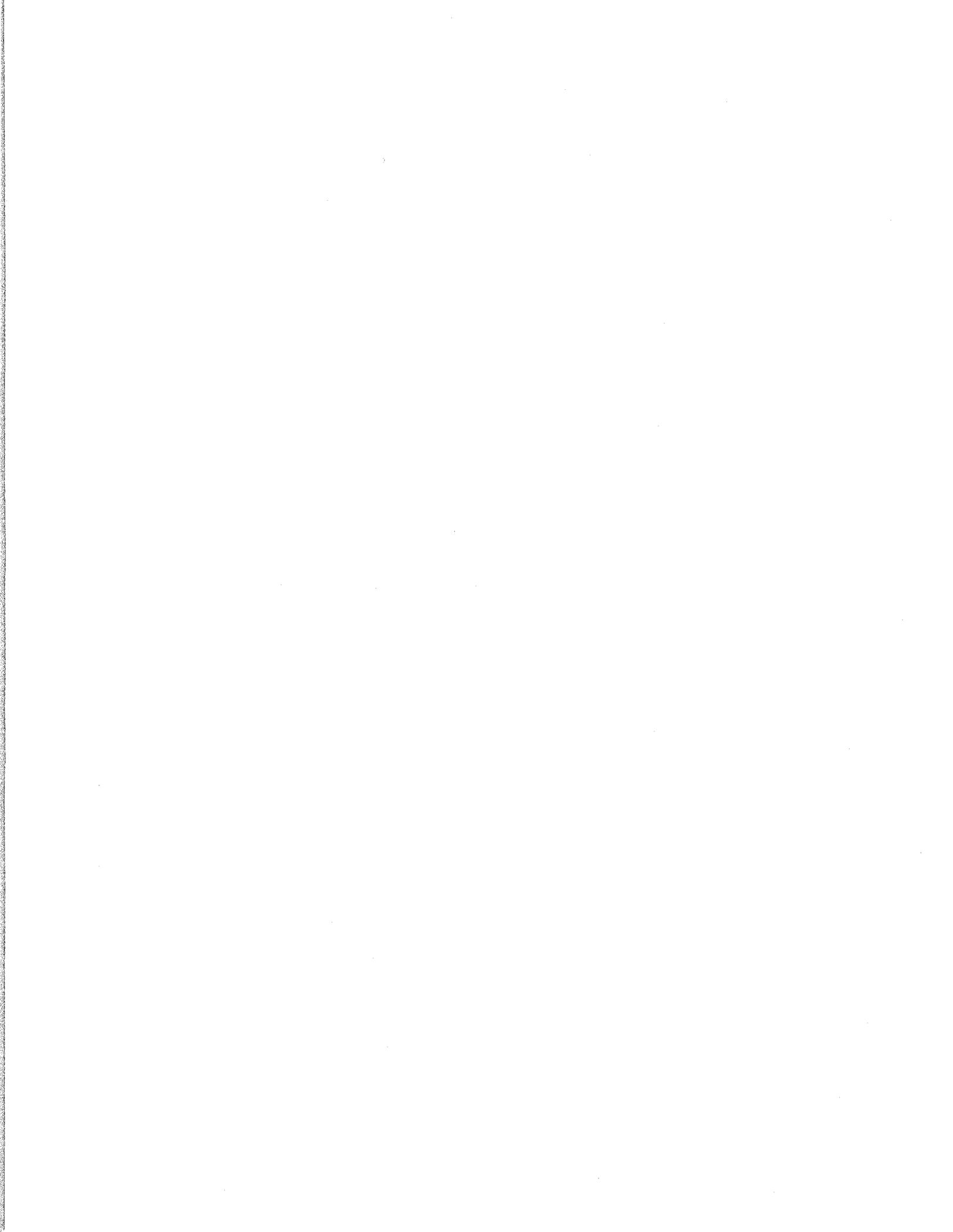
**NORTH DAKOTA ADMINISTRATIVE CODE**

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Administrative Rules Committee**



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**APPENDIX IX [Reserved]**

**APPENDIX X**  
**Recommended Technologies to Achieve Deactivation**  
**of Characteristics in Section 33-24-05-282**

The treatment standard for many subcategories of D001, D002, D003 wastes as well as for K044, K045, and K047 wastes is listed in 33-24-05-282 simply as "Deactivation to remove the characteristics of ignitability, corrosivity, and reactivity." The environmental protection agency has determined that many technologies, when used alone or in combination, can achieve this standard. The following appendix presents a partial list of these technologies, utilizing the five letter technology codes established in Section 33-24-05-282 table 1. Use of these specific technologies is not mandatory and does not preclude direct reuse, recovery, and/or the use of other pretreatment technologies provided deactivation is achieved and these alternative methods are not performed in units designated as land disposal. The treatment standard for many characteristic wastes is stated in the 33-24-05-280 Table of Treatment Standards as "Deactivation and meet UTS." The environmental protection agency has determined that many technologies, when used alone or in combination, can achieve the deactivation portion of the treatment standard. Characteristic wastes that are not managed in a facility regulated by the Clean Water Act or in a Clean Water Act-equivalent facility, and that also contain underlying hazardous constituents (see subsection 9 of section 33-24-05-251) must be treated not only by a "deactivating" technology to remove the characteristic, but also to achieve the universal treatment standards for underlying hazardous constituents. The following appendix presents a partial list of technologies, utilizing the five letter technology codes established in Table 1 of section 33-24-05-282, that may be useful in meeting the treatment standard. Use of these specific technologies is not mandatory and does not preclude direct reuse, recovery, or the use or any combination thereof, of other pretreatment technologies, provided deactivation is achieved and underlying hazardous constituents are treated to achieve the universal treatment standards.

<u>Waste Code/Subcategory</u>	<u>Nonwastewaters</u>	<u>Wastewaters</u>
<u>D001 Ignitable Liquids based on 33-24-02-11.1.a.-Low TOC</u>	<u>RORGS.....</u>	<u>n.a.</u>
<u>Nonwastewater Subcategory (containing 1% to &lt;10% TOC).</u>	<u>INCIN.....</u>	
	<u>WETOX.....</u>	
	<u>CHOXD.....</u>	
	<u>BIODG.....</u>	
<u>D001 Ignitable Liquids based on 33-24-02-11.1.a.-Ignitable</u>	<u>n.a.....</u>	<u>RORGS</u>
<u>Wastewater Subcategory(containing &lt;1% TOC).</u>		<u>INCIN</u>
		<u>WETOX</u>
		<u>CHOXD</u>
		<u>BIODG</u>
<u>D001 Compressed Gases based on 33-24-02-11.1.c.....</u>	<u>RCGAS.....</u>	<u>n.a.</u>
	<u>INCIN.....</u>	
	<u>FSUBS.....</u>	
	<u>ADGAS fb.</u>	
	<u>INCIN.....</u>	

<u>Waste Code/Subcategory</u>	<u>Nonwastewaters</u>	<u>Wastewaters</u>
	<u>ADGAS fb. (CHOXD; or CHRED).</u>	
<u>D001 Ignitable Reactives based on 33-24-02-11.1.b.....</u>	<u>WTRRX.....</u>	<u>n.a.</u>
	<u>CHOXD.....</u>	
	<u>CHRED.....</u>	
	<u>STABL.....</u>	
	<u>INCIN.....</u>	
<u>D001 Ignitable Oxidizers based on 33-24-02-11.1.d.....</u>	<u>CHRED.....</u>	<u>CHRED</u>
	<u>INCIN.....</u>	<u>INCIN</u>
<u>D002 Acid Subcategory based on 33-24-02-12.1.a. with pH less than or equal to 2</u>	<u>RCORR.....</u>	<u>NEUTR</u>
	<u>NEUTR.....</u>	<u>INCIN</u>
	<u>INCIN.....</u>	
<u>D002 Alkaline Subcategory based on 33-24-02-12.1.a. with pH greater than or equal to 12.5</u>	<u>NEUTR.....</u>	<u>NEUTR</u>
	<u>INCIN.....</u>	<u>INCIN</u>
<u>D002 Other Corrosives based on 33-24-02-12.1.b.....</u>	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
	<u>INCIN.....</u>	<u>INCIN</u>
	<u>STABL.....</u>	
<u>D003 Water Reactives based on 33-24-02-13.1.b., c., and d.....</u>	<u>INCIN.....</u>	<u>n.a.</u>
	<u>WTRRX</u>	
	<u>CHOXD.....</u>	
	<u>CHRED.....</u>	
<u>D003 Reactive Sulfides based on 33-24-02-13.1.e.....</u>	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
	<u>INCIN.....</u>	<u>BIODG</u>
	<u>STABL.....</u>	<u>INCIN</u>
<u>D003 Explosives based on 33-24-02-13.1.f., g., and h.....</u>	<u>INCIN.....</u>	<u>INCIN</u>
	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
		<u>BIODG</u>
		<u>CARBN</u>
<u>D003 Other Reactives based on 33-24-02-13.1.a.....</u>	<u>INCIN.....</u>	<u>INCIN</u>
	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
		<u>BIODG</u>
		<u>CARBN</u>
<u>K044 Wastewater treatment sludges from the manufacturing and processing of explosives.</u>	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
	<u>INCIN.....</u>	<u>BIODG</u>

<u>Waste Code/Subcategory</u>	<u>Nonwastewaters</u>	<u>Wastewaters</u>
		<u>CARBN</u>
		<u>INCIN</u>
<u>K045 Spent carbon from the treatment of wastewaters</u>	<u>CHOXD.....</u>	<u>CHOXD</u>
<u>containing explosives.</u>	<u>CHRED.....</u>	<u>CHRED</u>
	<u>INCIN.....</u>	<u>BIODG</u>
		<u>CARBN</u>
		<u>INCIN</u>
<u>K047 Pink/red water from TNT operations.....</u>	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
	<u>INCIN.....</u>	<u>BIODG</u>
		<u>CARBN</u>
		<u>INCIN</u>

Note: "n.a." stands for "not applicable;" "fb." stands for "followed by."

**APPENDIX XI**  
**Land Disposal Restrictions Effective Dates of Surface Disposed**  
**Prohibited Hazardous Wastes**  
**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)**  
**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>D001<sup>e</sup></u>	<u>All (except high total organic carbon ignitable liquids)</u>	<u>August 9, 1993</u>
<u>D001</u>	<u>High total organic carbon ignitable liquids</u>	<u>August 8, 1990</u>
<u>D002<sup>e</sup></u>	<u>All</u>	<u>August 9, 1993</u>
<u>D003</u>	<u>Newly identified surface-disposed elemental phosphorus processing wastes</u>	<u>May 26, 2000</u>
<u>D004</u>	<u>Newly identified D004 and mineral processing wastes</u>	<u>August 24, 1998</u>
<u>D004</u>	<u>Mixed radioactive/newly identified D004 or mineral processing wastes</u>	<u>May 26, 2000</u>
<u>D005</u>	<u>Newly identified D005 and mineral processing wastes</u>	<u>August 24, 1998</u>
<u>D005</u>	<u>Mixed radioactive/newly identified D005 or mineral processing wastes</u>	<u>May 26, 2000</u>
<u>D006</u>	<u>Newly identified D006 and mineral processing wastes</u>	<u>August 24, 1998</u>
<u>D006</u>	<u>Mixed radioactive/newly identified D006 or mineral processing wastes</u>	<u>May 26, 2000</u>
<u>D007</u>	<u>Newly identified D007 and mineral processing wastes</u>	<u>August 24, 1998</u>
<u>D007</u>	<u>Mixed radioactive/newly identified D007 or mineral processing wastes</u>	<u>May 26, 2000</u>
<u>D008</u>	<u>Newly identified D008 and mineral processing wastes</u>	<u>August 24, 1998</u>
<u>D008</u>	<u>Mixed radioactive/newly identified D008 or mineral processing wastes</u>	<u>May 26, 2000</u>
<u>D009</u>	<u>Newly identified D009 and mineral processing wastes</u>	<u>August 24, 1998</u>
<u>D009</u>	<u>Mixed radioactive/newly identified D009 or mineral processing wastes</u>	<u>May 26, 2000</u>
<u>D010</u>	<u>Newly identified D010 and mineral processing wastes</u>	<u>August 24, 1998</u>
<u>D010</u>	<u>Mixed radioactive/newly identified D010 or mineral processing wastes</u>	<u>May 26, 2000</u>
<u>D011</u>	<u>Newly identified D011 and mineral processing wastes</u>	<u>August 24, 1998</u>
<u>D011</u>	<u>Mixed radioactive/newly identified D011 or mineral processing wastes</u>	<u>May 26, 2000</u>
<u>D012 (that exhibit the toxicity characteristic based on the TCLP)<sup>d</sup></u>	<u>All</u>	<u>December 14, 1994</u>

<b>APPENDIX XI</b>		
<b>Land Disposal Restrictions Effective Dates of Surface Disposed Prohibited Hazardous Wastes</b>		
<b>Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris) Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List</b>		
<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
<u>D013 (that exhibit the toxicity characteristic based on the TCLP)<sup>d</sup></u>	<u>All</u>	<u>December 14, 1994</u>
<u>D014 (that exhibit the toxicity characteristic based on the TCLP)<sup>d</sup></u>	<u>All</u>	<u>December 14, 1994</u>
<u>D015 (that exhibit the toxicity characteristic based on the TCLP)<sup>d</sup></u>	<u>All</u>	<u>December 14, 1994</u>
<u>D016 (that exhibit the toxicity characteristic based on the TCLP)<sup>d</sup></u>	<u>All</u>	<u>December 14, 1994</u>
<u>D017 (that exhibit the toxicity characteristic based on the TCLP)<sup>d</sup></u>	<u>All</u>	<u>December 14, 1994</u>
<u>D018</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D018</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D019</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D019</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D020</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D020</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D021</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D021</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D022</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D022</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D023</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D023</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D024</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D024</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D025</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D025</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D026</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D026</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D027</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D027</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D028</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D028</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D029</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>

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**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>D029</u>	All others	December 19, 1994
<u>D030</u>	Mixed with radioactive wastes	September 19, 1996
<u>D030</u>	All others	December 19, 1994
<u>D031</u>	Mixed with radioactive wastes	September 19, 1996
<u>D031</u>	All others	December 19, 1994
<u>D032</u>	Mixed with radioactive wastes	September 19, 1996
<u>D032</u>	All others	December 19, 1996
<u>D033</u>	Mixed with radioactive wastes	September 19, 1996
<u>D033</u>	All others	December 19, 1994
<u>D034</u>	Mixed with radioactive wastes	September 19, 1996
<u>D034</u>	All others	December 19, 1994
<u>D035</u>	Mixed with radioactive wastes	September 19, 1996
<u>D035</u>	All others	December 19, 1994
<u>D036</u>	Mixed with radioactive wastes	September 19, 1996
<u>D036</u>	All others	December 19, 1994
<u>D037</u>	Mixed with radioactive wastes	September 19, 1996
<u>D037</u>	All others	December 19, 1994
<u>D038</u>	Mixed with radioactive wastes	September 19, 1996
<u>D038</u>	All others	December 19, 1994
<u>D039</u>	Mixed with radioactive wastes	September 19, 1996
<u>D039</u>	All others	December 19, 1994
<u>D040</u>	Mixed with radioactive wastes	September 19, 1996
<u>D040</u>	All others	December 19, 1994
<u>D041</u>	Mixed with radioactive wastes	September 19, 1996
<u>D041</u>	All others	December 19, 1994
<u>D042</u>	Mixed with radioactive wastes	September 19, 1996
<u>D042</u>	All others	December 19, 1994
<u>D043</u>	Mixed with radioactive wastes	September 19, 1996
<u>D043</u>	All others	December 19, 1994
<u>F001</u>	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	November 8, 1988
<u>F001</u>	All others	November 8, 1986
<u>F002 (1,1,2-trichloroethane)</u>	Wastewater and nonwastewater	August 8, 1990

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<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
F002	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	November 8, 1988
F002	All others	November 8, 1986
F003	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	November 8, 1988
F003	All others	November 8, 1986
F004	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	November 8, 1988
F004	All others	November 8, 1986
F005 (benzene, 2-ethoxy ethanol, 2-nitropropane)	Wastewater and nonwastewater	August 8, 1990
F005	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	November 8, 1988
F005	All others	November 8, 1986
F006	Wastewater	August 8, 1990
F006	Nonwastewater	August 8, 1988
F006 (cyanides)	Nonwastewater	July 8, 1989
F007	All	July 8, 1989
F008	All	July 8, 1989
F009	All	July 8, 1989
F010	All	June 8, 1989
F011 (cyanides)	Nonwastewater	December 8, 1989
F011	All others	July 8, 1989
F012 (cyanides)	Nonwastewater	December 8, 1989
F012	All others	July 8, 1989
F019	All	August 8, 1990
F020	All	November 8, 1988
F021	All	November 8, 1988
F025	All	August 8, 1990
F026	All	November 8, 1988
F027	All	November 8, 1988

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<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>F028</u>	<u>All</u>	<u>November 8, 1988</u>
<u>F032</u>	<u>Mixed with radioactive wastes</u>	<u>May 12, 1999</u>
<u>F032</u>	<u>All others</u>	<u>August 12, 1997</u>
<u>F034</u>	<u>Mixed with radioactive wastes</u>	<u>May 12, 1999</u>
<u>F034</u>	<u>All others</u>	<u>August 12, 1997</u>
<u>F035</u>	<u>Mixed with radioactive wastes</u>	<u>May 12, 1999</u>
<u>F035</u>	<u>All others</u>	<u>August 12, 1997</u>
<u>F037</u>	<u>Not generated from surface impoundment cleanouts or closures</u>	<u>June 30, 1993</u>
<u>F037</u>	<u>Generated from surface impoundment cleanouts or closures</u>	<u>June 30, 1994</u>
<u>F037</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>F038</u>	<u>Not generated from surface impoundment cleanouts or closures</u>	<u>June 30, 1993</u>
<u>F038</u>	<u>Generated from surface impoundment cleanouts or closures</u>	<u>June 30, 1994</u>
<u>F038</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>F039</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>F039</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>K001 (organics)<sup>b</sup></u>	<u>All</u>	<u>August 8, 1988</u>
<u>K001</u>	<u>All others</u>	<u>August 8, 1988</u>
<u>K002</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K003</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K004</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K004</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K005</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K005</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K006</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K007</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K007</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K008</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K008</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K009</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K010</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K011</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K011</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>

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<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>K013</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K013</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K014</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K014</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K015</u>	<u>Wastewater</u>	<u>August 8, 1988</u>
<u>K015</u>	<u>Nonwastewater</u>	<u>August 8, 1990</u>
<u>K016</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K017</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K018</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K019</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K020</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K021</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K021</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K022</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K022</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K023</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K024</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K025</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K025</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K026</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K027</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K028 (metals)</u>	<u>Nonwastewater</u>	<u>August 8, 1990</u>
<u>K028</u>	<u>All others</u>	<u>June 8, 1989</u>
<u>K029</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K029</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K030</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K031</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K031</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>K032</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K033</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K034</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K035</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K036</u>	<u>Wastewater</u>	<u>June 8, 1989</u>
<u>K036</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K037<sup>b</sup></u>	<u>Wastewater</u>	<u>August 8, 1988</u>

**APPENDIX XI**  
**Land Disposal Restrictions Effective Dates of Surface Disposed**  
**Prohibited Hazardous Wastes**  
**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)**  
**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>K037</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K038</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K039</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K040</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K041</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K042</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K043</u>	<u>all</u>	<u>June 8, 1989</u>
<u>K044</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K045</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K046 (nonreactive)</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K046</u>	<u>All others</u>	<u>August 8, 1990</u>
<u>K047</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K048</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K048</u>	<u>Nonwastewater</u>	<u>November 8, 1990</u>
<u>K049</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K049</u>	<u>Nonwastewater</u>	<u>November 8, 1990</u>
<u>K050</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K050</u>	<u>Nonwastewater</u>	<u>November 8, 1990</u>
<u>K051</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K051</u>	<u>Nonwastewater</u>	<u>November 8, 1990</u>
<u>K052</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K052</u>	<u>Nonwastewater</u>	<u>November 8, 1990</u>
<u>K060</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K060</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K061</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K061</u>	<u>Nonwastewater</u>	<u>June 30, 1992</u>
<u>K062</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K069 (non-calcium sulfate)</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K069</u>	<u>All others</u>	<u>August 8, 1990</u>
<u>K071</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K073</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K083</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K084</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K084</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>K085</u>	<u>All</u>	<u>August 8, 1990</u>

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**Land Disposal Restrictions Effective Dates of Surface Disposed**  
**Prohibited Hazardous Wastes**  
**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)**  
**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
<u>K086 (organics)<sup>b</sup></u>	<u>All</u>	<u>August 8, 1988</u>
<u>K086</u>	<u>All others</u>	<u>August 8, 1988</u>
<u>K087</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K088</u>	<u>All others</u>	<u>October 8, 1997</u>
<u>K088</u>	<u>All others</u>	<u>January 8, 1997</u>
<u>K093</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K094</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K095</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K095</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K096</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K096</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K097</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K098</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K099</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K100</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K100</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K101 (organics)</u>	<u>Wastewater</u>	<u>August 8, 1988</u>
<u>K101 (metals)</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K101 (organics)</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K101 (metals)</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>K102 (organics)</u>	<u>Wastewater</u>	<u>August 8, 1988</u>
<u>K102 (metals)</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K102 (organics)</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K102 (metals)</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>K103</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K104</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K105</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K106</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K106</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>K107</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K107</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K108</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K108</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K109</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K109</u>	<u>All others</u>	<u>November 9, 1992</u>

**APPENDIX XI**  
**Land Disposal Restrictions Effective Dates of Surface Disposed**  
**Prohibited Hazardous Wastes**  
**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)**  
**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
K110	Mixed with radioactive wastes	June 30, 1994
K110	All others	November 9, 1992
K111	Mixed with radioactive wastes	June 30, 1994
K111	All others	November 9, 1992
K112	Mixed with radioactive wastes	June 30, 1994
K112	All others	November 9, 1992
K113	All	June 8, 1989
K114	All	June 8, 1989
K115	All	June 8, 1989
K116	All	June 8, 1989
K117	Mixed with radioactive wastes	June 30, 1994
K117	All others	November 9, 1992
K118	Mixed with radioactive wastes	June 30, 1994
K118	All others	November 9, 1992
K123	Mixed with radioactive wastes	June 30, 1994
K123	All others	November 9, 1992
K124	Mixed with radioactive wastes	June 30, 1994
K124	All others	November 9, 1992
K125	Mixed with radioactive wastes	June 30, 1994
K125	All others	November 9, 1992
K126	Mixed with radioactive wastes	June 30, 1994
K126	All others	November 9, 1992
K131	Mixed with radioactive wastes	June 30, 1994
K131	All others	November 9, 1992
K132	Mixed with radioactive wastes	June 30, 1994
K132	All others	November 9, 1992
K136	Mixed with radioactive wastes	June 30, 1994
K136	All others	November 9, 1992
K141	Mixed with radioactive wastes	September 19, 1996
K141	All others	December 19, 1994
K142	Mixed with radioactive wastes	September 19, 1996
K142	All others	December 19, 1994
K143	Mixed with radioactive wastes	September 19, 1996
K143	All others	December 19, 1994
K144	Mixed with radioactive wastes	September 19, 1996

**APPENDIX XI**  
**Land Disposal Restrictions Effective Dates of Surface Disposed**  
**Prohibited Hazardous Wastes**  
**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)**  
**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
<u>K144</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K145</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K145</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K147</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K147</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K148</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K148</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K149</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K149</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K150</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K150</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K151</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K151</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K156</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>K156</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>K157</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>K157</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>K158</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>K158</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>K159</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>K159</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>K160</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>K160</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>K161</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>K161</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>P001</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P002</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P003</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P004</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P005</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P006</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P007</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P008</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P009</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P010</u>	<u>Wastewater</u>	<u>August 8, 1990</u>

<b>APPENDIX XI</b> <b>Land Disposal Restrictions Effective Dates of Surface Disposed Prohibited Hazardous Wastes</b> <b>Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris) Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List</b>		
<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
P010	<u>Nonwastewater</u>	<u>May 8, 1992</u>
P011	<u>Wastewater</u>	<u>August 8, 1990</u>
P011	<u>Nonwastewater</u>	<u>May 8, 1992</u>
P012	<u>Wastewater</u>	<u>August 8, 1990</u>
P012	<u>Nonwastewater</u>	<u>May 8, 1992</u>
P013 (barium)	<u>Nonwastewater</u>	<u>August 8, 1990</u>
P013	<u>All others</u>	<u>June 8, 1989</u>
P014	<u>All</u>	<u>August 8, 1990</u>
P015	<u>All</u>	<u>August 8, 1990</u>
P016	<u>All</u>	<u>August 8, 1990</u>
P017	<u>All</u>	<u>August 8, 1990</u>
P018	<u>All</u>	<u>August 8, 1990</u>
P020	<u>All</u>	<u>August 8, 1990</u>
P021	<u>All</u>	<u>June 8, 1989</u>
P022	<u>All</u>	<u>August 8, 1990</u>
P023	<u>All</u>	<u>August 8, 1990</u>
P024	<u>All</u>	<u>August 8, 1990</u>
P026	<u>All</u>	<u>August 8, 1990</u>
P027	<u>All</u>	<u>August 8, 1990</u>
P028	<u>All</u>	<u>August 8, 1990</u>
P029	<u>All</u>	<u>June 8, 1989</u>
P030	<u>All</u>	<u>June 8, 1989</u>
P031	<u>All</u>	<u>August 8, 1990</u>
P033	<u>All</u>	<u>August 8, 1990</u>
P034	<u>All</u>	<u>August 8, 1990</u>
P036	<u>Wastewater</u>	<u>August 8, 1990</u>
P036	<u>Nonwastewater</u>	<u>May 8, 1992</u>
P037	<u>All</u>	<u>August 8, 1990</u>
P038	<u>Wastewater</u>	<u>August 8, 1990</u>
P038	<u>Nonwastewater</u>	<u>May 8, 1992</u>
P039	<u>All</u>	<u>June 8, 1989</u>
P040	<u>All</u>	<u>June 8, 1989</u>
P041	<u>All</u>	<u>June 8, 1989</u>
P042	<u>All</u>	<u>August 8, 1990</u>
P043	<u>All</u>	<u>June 8, 1989</u>

<b>APPENDIX XI</b>		
<b>Land Disposal Restrictions Effective Dates of Surface Disposed Prohibited Hazardous Wastes</b>		
<b>Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris) Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List</b>		
<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
P044	All	June 8, 1989
P045	All	August 8, 1990
P046	All	August 8, 1990
P047	All	August 8, 1990
P048	All	August 8, 1990
P049	All	August 8, 1990
P050	All	August 8, 1990
P051	All	August 8, 1990
P054	All	August 8, 1990
P056	All	August 8, 1990
P057	All	August 8, 1990
P058	All	August 8, 1990
P059	All	August 8, 1990
P060	All	August 8, 1990
P062	All	June 8, 1989
P063	All	June 8, 1989
P064	All	August 8, 1990
P065	Wastewater	August 8, 1990
P065	Nonwastewater	May 8, 1992
P066	All	August 8, 1990
P067	All	August 8, 1990
P068	All	August 8, 1990
P069	All	August 8, 1990
P070	All	August 8, 1990
P071	All	June 8, 1989
P072	All	August 8, 1990
P073	All	August 8, 1990
P074	All	June 8, 1989
P075	All	August 8, 1990
P076	All	August 8, 1990
P077	All	August 8, 1990
P078	All	August 8, 1990
P081	All	August 8, 1990
P082	All	August 8, 1990
P084	All	August 8, 1990

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**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
P085	All	June 8, 1989
P087	All	May 8, 1992
P088	All	August 8, 1990
P089	All	June 8, 1989
P092	Wastewater	August 8, 1990
P092	Nonwastewater	May 8, 1992
P093	All	August 8, 1990
P094	All	June 8, 1989
P095	All	August 8, 1990
P096	All	August 8, 1990
P097	All	June 8, 1989
P098	All	June 8, 1989
P099 (silver)	Wastewater	August 8, 1990
P099	All others	June 8, 1989
P101	All	August 8, 1990
P102	All	August 8, 1990
P103	All	August 8, 1990
P104 (silver)	Wastewater	August 8, 1990
P104	All others	June 8, 1989
P105	All	August 8, 1990
P106	All	June 8, 1989
P108	All	August 8, 1990
P109	All	June 8, 1989
P110	All	August 8, 1990
P111	All	June 8, 1989
P112	All	August 8, 1990
P113	All	August 8, 1990
P114	All	August 8, 1990
P115	All	August 8, 1990
P116	All	August 8, 1990
P118	All	August 8, 1990
P119	All	August 8, 1990
P120	All	August 8, 1990
P121	All	June 8, 1989
P122	All	August 8, 1990

<b>APPENDIX XI</b>		
<b>Land Disposal Restrictions Effective Dates of Surface Disposed Prohibited Hazardous Wastes</b>		
<b>Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris) Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List</b>		
<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
P123	All	August 8, 1990
P127	Mixed with radioactive wastes	April 8, 1998
P127	All others	July 8, 1996
P128	Mixed with radioactive wastes	April 8, 1998
P128	All others	July 8, 1996
P185	Mixed with radioactive wastes	April 8, 1998
P185	All others	July 8, 1996
P188	Mixed with radioactive wastes	April 8, 1998
P188	All others	July 8, 1996
P189	Mixed with radioactive wastes	April 8, 1998
P189	All others	July 8, 1996
P190	Mixed with radioactive wastes	April 8, 1998
P190	All others	July 8, 1996
P191	Mixed with radioactive wastes	April 8, 1998
P191	All others	July 8, 1996
P192	Mixed with radioactive wastes	April 8, 1998
P192	All others	July 8, 1996
P194	Mixed with radioactive wastes	April 8, 1998
P194	All others	July 8, 1996
P196	Mixed with radioactive wastes	April 8, 1998
P196	All others	July 8, 1996
P197	Mixed with radioactive wastes	April 8, 1998
P197	All others	July 8, 1996
P198	Mixed with radioactive wastes	April 8, 1998
P198	All others	July 8, 1996
P199	Mixed with radioactive wastes	April 8, 1998
P199	All others	July 8, 1996
P201	Mixed with radioactive wastes	April 8, 1998
P201	All others	July 8, 1996
P202	Mixed with radioactive wastes	April 8, 1998
P202	All others	July 8, 1996
P203	Mixed with radioactive wastes	April 8, 1998
P203	All others	July 8, 1996
P204	Mixed with radioactive wastes	April 8, 1998
P204	All others	July 8, 1996

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**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
P205	Mixed with radioactive wastes	April 8, 1998
P205	All others	July 8, 1996
U001	All	August 8, 1990
U002	All	August 8, 1990
U003	All	August 8, 1990
U004	All	August 8, 1990
U005	All	August 8, 1990
U006	All	August 8, 1990
U007	All	August 8, 1990
U008	All	August 8, 1990
U009	All	August 8, 1990
U010	All	August 8, 1990
U011	All	August 8, 1990
U012	All	August 8, 1990
U014	All	August 8, 1990
U015	All	August 8, 1990
U016	All	August 8, 1990
U017	All	August 8, 1990
U018	All	August 8, 1990
U019	All	August 8, 1990
U020	All	August 8, 1990
U021	All	August 8, 1990
U022	All	August 8, 1990
U023	All	August 8, 1990
U024	All	August 8, 1990
U025	All	August 8, 1990
U026	All	August 8, 1990
U027	All	August 8, 1990
U028	All	June 8, 1989
U029	All	August 8, 1990
U030	All	August 8, 1990
U031	All	August 8, 1990
U032	All	August 8, 1990
U033	All	August 8, 1990
U034	All	August 8, 1990

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**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)**  
**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
U035	All	August 8, 1990
U036	All	August 8, 1990
U037	All	August 8, 1990
U038	All	August 8, 1990
U039	All	August 8, 1990
U041	All	August 8, 1990
U042	All	August 8, 1990
U043	All	August 8, 1990
U044	All	August 8, 1990
U045	All	August 8, 1990
U046	All	August 8, 1990
U047	All	August 8, 1990
U048	All	August 8, 1990
U049	All	August 8, 1990
U050	All	August 8, 1990
U051	All	August 8, 1990
U052	All	August 8, 1990
U053	All	August 8, 1990
U055	All	August 8, 1990
U056	All	August 8, 1990
U057	All	August 8, 1990
U058	All	June 8, 1989
U059	All	August 8, 1990
U060	All	August 8, 1990
U061	All	August 8, 1990
U062	All	August 8, 1990
U063	All	August 8, 1990
U064	All	August 8, 1990
U066	All	August 8, 1990
U067	All	August 8, 1990
U068	All	August 8, 1990
U069	All	June 30, 1992
U070	All	August 8, 1990
U071	All	August 8, 1990
U072	All	August 8, 1990

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**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)**  
**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
U073	All	August 8, 1990
U074	All	August 8, 1990
U075	All	August 8, 1990
U076	All	August 8, 1990
U077	All	August 8, 1990
U078	All	August 8, 1990
U079	All	August 8, 1990
U080	All	August 8, 1990
U081	All	August 8, 1990
U082	All	August 8, 1990
U083	All	August 8, 1990
U084	All	August 8, 1990
U085	All	August 8, 1990
U086	All	August 8, 1990
U087	All	June 8, 1989
U088	All	June 8, 1989
U089	All	August 8, 1990
U090	All	August 8, 1990
U091	All	August 8, 1990
U092	All	August 8, 1990
U093	All	August 8, 1990
U094	All	August 8, 1990
U095	All	August 8, 1990
U096	All	August 8, 1990
U097	All	August 8, 1990
U098	All	August 8, 1990
U099	All	August 8, 1990
U101	All	August 8, 1990
U102	All	June 8, 1989
U103	All	August 8, 1990
U105	All	August 8, 1990
U106	All	August 8, 1990
U107	All	June 8, 1989
U108	All	August 8, 1990
U109	All	August 8, 1990

**APPENDIX XI**  
**Land Disposal Restrictions Effective Dates of Surface Disposed**  
**Prohibited Hazardous Wastes**  
**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)**  
**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
U110	All	August 8, 1990
U111	All	August 8, 1990
U112	All	August 8, 1990
U113	All	August 8, 1990
U114	All	August 8, 1990
U115	All	August 8, 1990
U116	All	August 8, 1990
U117	All	August 8, 1990
U118	All	August 8, 1990
U119	All	August 8, 1990
U120	All	August 8, 1990
U121	All	August 8, 1990
U122	All	August 8, 1990
U123	All	August 8, 1990
U124	All	August 8, 1990
U125	All	August 8, 1990
U126	All	August 8, 1990
U127	All	August 8, 1990
U128	All	August 8, 1990
U129	All	August 8, 1990
U130	All	August 8, 1990
U131	All	August 8, 1990
U132	All	August 8, 1990
U133	All	August 8, 1990
U134	All	August 8, 1990
U135	All	August 8, 1990
U136	Wastewater	August 8, 1990
U136	Nonwastewater	May 8, 1992
U137	All	August 8, 1990
U138	All	August 8, 1990
U140	All	August 8, 1990
U141	All	August 8, 1990
U142	All	August 8, 1990
U143	All	August 8, 1990
U144	All	August 8, 1990

**APPENDIX XI**  
**Land Disposal Restrictions Effective Dates of Surface Disposed**  
**Prohibited Hazardous Wastes**  
**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)**  
**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
U145	All	August 8, 1990
U146	All	August 8, 1990
U147	All	August 8, 1990
U148	All	August 8, 1990
U149	All	August 8, 1990
U150	All	August 8, 1990
U151	Wastewater	August 8, 1990
U151	Nonwastewater	May 8, 1992
U152	All	August 8, 1990
U153	All	August 8, 1990
U154	All	August 8, 1990
U155	All	August 8, 1990
U156	All	August 8, 1990
U157	All	August 8, 1990
U158	All	August 8, 1990
U159	All	August 8, 1990
U160	All	August 8, 1990
U161	All	August 8, 1990
U162	All	August 8, 1990
U163	All	August 8, 1990
U164	All	August 8, 1990
U165	All	August 8, 1990
U166	All	August 8, 1990
U167	All	August 8, 1990
U168	All	August 8, 1990
U169	All	August 8, 1990
U170	All	August 8, 1990
U171	All	August 8, 1990
U172	All	August 8, 1990
U173	All	August 8, 1990
U174	All	August 8, 1990
U176	All	August 8, 1990
U177	All	August 8, 1990
U178	All	August 8, 1990
U179	All	August 8, 1990

<b>APPENDIX XI</b>		
<b>Land Disposal Restrictions Effective Dates of Surface Disposed Prohibited Hazardous Wastes</b>		
<b>Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris) Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List</b>		
<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
U180	All	August 8, 1990
U181	All	August 8, 1990
U182	All	August 8, 1990
U183	All	August 8, 1990
U184	All	August 8, 1990
U185	All	August 8, 1990
U186	All	August 8, 1990
U187	All	August 8, 1990
U188	All	August 8, 1990
U189	All	August 8, 1990
U190	All	June 8, 1989
U191	All	August 8, 1990
U192	All	August 8, 1990
U193	All	August 8, 1990
U194	All	June 8, 1989
U196	All	August 8, 1990
U197	All	August 8, 1990
U200	All	August 8, 1990
U201	All	August 8, 1990
U202	All	August 8, 1990
U203	All	August 8, 1990
U204	All	August 8, 1990
U205	All	August 8, 1990
U206	All	August 8, 1990
U207	All	August 8, 1990
U208	All	August 8, 1990
U209	All	August 8, 1990
U210	All	August 8, 1990
U211	All	August 8, 1990
U213	All	August 8, 1990
U214	All	August 8, 1990
U215	All	August 8, 1990
U216	All	August 8, 1990
U217	All	August 8, 1990
U218	All	August 8, 1990

**APPENDIX XI**  
**Land Disposal Restrictions Effective Dates of Surface Disposed**  
**Prohibited Hazardous Wastes**  
**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)**  
**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>U219</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U220</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U221</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U222</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U223</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U225</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U226</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U227</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U228</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U234</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U235</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U236</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U237</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U238</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U239</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U240</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U243</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U244</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U246</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U247</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U248</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U249</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U271</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U271</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U277</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U277</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U278</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U278</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U279</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U279</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U280</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U280</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U328</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>U328</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>U353</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>

**APPENDIX XI**  
**Land Disposal Restrictions Effective Dates of Surface Disposed**  
**Prohibited Hazardous Wastes**  
**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)**  
**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
U353	All others	November 9, 1992
U359	Mixed with radioactive wastes	June 30, 1994
U359	All others	November 9, 1992
U364	Mixed with radioactive wastes	April 8, 1998
U364	All others	July 8, 1996
U365	Mixed with radioactive wastes	April 8, 1998
U365	All others	July 8, 1996
U366	Mixed with radioactive wastes	April 8, 1998
U366	All others	July 8, 1996
U367	Mixed with radioactive wastes	April 8, 1998
U367	All others	July 8, 1996
U372	Mixed with radioactive wastes	April 8, 1998
U372	All others	July 8, 1996
U373	Mixed with radioactive wastes	April 8, 1998
U373	All others	July 8, 1996
U375	Mixed with radioactive wastes	April 8, 1998
U375	All others	July 8, 1996
U376	Mixed with radioactive wastes	April 8, 1998
U376	All others	July 8, 1996
U377	Mixed with radioactive wastes	April 8, 1998
U377	All others	July 8, 1996
U378	Mixed with radioactive wastes	April 8, 1998
U378	All others	July 8, 1996
U379	Mixed with radioactive wastes	April 8, 1998
U379	All others	July 8, 1996
U381	Mixed with radioactive wastes	April 8, 1998
U381	All others	July 8, 1996
U382	Mixed with radioactive wastes	April 8, 1998
U382	All others	July 8, 1996
U383	Mixed with radioactive wastes	April 8, 1998
U383	All others	July 8, 1996
U384	Mixed with radioactive wastes	April 8, 1998
U384	All others	July 8, 1996
U385	Mixed with radioactive wastes	April 8, 1998
U385	All others	July 8, 1996

**APPENDIX XI**  
**Land Disposal Restrictions Effective Dates of Surface Disposed**  
**Prohibited Hazardous Wastes**  
**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)**  
**Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
U386	Mixed with radioactive wastes	April 8, 1998
U386	All others	July 8, 1996
U387	Mixed with radioactive wastes	April 8, 1998
U387	All others	July 8, 1996
U389	Mixed with radioactive wastes	April 8, 1998
U389	All others	July 8, 1996
U390	Mixed with radioactive wastes	April 8, 1998
U390	All others	July 8, 1996
U391	Mixed with radioactive wastes	April 8, 1998
U391	All others	July 8, 1996
U392	Mixed with radioactive wastes	April 8, 1998
U392	All others	July 8, 1996
U393	Mixed with radioactive wastes	April 8, 1998
U393	All others	July 8, 1996
U394	Mixed with radioactive wastes	April 8, 1998
U394	All others	July 8, 1996
U395	Mixed with radioactive wastes	April 8, 1998
U395	All others	July 8, 1996
U396	Mixed with radioactive wastes	April 8, 1998
U396	All others	July 8, 1996
U400	Mixed with radioactive wastes	April 8, 1998
U400	All others	July 8, 1996
U401	Mixed with radioactive wastes	April 8, 1998
U401	All others	July 8, 1996
U402	Mixed with radioactive wastes	April 8, 1998
U402	All others	July 8, 1996
U403	Mixed with radioactive wastes	April 8, 1998
U403	All others	July 8, 1996
U404	Mixed with radioactive wastes	April 8, 1998
U404	All others	July 8, 1996
U407	Mixed with radioactive wastes	April 8, 1998
U407	All others	July 8, 1996
U409	Mixed with radioactive wastes	April 8, 1998
U409	All others	July 8, 1996
U410	Mixed with radioactive wastes	April 8, 1998

<b>APPENDIX XI</b>		
<b>Land Disposal Restrictions Effective Dates of Surface Disposed Prohibited Hazardous Wastes</b>		
<b>Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris) Regulated in the Land Disposal Restrictions<sup>a</sup> - Comprehensive List</b>		
<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
<u>U410</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U411</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U411</u>	<u>All others</u>	<u>July 8, 1996</u>

<sup>a</sup>This table does not include mixed radioactive wastes (from the First, Second, and Third Third rules) which received national capacity variance until May 8, 1992. This table also does not include contaminated soil and debris wastes.

<sup>b</sup>The standard was revised in the Third Third Final Rule (55 FR 22520, June 1, 1990).

<sup>c</sup>The standard was revised in the Third Third Emergency Rule (58 FR 29860, May 24, 1993); the original effective date was August 8, 1990.

<sup>d</sup>The standard was revised in the Phase II Final Rule (59 FR 47982, September 19, 1994); the original effective date was August 8, 1990.

<sup>e</sup>The standards for selected reactive wastes was revised in the Phase III Final Rule (61 FR 15566, April 8, 1996); the original effective date was August 8, 1990.

**APPENDIX XI (continued)**

**Table 2. Summary of Effective Dates of Land Disposal Restrictions for Contaminated Soil and Debris**

<b><u>Restricted Hazardous Waste in Contaminated Soil and Debris</u></b>	<b><u>Effective Date</u></b>
1. <u>Solvent-(F001 through F005) and dioxin-(F020 through F023 and F026 through F028) containing soil and debris from CERCLA response or RCRA corrective actions.</u>	<u>November 8, 1990</u>
2. <u>Soil and debris not from CERCLA response or RCRA corrective actions contaminated with less than 1% total solvents (F001 through F005) or dioxins (F020 through F023 and F026 through F028).</u>	<u>November 8, 1988</u>
3. <u>All soil and debris contaminated with First Third wastes for which treatment standards are based on incineration.</u>	<u>August 8, 1990</u>
4. <u>All soil and debris contaminated with Second Third wastes for which treatment standards are based on incineration.</u>	<u>June 8, 1991</u>
5. <u>All soil and debris contaminated with Third Third wastes or First or Second Third "soft hammer" wastes which had treatment standards promulgated in the Third Third rule, for which treatment standards are based on incineration, vitrification, or mercury retorting, acid leaching followed by chemical precipitation, or thermal recovery of metals; as well as all inorganic solids debris contaminated with D004 through D011 wastes, and all soil and debris contaminated with mixed Resource Conservation and Recovery Act/radioactive wastes.</u>	<u>May 8, 1992</u>
6. <u>Soil and debris contaminated with D012 through D043, K141 through K145, and K147 through K151 wastes.</u>	<u>December 19, 1994</u>
7. <u>Debris (only) contaminated with F037, F038, K107 through K112, K117, K118, K123 through K126, K131, K132, K136, U328, U353, U359.</u>	<u>December 19, 1994</u>
8. <u>Soil and debris contaminated with K156 through K161, P127, P128, P188 through P192, P194, P196 through P199, P201 through P205, U271, U277 through U280, U364 through U367, U372, U373, U375 through U379, U381 through U387, U389 through U396, U400 through U404, U407, and U409 through U411 wastes.</u>	<u>July 8, 1996</u>
9. <u>Soil and debris contaminated with K088 wastes.</u>	<u>October 8, 1997</u>
10. <u>Soil and debris contaminated with radioactive wastes mixed with K088, K156 through K161, P127, P128, P188 through P192, P194, P196 through P199, P201 through P205, U271, U277 through U280, U364 through U367, U372, U373, U375 through U379, U381 through U387, U389 through U396, U400 through U404, U407, and U409 through U411 wastes.</u>	<u>April 8, 1998</u>
11. <u>Soil and debris contaminated with F032, F034, and F035.</u>	<u>May 12, 1997</u>
12. <u>Soil and debris contaminated with newly identified D004 through D011 toxicity characteristic wastes and mineral processing wastes.</u>	<u>August 24, 1998</u>
13. <u>Soil and debris contaminated with mixed radioactive newly identified D004 through D011 characteristic wastes and mineral processing wastes.</u>	<u>May 26, 2000</u>

Note: Appendix XI is provided for the convenience of the reader.

**APPENDIX XII. Ground Water Monitoring List<sup>1</sup>**

<u>Common Name<sup>2</sup></u>	<u>CAS RN<sup>3</sup></u>	<u>Chemical Abstracts Service Index Name<sup>4</sup></u>	<u>Suggested Methods<sup>5</sup></u>	<u>PQL (ug/l)<sup>6</sup></u>
<u>Acenaphthene.....</u>	<u>83-32-9</u>	<u>Acenaphthylene, 1,2-dihydro-.....</u>	<u>8100</u> <u>8270</u>	<u>200</u> <u>10</u>
<u>Acenaphthylene.....</u>	<u>208-96-8</u>	<u>Acenaphthylene.....</u>	<u>8100</u> <u>8270</u>	<u>200</u> <u>10</u>
<u>Acetone.....</u>	<u>67-64-1</u>	<u>2-Propanone</u>	<u>8240</u>	<u>100</u>
<u>Acetophenone.....</u>	<u>98-86-2</u>	<u>Ethanone, 1-phenyl-</u>	<u>8270</u>	<u>10</u>
<u>Acetonitrile: Methyl cyanide.....</u>	<u>75-05-8</u>	<u>Acetonitrile.....</u>	<u>8015</u>	<u>100</u>
<u>2-Acetylaminofluorene: 2-AAF.....</u>	<u>53-96-3</u>	<u>Acetamide, N-9H-fluoren-2-yl-.....</u>	<u>8270</u>	<u>10</u>
<u>Acrolein.....</u>	<u>107-02-8</u>	<u>2-Propenal.....</u>	<u>8030</u> <u>8240</u>	<u>5</u> <u>5</u>
<u>Acrylonitrile.....</u>	<u>107-13-1</u>	<u>2-Propenenitrile.....</u>	<u>8030</u> <u>8240</u>	<u>5</u> <u>5</u>
<u>Aldrin.....</u>	<u>309-00-2</u>	<u>1,4:5,8-Dimethanonaphthalene, 1,2,3,4, 10,10-hexachloro-, 1,1,4,4a,5,8,8a-hexahydro- (1a,4a,5ab,5a,8a,8ab)-.....</u>	<u>8080</u>  <u>8270</u>	<u>0.05</u>  <u>10</u>
<u>Allyl chloride.....</u>	<u>107-05-1</u>	<u>1-Propene, 3-chloro-.....</u>	<u>8010</u> <u>8240</u>	<u>5</u> <u>100</u>
<u>4-Aminobiphenyl.....</u>	<u>92-67-1</u>	<u>[1,1'-Biphenyl]-4-amine.....</u>	<u>8270</u>	<u>10</u>
<u>Aniline.....</u>	<u>62-53-3</u>	<u>Benzenamine.....</u>	<u>8270</u>	<u>10</u>
<u>Anthracene</u>	<u>120-12-7</u>	<u>Anthracene</u>	<u>8100</u> <u>8270</u>	<u>200</u> <u>10</u>
<u>Antimony</u>	<u>(Total)</u>	<u>Antimony.....</u>	<u>6010</u> <u>7040</u> <u>7041</u>	<u>300</u> <u>2,000</u> <u>30</u>
<u>Aramite</u>	<u>140-57-8</u>	<u>Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester.....</u>	<u>8270</u>	<u>10</u>
<u>Arsenic</u>	<u>(Total)</u>	<u>Arsenic.....</u>	<u>6010</u> <u>7060</u> <u>7061</u>	<u>500</u> <u>10</u> <u>20</u>
<u>Barium.....</u>	<u>(Total)</u>	<u>Barium.....</u>	<u>6010</u> <u>7080</u>	<u>20</u> <u>1,000</u>
<u>Benzene.....</u>	<u>71-43-2</u>	<u>Benzene.....</u>	<u>8020</u> <u>8240</u>	<u>2</u> <u>5</u>
<u>Benzo[a]anthracene: Benzanthracene</u>	<u>56-55-3</u>	<u>Benz[a]anthracene.....</u>	<u>8100</u>	<u>200</u>

**APPENDIX XII. Ground Water Monitoring List<sup>1</sup>**

<u>Common Name<sup>2</sup></u>	<u>CAS RN<sup>3</sup></u>	<u>Chemical Abstracts Service Index Name<sup>4</sup></u>	<u>Suggested Methods<sup>5</sup></u>	<u>PQL (µg/l)<sup>6</sup></u>
			<u>8270</u>	<u>10</u>
<u>Benzo[b]fluoranthene.....</u>	<u>205-99-2</u>	<u>Benzo[e]acephenanthrylene.....</u>	<u>8100</u>	<u>200</u>
			<u>8270</u>	<u>10</u>
<u>Benzo[k]fluoranthene.....</u>	<u>207-08-9</u>	<u>Benzo[k]fluoranthene.....</u>	<u>8100</u>	<u>200</u>
			<u>8270</u>	<u>10</u>
<u>Benzo[ghi]perylene.....</u>	<u>191-24-2</u>	<u>Benzo[ghi]perylene.....</u>	<u>8100</u>	<u>200</u>
			<u>8270</u>	<u>10</u>
<u>Benzo[a]pyrene.....</u>	<u>50-32-8</u>	<u>Benzo[a]pyrene.....</u>	<u>8100</u>	<u>200</u>
			<u>8270</u>	<u>10</u>
<u>Benzyl alcohol</u>	<u>100-51-6</u>	<u>Benzenemethanol.....</u>	<u>8270</u>	<u>20</u>
<u>Beryllium.....</u>	<u>(Total)</u>	<u>Beryllium.....</u>	<u>6010</u>	<u>3</u>
			<u>7090</u>	<u>50</u>
			<u>7091</u>	<u>2</u>
<u>alpha-BHC</u>	<u>319-84-6</u>	<u>Cyclohexane, 1,2,3,4,5,6-hexachloro-(1a,2a,3b, 4a,5b,6b)-.....</u>	<u>8080</u>	<u>0.05</u>
			<u>8250</u>	<u>10</u>
<u>beta-BHC</u>	<u>319-85-7</u>	<u>Cyclohexane, 1,2,3,4,5,6-hexachloro-(1a,2b,3a, 4b,5a,6b)-.....</u>	<u>8080</u>	<u>0.05</u>
			<u>8250</u>	<u>40</u>
<u>delta-BHC</u>	<u>319-86-8</u>	<u>Cyclohexane, 1,2,3,4,5,6-hexachloro-(1a,2a,3a, 4b,5a,6b)-.....</u>	<u>8080</u>	<u>0.1</u>
			<u>8250</u>	<u>30</u>
<u>gamma-BHC;Lindane.....</u>	<u>58-89-9</u>	<u>Cyclohexane, 1,2,3,4,5,6-hexachloro-(1a,2a,3b, 4a,5a,6b)-.....</u>	<u>8080</u>	<u>0.05</u>
			<u>8250</u>	<u>10</u>
<u>Bis(2-chloroethoxy) methane.....</u>	<u>111-91-1</u>	<u>Ethane, 1,1'-(methylenebis(oxy))bis[2-chloro-.....</u>	<u>8270</u>	<u>10</u>
<u>Bis(2-chloroethyl)ether....</u>	<u>111-44-4</u>	<u>Ethane, 1,1'-oxybis[2-chloro-.....</u>	<u>8270</u>	<u>10</u>
<u>Bis(2-chloro-1-methylethyl) ether: 2,2'-Dichlorodiisopropyl ether</u>	<u>108-60-1</u>	<u>Propane, 2,2'-oxybis[1-chloro-.....</u>	<u>8010</u>	<u>100</u>
			<u>8270</u>	<u>10</u>
<u>Bis(2-ethylhexyl)phthalate...</u>	<u>117-81-7</u>	<u>1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl)ester.....</u>	<u>8060</u>	<u>20</u>
			<u>8270</u>	<u>10</u>
<u>Bromodichloromethane.....</u>	<u>75-27-4</u>	<u>Methane, bromodichloro-.....</u>	<u>8010</u>	<u>1</u>
			<u>8240</u>	<u>5</u>

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<u>Common Name<sup>2</sup></u>	<u>CAS RN<sup>3</sup></u>	<u>Chemical Abstracts Service Index Name<sup>4</sup></u>	<u>Suggested Methods<sup>5</sup></u>	<u>PQL (µg/l)<sup>6</sup></u>
<u>Bromoform:</u> <u>Tribromomethane.....</u>	<u>75-25-2</u>	<u>Methane, tribromo-.....</u>	<u>8010</u>	<u>2</u>
			<u>8240</u>	<u>5</u>
<u>4-Bromophenyl phenyl ether.....</u>	<u>101-55-3</u>	<u>Benzene, 1-bromo-4-phenoxy-.....</u>	<u>8270</u>	<u>10</u>
<u>Butyl benzyl phthalate: Benzyl butyl phthalate.....</u>	<u>85-68-7</u>	<u>1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester.....</u>	<u>8060</u>	<u>5</u>
			<u>8270</u>	<u>10</u>
<u>Cadmium.....</u>	<u>(Total)</u>	<u>Cadmium.....</u>	<u>6010</u>	<u>40</u>
			<u>7130</u>	<u>50</u>
			<u>7131</u>	<u>1</u>
<u>Carbon disulfide.....</u>	<u>75-15-0</u>	<u>Carbon disulfide.....</u>	<u>8240</u>	<u>5</u>
<u>Carbon tetrachloride.....</u>	<u>56-23-5</u>	<u>Methane, tetrachloro-.....</u>	<u>8010</u>	<u>1</u>
			<u>8240</u>	<u>5</u>
<u>Chlordane.....</u>	<u>57-74-9</u>	<u>4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-.....</u>	<u>8080</u>	<u>0.1</u>
			<u>8250</u>	<u>10</u>
<u>p-Chloroaniline.....</u>	<u>106-47-8</u>	<u>Benzenamine, 4-chloro-.....</u>	<u>8270</u>	<u>20</u>
<u>Chlorobenzene.....</u>	<u>108-90-7</u>	<u>Benzene, chloro-.....</u>	<u>8010</u>	<u>2</u>
			<u>8020</u>	<u>2</u>
			<u>8240</u>	<u>5</u>
<u>Chlorobenzilate.....</u>	<u>510-15-6</u>	<u>Benzeneacetic acid, 4-chloro-a-(4-chlorophenyl)-a-hydroxy, ethyl ester.....</u>	<u>8270</u>	<u>10</u>
<u>p-Chloro-m-cresol.....</u>	<u>59-50-7</u>	<u>Phenol, 4-chloro-3-methyl-.....</u>	<u>8040</u>	<u>5</u>
			<u>8270</u>	<u>20</u>
<u>Chloroethane: Ethyl chloride.....</u>	<u>75-00-3</u>	<u>Ethane, chloro-.....</u>	<u>8010</u>	<u>5</u>
			<u>8240</u>	<u>10</u>
<u>Chloroform.....</u>	<u>67-66-3</u>	<u>Methane, trichloro-.....</u>	<u>8010</u>	<u>0.5</u>
			<u>8240</u>	<u>5</u>
<u>2-Chloronaphthalene.....</u>	<u>91-58-7</u>	<u>Naphthalene, 2-chloro-.....</u>	<u>8120</u>	<u>10</u>
			<u>8270</u>	<u>10</u>
<u>2-Chlorophenol.....</u>	<u>95-57-8</u>	<u>Phenol, 2-chloro-.....</u>	<u>8040</u>	<u>5</u>
			<u>8270</u>	<u>10</u>
<u>4-Chlorophenyl phenyl ether..</u>	<u>7005-72-3</u>	<u>Benzene, 1-chloro-4-phenoxy-.....</u>	<u>8270</u>	<u>10</u>
<u>Chloroprene.....</u>	<u>126-99-8</u>	<u>1,3-Butadiene, 2-chloro-.....</u>	<u>8010</u>	<u>50</u>
			<u>8240</u>	<u>5</u>

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<u>Common Name<sup>2</sup></u>	<u>CAS RN<sup>3</sup></u>	<u>Chemical Abstracts Service Index Name<sup>4</sup></u>	<u>Suggested Methods<sup>5</sup></u>	<u>PQL (ug/l)<sup>6</sup></u>
<u>Chromium.....</u>	<u>(Total)</u>	<u>Chromium.....</u>	<u>6010</u>	<u>70</u>
			<u>7910</u>	<u>500</u>
			<u>7191</u>	<u>10</u>
<u>Chrysene.....</u>	<u>218-01-9</u>	<u>Chrysene.....</u>	<u>8100</u>	<u>200</u>
			<u>8270</u>	<u>10</u>
<u>Cobalt.....</u>	<u>(Total)</u>	<u>Cobalt.....</u>	<u>6010</u>	<u>70</u>
			<u>7200</u>	<u>500</u>
			<u>7201</u>	<u>10</u>
<u>Copper.....</u>	<u>(Total)</u>	<u>Copper.....</u>	<u>6010</u>	<u>60</u>
			<u>7210</u>	<u>200</u>
<u>m-Cresol.....</u>	<u>108-39-4</u>	<u>Phenol, 3-methyl.....</u>	<u>8270</u>	<u>10</u>
<u>o-Cresol.....</u>	<u>95-48-7</u>	<u>Phenol, 2-methyl.....</u>	<u>8270</u>	<u>10</u>
<u>p-Cresol.....</u>	<u>106-44-5</u>	<u>Phenol, 4-methyl.....</u>	<u>8270</u>	<u>10</u>
<u>Cyanide.....</u>	<u>57-12-5</u>	<u>Cyanide.....</u>	<u>9010</u>	<u>40</u>
<u>2,4-D; 2,4-Dichloro phenoxyacetic acid....</u>	<u>94-75-7</u>	<u>Acetic acid, (2,4-dichlorophenoxy)-.....</u>	<u>8150</u>	<u>10</u>
<u>4,4'-DDD.....</u>	<u>72-54-8</u>	<u>Benzene 1,1'-(2,2-dichloroethylidene) bis[4-chloro-.....</u>	<u>8080</u>	<u>0.1</u>
			<u>8270</u>	<u>10</u>
<u>4,4'-DDE.....</u>	<u>72-55-9</u>	<u>Benzene 1,1'-(dichloroethylidene) bis[4-chloro-.....</u>	<u>8080</u>	<u>0.05</u>
			<u>8270</u>	<u>10</u>
<u>4,4'-DDT.....</u>	<u>50-29-3</u>	<u>Benzene 1,1'-(2,2,2-trichloroethylidene) bis[4-chloro-.....</u>	<u>8080</u>	<u>0.1</u>
			<u>8270</u>	<u>10</u>
<u>Diallate.....</u>	<u>2303-16-4</u>	<u>Carbamothioic acid, bis(1-methylethyl)-, S- (2,3-dichloro-2-propenyl) ester</u>	<u>8270</u>	<u>10</u>
<u>Dibenz[a,h]anthracene.....</u>	<u>53-70-3</u>	<u>Dibenz[a,h]anthracene.....</u>	<u>8100</u>	<u>200</u>
			<u>8270</u>	<u>10</u>
<u>Dibenzofuran.....</u>	<u>132-64-9</u>	<u>Dibenzofuran.....</u>	<u>8270</u>	<u>10</u>
<u>Dibromochloromethane; Chlorodi-bromomethane.....</u>	<u>124-48-1</u>	<u>Methane, dibromochloro-.....</u>	<u>8010</u>	<u>1</u>
			<u>8240</u>	<u>5</u>
<u>1,2-Dibromo-3-chloro propane; DBCP.....</u>	<u>96-12-8</u>	<u>Propane, 1,2-dibromo-3-chloro-.....</u>	<u>81010</u>	<u>100</u>
			<u>8240</u>	<u>5</u>
			<u>8270</u>	<u>10</u>
<u>1,2-Dibromoethane; Ethylene dibromide.....</u>	<u>106-93-4</u>	<u>Ethane, 1,2-dibromo-.....</u>	<u>8010</u>	<u>10</u>
			<u>8240</u>	<u>5</u>

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<u>Common Name<sup>2</sup></u>	<u>CAS RN<sup>3</sup></u>	<u>Chemical Abstracts Service Index Name<sup>4</sup></u>	<u>Suggested Methods<sup>5</sup></u>	<u>PQL (µg/l)<sup>6</sup></u>
<u>Di-n-butyl phthalate.....</u>	<u>84-74-2</u>	<u>1,2-Benzenedicarboxylic acid, dibutyl ester.....</u>	<u>8060</u>	<u>5</u>
			<u>8270</u>	<u>10</u>
<u>o-Dichlorobenzene.....</u>	<u>95-50-1</u>	<u>Benzene, 1,2-dichloro.....</u>	<u>8010</u>	<u>2</u>
			<u>8020</u>	<u>5</u>
			<u>8120</u>	<u>10</u>
			<u>8270</u>	<u>10</u>
<u>m-Dichlorobenzene.....</u>	<u>541-73-1</u>	<u>Benzene, 1,3-dichloro.....</u>	<u>8010</u>	<u>5</u>
			<u>8020</u>	<u>5</u>
			<u>8120</u>	<u>10</u>
			<u>8270</u>	<u>10</u>
<u>p-Dichlorobenzene.....</u>	<u>106-46-7</u>	<u>Benzene, 1,4-dichloro-</u>	<u>8010</u>	<u>2</u>
			<u>8020</u>	<u>5</u>
			<u>8120</u>	<u>15</u>
			<u>8270</u>	<u>10</u>
<u>3,3'-Dichlorobenzidine.....</u>	<u>91-94-1</u>	<u>[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro.....</u>	<u>8270</u>	<u>20</u>
<u>trans-1,4-Dichloro-2-butene</u>	<u>110-57-6</u>	<u>2-Butene, 1,4-dichloro-, (E).....</u>	<u>8240</u>	<u>5</u>
<u>Dichlorodifluoromethane.....</u>	<u>75-71-8</u>	<u>Methane, dichlorodifluoro.....</u>	<u>8010</u>	<u>10</u>
			<u>8240</u>	<u>5</u>
<u>1,1-Dichloroethane.....</u>	<u>75-34-3</u>	<u>Ethane, 1,1-dichloro.....</u>	<u>8010</u>	<u>1</u>
			<u>8240</u>	<u>5</u>
<u>1,2-Dichloroethane; Ethylene dichloride.....</u>	<u>107-06-2</u>	<u>Ethane, 1,2-dichloro.....</u>	<u>8010</u>	<u>0.5</u>
			<u>8240</u>	<u>5</u>
<u>1,1-Dichloroethylene; Vinylidene chloride.....</u>	<u>75-35-4</u>	<u>Ethene, 1,1-dichloro.....</u>	<u>8010</u>	<u>1</u>
			<u>8240</u>	<u>5</u>
<u>trans-1,2-Dichloroethylene</u>	<u>156-60-5</u>	<u>Ethene, 1,2-dichloro-, (E).....</u>	<u>8010</u>	<u>1</u>
			<u>8240</u>	<u>5</u>
<u>2,4-Dichlorophenol.....</u>	<u>120-83-2</u>	<u>Phenol, 2,4-dichloro.....</u>	<u>8040</u>	<u>5</u>
			<u>8270</u>	<u>10</u>
<u>2,6-Dichlorophenol.....</u>	<u>87-65-0</u>	<u>Phenol, 2,6-dichloro.....</u>	<u>8270</u>	<u>10</u>
<u>1,2-Dichloropropane.....</u>	<u>78-87-5</u>	<u>Propane, 1,2-dichloro.....</u>	<u>8010</u>	<u>0.5</u>
			<u>8240</u>	<u>5</u>
<u>cis-1,3-Dichloropropene.....</u>	<u>10061-01-5</u>	<u>1-Propene, 1,3-dichloro-, (Z).....</u>	<u>8010</u>	<u>20</u>
			<u>8240</u>	<u>5</u>
<u>trans-1,3-Dichloro propene.....</u>	<u>10061-02-6</u>	<u>1-Propene, 1,3-dichloro-, (E).....</u>	<u>8010</u>	<u>5</u>

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<u>Common Name<sup>2</sup></u>	<u>CAS RN<sup>3</sup></u>	<u>Chemical Abstracts Service Index Name<sup>4</sup></u>	<u>Suggested Methods<sup>5</sup></u>	<u>PQL (µg/l)<sup>6</sup></u>
			8240	5
<u>Dieldrin.....</u>	<u>60-57-1</u>	<u>2,7:3,6-Dimethanonaphth[2,3-]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aa,2b,2aa,3b,6b,6aa,7b,7aa)-.....</u>	8080	0.05
			8270	10
<u>Diethyl phthalate.....</u>	<u>84-66-2</u>	<u>1,2-Benzenedicarboxylic acid, diethyl ester.....</u>	8060	5
			8270	10
<u>O,O-Diethyl O-2-pyrazinyl phosphorothioate; Thionazin.....</u>	<u>297-97-2</u>	<u>Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester.....</u>	8270	10
<u>Dimethoate.....</u>	<u>60-51-5</u>	<u>Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester.....</u>	8270	10
<u>p-(Dimethylamino) azobenzene.....</u>	<u>60-11-7</u>	<u>Benzenamine, N,N-dimethyl-4-(phenylazo)-.....</u>	8270	10
<u>7,12-Dimethylbenz[a] anthracene.....</u>	<u>57-97-6</u>	<u>Benz[a]anthracene, 7,12-dimethyl-.....</u>	8270	10
<u>3,3'-Dimethylbenzidine.....</u>	<u>119-93-7</u>	<u>[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-.....</u>	8270	10
<u>alpha, alpha-Dimethylphene thylamine.....</u>	<u>122-09-8</u>	<u>Benzeneethanamine, a,a-dimethyl-.....</u>	8270	10
<u>2,4-Dimethylphenol.....</u>	<u>105-67-9</u>	<u>Phenol, 2,4-dimethyl-.....</u>	8040	5
			8270	10
<u>Dimethyl phthalate.....</u>	<u>131-11-3</u>	<u>1,2-Benzenedicarboxylic acid, dimethyl ester.....</u>	8060	5
			8270	10
<u>m-Dinitrobenzene.....</u>	<u>99-65-0</u>	<u>Benzene, 1,3-dinitro-.....</u>	8270	10
<u>4,6-Dinitro-o-cresol.....</u>	<u>534-52-1</u>	<u>Phenol, 2-methyl-4,6-dinitro-.....</u>	8040	150
			8270	50
<u>2,4-Dinitrophenol.....</u>	<u>51-28-5</u>	<u>Phenol, 2,4-dinitro-.....</u>	8040	150
			8270	50
<u>2,4-Dinitrotoluene.....</u>	<u>121-14-2</u>	<u>Benzene, 1-methyl-2,4-dinitro-.....</u>	8090	0.2
			8270	10
<u>2,6-Dinitrotoluene.....</u>	<u>606-20-2</u>	<u>Benzene, 2-methyl-1,3-dinitro-.....</u>	8090	0.1
			8270	10
<u>Dinoseb; DNBP; 2-sec-Butyl-4,6-dinitrophenol.....</u>	<u>88-85-7</u>	<u>Phenol, 2-(1-methylpropyl)-4,6-dinitro-.....</u>	8150	1
			8270	10

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<u>Di-n-octyl phthalate.....</u>	<u>117-84-0</u>	<u>1,2-Benzenedicarboxylic acid, dioctyl ester.....</u>	<u>8060</u>	<u>30</u>
			<u>8270</u>	<u>10</u>
<u>1,4-Dioxane.....</u>	<u>123-91-1</u>	<u>1,4-Dioxane.....</u>	<u>8015</u>	<u>150</u>
<u>Diphenylamine.....</u>	<u>122-39-4</u>	<u>Benzenamine, N-phenyl.....</u>	<u>8270</u>	<u>10</u>
<u>Disulfoton.....</u>	<u>298-04-4</u>	<u>Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)- S-[2-ethyl]ester.....</u>	<u>8140</u>	<u>2</u>
			<u>8270</u>	<u>10</u>
<u>Endosulfan I.....</u>	<u>959-98-8</u>	<u>6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide, (3a,5ab,6a,9a,9ab)-.....</u>	<u>8080</u>	<u>0.1</u>
			<u>8250</u>	<u>10</u>
<u>Endosulfan II.....</u>	<u>33213-65-9</u>	<u>6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide, (3a,5aa,6b,9b,9aa)-.....</u>	<u>8080</u>	<u>0.05</u>
<u>Endosulfan sulfate</u>	<u>1031-07-8</u>	<u>6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3,3-dioxide</u>	<u>8080</u>	<u>0.5</u>
			<u>8270</u>	<u>10</u>
<u>Endrin</u>	<u>72-20-8</u>	<u>2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aa,2b,2ab,3a,6a,6ab,7b,7aa)-.....</u>	<u>8080</u>	<u>0.1</u>
			<u>8250</u>	<u>10</u>
<u>Endrin aldehyde.....</u>	<u>7421-93-4</u>	<u>1,2,4-Methenocyclopenta[cd]pentalene-5-carboxaldehyde, 2,2a,3,3,4,7-hexachlorodecahydro-, (1a,2b,2ab,4b,4ab,5b,6ab,6bb,7R*)-.....</u>	<u>8080</u>	<u>0.2</u>
			<u>8270</u>	<u>10</u>
<u>Ethylbenzene.....</u>	<u>100-41-4</u>	<u>Benzene, ethyl-.....</u>	<u>8020</u>	<u>2</u>
			<u>8240</u>	<u>5</u>
			<u>8270</u>	<u>10</u>
<u>Ethyl methacrylate.....</u>	<u>97-63-2</u>	<u>2-Propenoic acid, 2-methyl-, ethyl ester.....</u>	<u>8015</u>	<u>10</u>
			<u>8240</u>	<u>5</u>
			<u>8270</u>	<u>10</u>
<u>Ethyl methanesulfonate</u>	<u>62-50-0</u>	<u>Methanesulfonic acid, ethyl ester.....</u>	<u>8270</u>	<u>10</u>
<u>Famphur.....</u>	<u>52-85-7</u>	<u>Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl]-O,O-dimethyl ester.....</u>	<u>8270</u>	<u>10</u>
<u>Fluoranthene.....</u>	<u>206-44-0</u>	<u>Fluoranthene.....</u>	<u>8100</u>	<u>200</u>
			<u>8270</u>	<u>10</u>
<u>Fluorene</u>	<u>86-73-7</u>	<u>9H-Fluorene</u>	<u>8100</u>	<u>200</u>
			<u>8270</u>	<u>10</u>

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<u>Heptachlor.....</u>	<u>76-44-8</u>	<u>4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7, 7a-tetrahydro-.....</u>	<u>8080</u>  <u>8270</u>	<u>0.05</u>  <u>10</u>
<u>Heptachlor epoxide.....</u>	<u>1024-57-3</u>	<u>2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-tachloro-1a,1b,5,5a,6, 6a.-hexahydro-, (1aa,1bb,2a,5ab,6b,6aa)</u>	<u>8080</u>  <u>8270</u>	<u>1</u>  <u>10</u>
<u>Hexachlorobenzene.....</u>	<u>118-74-1</u>	<u>Benzene, hexachloro-.....</u>	<u>8120</u>  <u>8270</u>	<u>0.5</u>  <u>10</u>
<u>Hexachlorobutadiene.....</u>	<u>87-68-3</u>	<u>1,3-Butadiene, 1,1,2,3,4,4-hexachloro-.....</u>	<u>8120</u>  <u>8270</u>	<u>5</u>  <u>10</u>
<u>Hexachlorocyclopentadiene.....</u>	<u>77-47-4</u>	<u>1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-.....</u>	<u>8120</u>  <u>8270</u>	<u>5</u>  <u>10</u>
<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>Ethane, hexachloro-.....</u>	<u>8120</u>  <u>8270</u>	<u>0.5</u>  <u>10</u>
<u>Hexachlorophene</u>	<u>70-30-4</u>	<u>Phenol, 2,2'-methylenebis[3,4,6-trichloro-.....</u>	<u>8270</u>	<u>10</u>
<u>Hexachloropropene</u>	<u>1888-71-7</u>	<u>1-Propene, 1,1,2,3,3,3-hexachloro-.....</u>	<u>8270</u>	<u>10</u>
<u>2-Hexanone</u>	<u>591-76-6</u>	<u>2-Hexanone.....</u>	<u>8240</u>	<u>50</u>
<u>Indeno(1,2,3-cd)pyrene.....</u>	<u>193-39-5</u>	<u>Indeno[1,2,3-cd]pyrene.....</u>	<u>8100</u>  <u>8270</u>	<u>200</u>  <u>10</u>
<u>Isobutyl alcohol.....</u>	<u>78-83-1</u>	<u>1-Propanol, 2-methyl-.....</u>	<u>8015</u>	<u>50</u>
<u>Isodrin</u>	<u>465-73-6</u>	<u>1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a hexahydro-(1a,4a,4ab,5b,8b,8ab)-.....</u>	<u>8270</u>	<u>10</u>
<u>Isophorone.....</u>	<u>78-59-1</u>	<u>2-Cyclohexen-1-one, 3,5,5-trimethyl-.....</u>	<u>8090</u>  <u>8270</u>	<u>60</u>  <u>10</u>
<u>Isosafrole.....</u>	<u>120-58-1</u>	<u>1,3-Benzodioxole, 5-(1-propenyl)-.....</u>	<u>8270</u>	<u>10</u>
<u>Kepone.....</u>	<u>143-50-0</u>	<u>1,3,4-Metheno-2H-cyclobuta- [cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b, 6-decachlorooctahydro-.....</u>	<u>8270</u>	<u>10</u>
<u>Lead.....</u>	<u>(Total)</u>	<u>Lead.....</u>	<u>6010</u>  <u>7420</u>  <u>7421</u>	<u>40</u>  <u>1,000</u>  <u>10</u>
<u>Mercury.....</u>	<u>(Total)</u>	<u>Mercury.....</u>	<u>7470</u>	<u>2</u>
<u>Methacrylonitrile.....</u>	<u>128-98-7</u>	<u>2-Propenenitrile, 2-methyl-.....</u>	<u>8015</u>  <u>8240</u>	<u>5</u>  <u>5</u>

**APPENDIX XII. Ground Water Monitoring List<sup>1</sup>**

<u>Common Name<sup>2</sup></u>	<u>CAS RN<sup>3</sup></u>	<u>Chemical Abstracts Service Index Name<sup>4</sup></u>	<u>Suggested Methods<sup>5</sup></u>	<u>PQL (µg/l)<sup>6</sup></u>
<u>Methapyrilene.....</u>	<u>91-80-5</u>	<u>1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'- (2-thien-ylmethyl)-.....</u>	<u>8270</u>	<u>10</u>
<u>Methoxychlor</u>	<u>72-43-5</u>	<u>Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-methoxy-.....</u>	<u>8080</u> <u>8270</u>	<u>2</u> <u>10</u>
<u>Methyl bromide; Bromomethane.....</u>	<u>74-83-9</u>	<u>Methane, bromo-.....</u>	<u>8010</u> <u>8240</u>	<u>20</u> <u>10</u>
<u>Methyl chloride; Chloromethane.....</u>	<u>74-87-3</u>	<u>Methane, chloro-.....</u>	<u>8010</u> <u>8240</u>	<u>1</u> <u>10</u>
<u>3-Methylcholanthrene.....</u>	<u>56-49-5</u>	<u>Benz[<i>a</i>]aceanthrylene, 1,2-dihydro-3-methyl-.....</u>	<u>8270</u>	<u>10</u>
<u>Methylene bromide; Dibromomethane.....</u>	<u>74-95-3</u>	<u>Methane, dibromo-.....</u>	<u>8010</u> <u>8240</u>	<u>15</u> <u>5</u>
<u>Methylene chloride; Dichloromethane.....</u>	<u>75-09-2</u>	<u>Methane, dichloro-.....</u>	<u>8010</u> <u>8240</u>	<u>5</u> <u>5</u>
<u>Methyl ethyl ketone, MEK.....</u>	<u>78-93-3</u>	<u>2-Butanone.....</u>	<u>8015</u> <u>8240</u>	<u>10</u> <u>100</u>
<u>Methyl iodide; Iodomethane.....</u>	<u>74-88-4</u>	<u>Methane, iodo-.....</u>	<u>8010</u> <u>8240</u>	<u>40</u> <u>5</u>
<u>Methyl methacrylate.....</u>	<u>80-62-6</u>	<u>2-Propenoic acid, 2-methyl-, methyl ester.....</u>	<u>8015</u> <u>8240</u>	<u>2</u> <u>5</u>
<u>Methyl methanesulfonate.....</u>	<u>66-27-3</u>	<u>Methanesulfonic acid, methyl ester.....</u>	<u>8270</u>	<u>10</u>
<u>2-Methylnaphthalene.....</u>	<u>91-57-6</u>	<u>Naphthalene, 2-methyl-.....</u>	<u>8270</u>	<u>10</u>
<u>Methyl parathion; Parathion methyl.....</u>	<u>298-00-0</u>	<u>Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester.....</u>	<u>8140</u> <u>8270</u>	<u>0.5</u> <u>10</u>
<u>4-Methyl-2-pentanone; Methyl isobutyl ketone.....</u>	<u>108-10-1</u>	<u>2-Pentanone, 4-methyl-.....</u>	<u>8015</u> <u>8240</u>	<u>5</u> <u>50</u>
<u>Naphthalene.....</u>	<u>91-20-3</u>	<u>Naphthalene.....</u>	<u>8100</u> <u>8270</u>	<u>200</u> <u>10</u>
<u>1,4-Naphthoquinone.....</u>	<u>130-15-4</u>	<u>1,4-Naphthalenedione.....</u>	<u>8270</u>	<u>10</u>
<u>1-Naphthylamine.....</u>	<u>134-32-7</u>	<u>1-Naphthalenamine.....</u>	<u>8270</u>	<u>10</u>
<u>2-Naphthylamine.....</u>	<u>91-59-8</u>	<u>2-Naphthalenamine.....</u>	<u>8270</u>	<u>10</u>

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<u>Common Name<sup>2</sup></u>	<u>CAS RN<sup>3</sup></u>	<u>Chemical Abstracts Service Index Name<sup>4</sup></u>	<u>Suggested Methods<sup>5</sup></u>	<u>PQL (ug/l)<sup>6</sup></u>
<u>Nickel.....</u>	<u>(Total)</u>	<u>Nickel.....</u>	<u>6010</u>	<u>50</u>
			<u>7520</u>	<u>400</u>
<u>o-Nitroaniline.....</u>	<u>88-74-4</u>	<u>Benzenamine, 2-nitro-.....</u>	<u>8270</u>	<u>50</u>
<u>m-Nitroaniline.....</u>	<u>99-09-2</u>	<u>Benzenamine, 3-nitro-</u>	<u>8270</u>	<u>50</u>
<u>p-Nitroaniline.....</u>	<u>100-01-6</u>	<u>Benzenamine, 4-nitro-.....</u>	<u>8270</u>	<u>50</u>
<u>Nitrobenzene.....</u>	<u>98-95-3</u>	<u>Benzene, nitro-.....</u>	<u>8090</u>	<u>40</u>
			<u>8270</u>	<u>10</u>
<u>o-Nitrophenol.....</u>	<u>88-75-5</u>	<u>Phenol, 2-nitro-.....</u>	<u>8040</u>	<u>5</u>
			<u>8270</u>	<u>10</u>
<u>p-Nitrophenol.....</u>	<u>100-02-7</u>	<u>Phenol, 4-nitro-.....</u>	<u>8040</u>	<u>10</u>
			<u>8270</u>	<u>50</u>
<u>4-Nitroquinoline 1-oxide.....</u>	<u>56-57-5</u>	<u>Quinoline, 4-nitro, 1-oxide.....</u>	<u>8270</u>	<u>10</u>
<u>N-Nitrosodi-n-butylamine....</u>	<u>924-16-3</u>	<u>1-Butanamine, N-butyl-N-nitroso-.....</u>	<u>8270</u>	<u>10</u>
<u>N-Nitrosodiethylamine.....</u>	<u>55-18-5</u>	<u>Ethanamine, N-ethyl-N-nitroso-.....</u>	<u>8270</u>	<u>10</u>
<u>N-Nitrosodimethylamine.....</u>	<u>62-75-9</u>	<u>Methanamine, N-methyl-N-nitroso-.....</u>	<u>8270</u>	<u>10</u>
<u>N-Nitrosodiphenylamine.....</u>	<u>86-30-6</u>	<u>Benzenamine, N-nitroso-N-phenyl.....</u>	<u>8270</u>	<u>10</u>
<u>N-Nitrosodipropylamine; di-n-propylnitrosamine.....</u>	<u>621-64-7</u>	<u>1-Propanamine, N-nitroso-N-propyl-.....</u>	<u>8270</u>	<u>10</u>
<u>N-Nitrosomethyl ethylamine..</u>	<u>10595-95-6</u>	<u>Ethanamine, N-methyl-N-nitroso-.....</u>	<u>8270</u>	<u>10</u>
<u>N-Nitrosomorpholine.....</u>	<u>59-89-2</u>	<u>Morpholine, 4-nitroso-.....</u>	<u>8270</u>	<u>10</u>
<u>N-Nitrosopiperidine.....</u>	<u>100-75-4</u>	<u>Piperidine, 1-nitroso-.....</u>	<u>8270</u>	<u>10</u>
<u>N-Nitrosopyrrolidine.....</u>	<u>930-55-2</u>	<u>Pyrrolidine, 1-nitroso-.....</u>	<u>8270</u>	<u>10</u>
<u>5-Nitro-o-toluidine.....</u>	<u>99-55-8</u>	<u>Benzenamine, 2-methyl-5-nitro-</u>	<u>8270</u>	<u>10</u>
<u>Parathion.....</u>	<u>56-38-2</u>	<u>Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl) ester.....</u>	<u>8270</u>	<u>10</u>
<u>Polychlorinated biphenyls; PCBs.....</u>	<u>See Note 7</u>	<u>1,1'-Biphenyl, chloro derivatives.....</u>	<u>8080</u>	<u>50</u>
			<u>8250</u>	<u>100</u>
<u>Polychlorinated dibenzo-p-dioxins; PCDDs .....</u>	<u>See Note 8</u>	<u>Dibenzo[b,e][1,4]dioxin, chloro derivatives.....</u>	<u>8280</u>	<u>0.01</u>
<u>Polychlorinated dibenzofurans; PCDFs.....</u>	<u>See Note 9</u>	<u>Dibenzofuran, chloro derivatives.....</u>	<u>8280</u>	<u>0.01</u>
<u>Pentachlorobenzene.....</u>	<u>608-93-5</u>	<u>Benzene, pentachloro-.....</u>	<u>8270</u>	<u>10</u>
<u>Pentachloroethane.....</u>	<u>76-01-7</u>	<u>Ethane, pentachloro-.....</u>	<u>8240</u>	<u>5</u>
			<u>8270</u>	<u>10</u>
<u>Pentachloronitrobenzene....</u>	<u>82-68-8</u>	<u>Benzene, pentachloronitro-.....</u>	<u>8270</u>	<u>10</u>
<u>Pentachlorophenol.....</u>	<u>87-86-5</u>	<u>Phenol, pentachloro-.....</u>	<u>8040</u>	<u>5</u>

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<u>Common Name<sup>2</sup></u>	<u>CAS RN<sup>3</sup></u>	<u>Chemical Abstracts Service Index Name<sup>4</sup></u>	<u>Suggested Methods<sup>5</sup></u>	<u>PQL (µg/l)<sup>6</sup></u>
			<u>8270</u>	<u>50</u>
<u>Phenacetin.....</u>	<u>62-44-2</u>	<u>Acetamide, N-(4-ethoxyphenyl).....</u>	<u>8270</u>	<u>10</u>
<u>Phenanthrene.....</u>	<u>85-01-8</u>	<u>Phenanthrene.....</u>	<u>8100</u>	<u>200</u>
			<u>8270</u>	<u>10</u>
<u>Phenol.....</u>	<u>108-95-2</u>	<u>Phenol.....</u>	<u>8040</u>	<u>1</u>
			<u>8270</u>	<u>10</u>
<u>p-Phenylenediamine.....</u>	<u>106-50-3</u>	<u>1,4-Benzenediamine.....</u>	<u>8270</u>	<u>10</u>
<u>Phorate.....</u>	<u>298-02-2</u>	<u>Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester</u>	<u>8140</u>	<u>2</u>
			<u>8270</u>	<u>10</u>
<u>2-Picoline.....</u>	<u>109-06-8</u>	<u>Pyridine, 2-methyl.....</u>	<u>8240</u>	<u>5</u>
			<u>8270</u>	<u>10</u>
<u>Pronamide.....</u>	<u>23950-58-5</u>	<u>Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-.....</u>	<u>8270</u>	<u>10</u>
<u>Propionitrile: Ethyl cyanide.....</u>	<u>107-12-0</u>	<u>Propanenitrile.....</u>	<u>8015</u>	<u>60</u>
			<u>8240</u>	<u>5</u>
<u>Pyrene.....</u>	<u>129-00-0</u>	<u>Pyrene.....</u>	<u>8100</u>	<u>200</u>
			<u>8270</u>	<u>10</u>
<u>Pyridine.....</u>	<u>110-86-1</u>	<u>Pyridine.....</u>	<u>8240</u>	<u>5</u>
			<u>8270</u>	<u>10</u>
<u>Safrole.....</u>	<u>94-59-7</u>	<u>1,3-Benzodioxole, 5-(2-propenyl)-.....</u>	<u>8270</u>	<u>10</u>
<u>Selenium.....</u>	<u>(Total)</u>	<u>Selenium.....</u>	<u>6010</u>	<u>750</u>
			<u>7740</u>	<u>20</u>
			<u>7741</u>	<u>20</u>
<u>Silver.....</u>	<u>(Total)</u>	<u>Silver.....</u>	<u>6010</u>	<u>70</u>
			<u>7760</u>	<u>100</u>
<u>Silvex; 2,4,5-TP.....</u>	<u>93-72-1</u>	<u>Propanoic acid, 2-(2,4,5-trichlorophenoxy)-.....</u>	<u>8150</u>	<u>2</u>
<u>Styrene.....</u>	<u>100-42-5</u>	<u>Benzene, ethenyl.....</u>	<u>8020</u>	<u>1</u>
			<u>8240</u>	<u>5</u>
<u>Sulfide.....</u>	<u>18496-25-8</u>	<u>Sulfide.....</u>	<u>9030</u>	<u>10,000</u>
<u>2,4,5-T; 2,4,5-Trichlorophenoxy- acetic acid.....</u>	<u>93-76-5</u>	<u>Acetic acid, (2,4,5-trichlorophenoxy)-.....</u>	<u>8150</u>	<u>2</u>
<u>2,3,7,8-TCDD; 2,3,7,8-Tetrachloro- dibenzo-p-dioxin.....</u>	<u>1746-01-6</u>	<u>Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro.....</u>	<u>8280</u>	<u>0.005</u>
<u>1,2,4,5-Tetrachloro benzene.....</u>	<u>95-94-3</u>	<u>Benzene, 1,2,4,5-tetrachloro.....</u>	<u>8270</u>	<u>10</u>

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<u>Common Name<sup>2</sup></u>	<u>CAS RN<sup>3</sup></u>	<u>Chemical Abstracts Service Index Name<sup>4</sup></u>	<u>Suggested Methods<sup>5</sup></u>	<u>PQL (<math>\mu\text{g/l}</math>)<sup>6</sup></u>
<u>1,1,1,2-Tetrachloro ethane.....</u>	<u>630-20-6</u>	<u>Ethane, 1,1,1,2-tetrachloro-.....</u>	<u>8010</u>	<u>5</u>
			<u>8240</u>	<u>5</u>
<u>1,1,2,2-Tetrachloro ethane..</u>	<u>79-34-5</u>	<u>Ethane, 1,1,2,2-tetrachloro-.....</u>	<u>8010</u>	<u>0.5</u>
			<u>8240</u>	<u>5</u>
<u>Tetrachloroethylene: Perchloro-ethylene: Tetrachloroethene.....</u>	<u>127-18-4</u>	<u>Ethene, tetrachloro-.....</u>	<u>8010</u>	<u>0.5</u>
			<u>8240</u>	<u>5</u>
<u>2,3,4,6-Tetrachloro phenol.....</u>	<u>58-90-2</u>	<u>Phenol, 2,3,4,6-tetrachloro-.....</u>	<u>8270</u>	<u>10</u>
<u>Tetraethyl dithiopyrophosphate: sulfotepp</u>	<u>3689-24-5</u>	<u>Thiodiphosphoric acid ((HO)<sub>2</sub>P(S)<sub>2</sub>O), tetraethyl ester.....</u>	<u>8270</u>	<u>10</u>
<u>Thallium.....</u>	<u>(Total)</u>	<u>Thallium.....</u>	<u>6010</u>	<u>400</u>
			<u>7840</u>	<u>1,000</u>
			<u>7841</u>	<u>10</u>
<u>Tin.....</u>	<u>(Total)</u>	<u>Tin.....</u>	<u>7870</u>	<u>8,000</u>
<u>Toluene.....</u>	<u>108-88-3</u>	<u>Benzene, methyl-.....</u>	<u>8020</u>	<u>2</u>
			<u>8240</u>	<u>5</u>
<u>o-Toluidine.....</u>	<u>95-53-4</u>	<u>Benzenamine, 2-methyl-.....</u>	<u>8270</u>	<u>10</u>
<u>Toxaphene.....</u>	<u>8001-35-2</u>	<u>Toxaphene.....</u>	<u>8080</u>	<u>2</u>
			<u>8250</u>	<u>10</u>
<u>1,2,4-Trichlorobenzene</u>	<u>120-82-1</u>	<u>Benzene, 1,2,4-Trichloro-.....</u>	<u>8270</u>	<u>10</u>
<u>1,1,1-Trichloroethane: Methylchloroform.....</u>	<u>71-55-6</u>	<u>Ethane, 1,1,1-trichloro-.....</u>	<u>8240</u>	<u>5</u>
<u>1,1,2-Trichloroethane.....</u>	<u>79-00-5</u>	<u>Ethane, 1,1,2-trichloro-.....</u>	<u>8010</u>	<u>0.2</u>
			<u>8240</u>	<u>5</u>
<u>Trichloroethylene: Trichloroethene.....</u>	<u>79-01-6</u>	<u>Ethene, trichloro-.....</u>	<u>8010</u>	<u>1</u>
			<u>8240</u>	<u>5</u>
<u>Trichlorofluoromethane.....</u>	<u>75-69-4</u>	<u>Methane, trichlorofluoro-.....</u>	<u>8010</u>	<u>10</u>
			<u>8240</u>	<u>5</u>
<u>2,4,5-Trichlorophenol.....</u>	<u>95-95-4</u>	<u>Phenol, 2,4,5-trichloro-.....</u>	<u>8270</u>	<u>10</u>
<u>2,4,6-Trichlorophenol.....</u>	<u>88-06-2</u>	<u>Phenol, 2,4,6-trichloro-.....</u>	<u>8040</u>	<u>5</u>
			<u>8270</u>	<u>10</u>
<u>1,2,3-Trichloropropane.....</u>	<u>96-18-4</u>	<u>Propane, 1,2,3-trichloro-.....</u>	<u>8010</u>	<u>10</u>
			<u>8240</u>	<u>5</u>
<u>O,O,O-Triethyl phosphorothioate.....</u>	<u>126-68-1</u>	<u>Phosphorothioic acid, O,O,O-triethyl ester.....</u>	<u>8270</u>	<u>10</u>

**APPENDIX XII. Ground Water Monitoring List<sup>1</sup>**

<u>Common Name<sup>2</sup></u>	<u>CAS RN<sup>3</sup></u>	<u>Chemical Abstracts Service Index Name<sup>4</sup></u>	<u>Suggested Methods<sup>5</sup></u>	<u>PQL (µg/l)<sup>6</sup></u>
<u>sym-Trinitrobenzene.....</u>	<u>99-35-4</u>	<u>Benzene, 1,3,5-trinitro-.....</u>	<u>8270</u>	<u>10</u>
<u>Vanadium.....</u>	<u>(Total)</u>	<u>Vanadium.....</u>	<u>6010</u>	<u>80</u>
			<u>7910</u>	<u>2,000</u>
			<u>7911</u>	<u>40</u>
<u>Vinyl acetate.....</u>	<u>108-05-4</u>	<u>Acetic acid, ethenyl ester.....</u>	<u>8240</u>	<u>5</u>
<u>Vinyl chloride.....</u>	<u>75-01-4</u>	<u>Ethene, chloro-.....</u>	<u>8010</u>	<u>2</u>
			<u>8240</u>	<u>10</u>
<u>Xylene (total).....</u>	<u>1330-20-7</u>	<u>Benzene, dimethyl-.....</u>	<u>8020</u>	<u>5</u>
			<u>8240</u>	<u>5</u>
<u>Zinc.....</u>	<u>(Total)</u>	<u>Zinc.....</u>	<u>6010</u>	<u>20</u>
			<u>7950</u>	<u>50</u>

**APPENDIX XII. Ground Water Monitoring List<sup>1</sup>**

<b>Common Name<sup>2</sup></b>	<b>CAS RN<sup>3</sup></b>	<b>Chemical Abstracts Service Index Name<sup>4</sup></b>	<b>Suggested Methods<sup>5</sup></b>	<b>PQL (µg/L)<sup>6</sup></b>
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<sup>1</sup>The regulatory requirements pertain only to the list of substances; the right hand columns (Methods and PQL) are given for informational purposes only. See also Footnotes 5 and 6.

<sup>2</sup>Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

<sup>3</sup>Chemical Abstracts Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included.

<sup>4</sup>CAS index names are those used in the 9th Cumulative Index.

<sup>5</sup>Suggested methods refer to analytical procedure numbers used in environmental protection agency publication SW-846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", third edition. Analytical details can be found in SW-846 and in documentation on file at the environmental protection agency. The packed column gas chromatography methods 8010, 8020, 8030, 8040, 8060, 8080, 8090, 8110, 8120, 8140, 8150, 8240, and 8250 were promulgated methods through update IIB of SW-846 and, as of update III, the environmental protection agency has replaced these methods with "capillary column GC methods", as the suggested methods.

<sup>6</sup>Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in ground waters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQLs listed are generally stated to one significant figure. CAUTION: The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not a part of the regulation.

<sup>7</sup>Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including constituents of Aroclor 1016 (CAS RN 12674-11-2), Aroclor-1221 (CAS RN 1104-28-2), Aroclor-1232 (CAS RN 11141-16-5), Aroclor-1242 (CAS RN 53469-21-9), Aroclor-1248 (CAS RN 12672-29-6), Aroclor-1254 (CAS RN 11097-69-1), and Aroclor-1260 (CAS RN 11096-82-5). The PQL shown is an average value for PCB congeners.

<sup>8</sup>This category contains congener chemicals, including tetrachlorodibenzo-p-dioxins (see also 2,3,7,8-TCDD), pentachlorodibenzo-p-dioxins, and hexachlorodibenzo-p-dioxins. The PQL shown is an average value for PCDD congeners.

<sup>9</sup>This category contains congener chemicals, including tetrachlorodibenzofurans, pentachlorodibenzofurans, and hexachlorodibenzofurans. The PQL shown is an average value for PCDF congeners.

<b>APPENDIX XIII</b>		
<b>Land Disposal Restriction Effective Dates of Injected Prohibited Hazardous Wastes</b>		
<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
<u>F001-F005</u>	<u>All spent F001-F005 solvent containing less than 1 percent total F001-F005 solvent constituents</u>	<u>August 8, 1990</u>
<u>D001 (except high total organic carbon ignitable liquids subcategory)</u>	<u>All</u>	<u>February 10, 1994</u>
<u>D001 (high total organic carbon ignitable liquids subcategory)</u>	<u>Nonwastewater</u>	<u>September 19, 1995</u>
<u>D002<sup>b</sup></u>	<u>All</u>	<u>May 8, 1992</u>
<u>D002<sup>c</sup></u>	<u>All</u>	<u>May 8, 1992</u>
<u>D003 (cyanides)</u>	<u>All</u>	<u>May 8, 1992</u>
<u>D003 (sulfides)</u>	<u>All</u>	<u>May 8, 1992</u>
<u>D003 (explosives, reactives)</u>	<u>All</u>	<u>September 10, 1995</u>
<u>D007</u>	<u>All</u>	<u>September 10, 1995</u>
<u>D009</u>	<u>Non.</u>	<u>September 10, 1995</u>
<u>D012</u>	<u>All</u>	<u>September 19, 1995</u>
<u>D013</u>	<u>All</u>	<u>September 19, 1995</u>
<u>D014</u>	<u>All</u>	<u>September 19, 1995</u>
<u>D015</u>	<u>All</u>	<u>September 19, 1995</u>
<u>D016</u>	<u>All</u>	<u>September 19, 1995</u>
<u>D017</u>	<u>All, including mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>D018</u>	<u>All, including mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>D019</u>	<u>All, including mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>D020</u>	<u>All, including mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>D021</u>	<u>All, including mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>D022</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D023</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D024</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D025</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D026</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D027</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D028</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D029</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D030</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D031</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D032</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>

<b>APPENDIX XIII</b>		
<b>Land Disposal Restriction Effective Dates of Injected Prohibited Hazardous Wastes</b>		
<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
<u>D033</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D034</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D035</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D036</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D037</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D038</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D039</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D040</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D041</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D042</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D043</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>F007</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>F032</u>	<u>All, including mixed radioactive wastes</u>	<u>May 12, 1999</u>
<u>F034</u>	<u>All, including mixed radioactive wastes</u>	<u>May 12, 1999</u>
<u>F035</u>	<u>All, including mixed radioactive wastes</u>	<u>May 12, 1999</u>
<u>F037</u>	<u>All</u>	<u>November 8, 1992</u>
<u>F038</u>	<u>All</u>	<u>November 8, 1992</u>
<u>F039</u>	<u>All, including mixed radioactive wastes</u>	<u>May 12, 1999</u>
<u>K009</u>	<u>Wastewater</u>	<u>June 8, 1991</u>
<u>K011</u>	<u>Nonwastewater</u>	<u>June 8, 1991</u>
<u>K011</u>	<u>Wastewater</u>	<u>May 8, 1992</u>
<u>K013</u>	<u>Nonwastewater</u>	<u>June 8, 1991</u>
<u>K013</u>	<u>Wastewater</u>	<u>May 8, 1992</u>
<u>K014</u>	<u>All</u>	<u>May 8, 1992</u>
<u>K016 (dilute)</u>	<u>All</u>	<u>June 8, 1991</u>
<u>K049</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K050</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K051</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K052</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K062</u>	<u>All</u>	<u>January 8, 1997</u>
<u>K071</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K088</u>	<u>All</u>	<u>November 8, 1992</u>
<u>K104</u>	<u>All</u>	<u>November 9, 1992</u>
<u>K107</u>	<u>All</u>	<u>November 9, 1992</u>
<u>K108</u>	<u>All</u>	<u>November 9, 1992</u>
<u>K109</u>	<u>All</u>	<u>November 9, 1992</u>

**APPENDIX XIII**  
**Land Disposal Restriction Effective Dates of Injected Prohibited Hazardous Wastes**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
K110	All	November 9, 1992
K111	All	November 9, 1992
K112	All	June 30, 1995
K117	All	June 30, 1995
K118	All	November 9, 1992
K123	All	November 9, 1992
K124	All	November 9, 1992
K125	All	November 9, 1992
K126	All	November 9, 1992
K131	All	June 30, 1995
K132	All	November 9, 1992
K136	All	December 19, 1994
K141	All	December 19, 1994
K142	All	December 19, 1994
K143	All	December 19, 1994
K144	All	December 19, 1994
K145	All	December 19, 1994
K147	All	December 19, 1994
K148	All	December 19, 1994
K149	All	December 19, 1994
K150	All	December 19, 1994
K151	All	July 8, 1996
K156	All	July 8, 1996
K157	All	July 8, 1996
K158	All	July 8, 1996
K159	All	July 8, 1996
K160	All	July 8, 1996
K161	All	July 8, 1996
NA	Newly identified mineral processing wastes from titanium dioxide production and mixed radioactive, newly identified D004 through D011 characteristic wastes and mineral processing wastes	May 26, 2000
P127	All	July 8, 1996
P128	All	July 8, 1996
P185	All	July 8, 1996
P188	All	July 8, 1996
P189	All	July 8, 1996

<b>APPENDIX XIII</b>		
<b>Land Disposal Restriction Effective Dates of Injected Prohibited Hazardous Wastes</b>		
<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
<u>P190</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P191</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P192</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P194</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P196</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P197</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P198</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P199</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P201</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P202</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P203</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P204</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P205</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U271</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U277</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U278</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U279</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U280</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U328</u>	<u>All</u>	<u>November 9, 1992</u>
<u>U353</u>	<u>All</u>	<u>November 9, 1992</u>
<u>U359</u>	<u>All</u>	<u>November 9, 1992</u>
<u>U364</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U365</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U366</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U367</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U372</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U373</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U375</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U376</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U377</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U378</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U379</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U381</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U382</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U383</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U384</u>	<u>All</u>	<u>July 8, 1996</u>

<b>APPENDIX XIII</b>		
<b>Land Disposal Restriction Effective Dates of Injected Prohibited Hazardous Wastes</b>		
<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
<u>U385</u>	All	<u>July 8, 1996</u>
<u>U386</u>	All	<u>July 8, 1996</u>
<u>U387</u>	All	<u>July 8, 1996</u>
<u>U389</u>	All	<u>July 8, 1996</u>
<u>U390</u>	All	<u>July 8, 1996</u>
<u>U391</u>	All	<u>July 8, 1996</u>
<u>U392</u>	All	<u>July 8, 1996</u>
<u>U395</u>	All	<u>July 8, 1996</u>
<u>U396</u>	All	<u>July 8, 1996</u>
<u>U400</u>	All	<u>July 8, 1996</u>
<u>U401</u>	All	<u>July 8, 1996</u>
<u>U402</u>	All	<u>July 8, 1996</u>
<u>U403</u>	All	<u>July 8, 1996</u>
<u>U404</u>	All	<u>July 8, 1996</u>
<u>U407</u>	All	<u>July 8, 1996</u>
<u>U409</u>	All	<u>July 8, 1996</u>
<u>U410</u>	All	<u>July 8, 1996</u>
<u>U411</u>	All	<u>July 8, 1996</u>
<sup>a</sup> Wastes that are deep well disposed onsite receive a six-month variance, with restrictions effective in November 1990.		
<sup>b</sup> Deep well injected D002 liquids with a pH less than 2 must meet the California List treatment standards on August 8, 1990.		
<sup>c</sup> Managed in systems defined in 40 CFR 144.6(e) and 14.6(e) as Class V injection wells, that do not engage in Clean Water Act-equivalent treatment before injection.		
Note: This table is provided for the convenience of the reader.		

**APPENDIX XIV**  
**[Reserved]**

**APPENDIX XV**  
**[Reserved]**

**APPENDIX XVI**

**Tier I and Tier II Feed Rate and Emissions Screening Limits for Metals**

**Table I-A. Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain**

<u>Values for Urban Areas</u>						
<u>TESH</u> <u>(m)</u>	<u>Antimony</u> <u>(g/hr)</u>	<u>Barium</u> <u>(g/hr)</u>	<u>Lead</u> <u>(g/hr)</u>	<u>Mercury</u> <u>(g/hr)</u>	<u>Silver</u> <u>(g/hr)</u>	<u>Thallium</u> <u>(g/hr)</u>
4	<u>6.0E+01</u>	<u>1.0E+04</u>	<u>1.8E+01</u>	<u>6.0E+01</u>	<u>6.0E+02</u>	<u>6.0E+01</u>
6	<u>6.8E+01</u>	<u>1.1E+04</u>	<u>2.0E+01</u>	<u>6.8E+01</u>	<u>6.8E+02</u>	<u>6.8E+01</u>
8	<u>7.6E+01</u>	<u>1.3E+04</u>	<u>2.3E+01</u>	<u>7.6E+01</u>	<u>7.6E+02</u>	<u>7.6E+01</u>
10	<u>8.6E+01</u>	<u>1.4E+04</u>	<u>2.6E+01</u>	<u>8.6E+01</u>	<u>8.6E+02</u>	<u>8.6E+01</u>
12	<u>9.6E+01</u>	<u>1.7E+04</u>	<u>3.0E+01</u>	<u>9.6E+01</u>	<u>9.6E+02</u>	<u>9.6E+01</u>
14	<u>1.1E+02</u>	<u>1.8E+04</u>	<u>3.4E+01</u>	<u>1.1E+02</u>	<u>1.1E+03</u>	<u>1.1E+02</u>
16	<u>1.3E+02</u>	<u>2.1E+04</u>	<u>3.6E+01</u>	<u>1.3E+02</u>	<u>1.3E+03</u>	<u>1.3E+02</u>
18	<u>1.4E+02</u>	<u>2.4E+04</u>	<u>4.3E+01</u>	<u>1.4E+02</u>	<u>1.4E+03</u>	<u>1.4E+02</u>
20	<u>1.6E+02</u>	<u>2.7E+04</u>	<u>4.6E+01</u>	<u>1.6E+02</u>	<u>1.6E+03</u>	<u>1.6E+02</u>
22	<u>1.8E+02</u>	<u>3.0E+04</u>	<u>5.4E+01</u>	<u>1.8E+02</u>	<u>1.8E+03</u>	<u>1.8E+02</u>
24	<u>2.0E+02</u>	<u>3.4E+04</u>	<u>6.0E+01</u>	<u>2.0E+02</u>	<u>2.0E+03</u>	<u>2.0E+02</u>
26	<u>2.3E+02</u>	<u>3.9E+04</u>	<u>6.8E+01</u>	<u>2.3E+02</u>	<u>2.3E+03</u>	<u>2.3E+02</u>
28	<u>2.6E+02</u>	<u>4.3E+04</u>	<u>7.8E+01</u>	<u>2.6E+02</u>	<u>2.6E+03</u>	<u>2.6E+02</u>
30	<u>3.0E+02</u>	<u>5.0E+04</u>	<u>9.0E+01</u>	<u>3.0E+02</u>	<u>3.0E+03</u>	<u>3.0E+02</u>
35	<u>4.0E+02</u>	<u>6.6E+04</u>	<u>1.1E+02</u>	<u>4.0E+02</u>	<u>4.0E+03</u>	<u>4.0E+02</u>
40	<u>4.6E+02</u>	<u>7.8E+04</u>	<u>1.4E+02</u>	<u>4.6E+02</u>	<u>4.6E+03</u>	<u>4.6E+02</u>
45	<u>6.0E+02</u>	<u>1.0E+05</u>	<u>1.8E+02</u>	<u>6.0E+02</u>	<u>6.0E+03</u>	<u>6.0E+02</u>
50	<u>7.8E+02</u>	<u>1.3E+05</u>	<u>2.3E+02</u>	<u>7.8E+02</u>	<u>7.8E+03</u>	<u>7.8E+02</u>
55	<u>9.6E+02</u>	<u>1.7E+05</u>	<u>3.0E+02</u>	<u>9.6E+02</u>	<u>9.6E+03</u>	<u>9.6E+02</u>
60	<u>1.2E+03</u>	<u>2.0E+05</u>	<u>3.6E+02</u>	<u>1.2E+03</u>	<u>1.2E+04</u>	<u>1.2E+03</u>
65	<u>1.5E+03</u>	<u>2.5E+05</u>	<u>4.3E+02</u>	<u>1.5E+03</u>	<u>1.5E+04</u>	<u>1.5E+03</u>
70	<u>1.7E+03</u>	<u>2.8E+05</u>	<u>5.0E+02</u>	<u>1.7E+03</u>	<u>1.7E+04</u>	<u>1.7E+03</u>
75	<u>1.9E+03</u>	<u>3.2E+05</u>	<u>5.8E+02</u>	<u>1.9E+03</u>	<u>1.9E+04</u>	<u>1.9E+03</u>
80	<u>2.2E+03</u>	<u>3.6E+05</u>	<u>6.4E+02</u>	<u>2.2E+03</u>	<u>2.2E+04</u>	<u>2.2E+04</u>
85	<u>2.5E+03</u>	<u>4.0E+05</u>	<u>7.6E+02</u>	<u>2.5E+03</u>	<u>2.5E+04</u>	<u>2.5E+03</u>
90	<u>2.8E+03</u>	<u>4.6E+05</u>	<u>8.2E+02</u>	<u>2.8E+03</u>	<u>2.8E+04</u>	<u>2.8E+03</u>
95	<u>3.2E+03</u>	<u>5.4E+05</u>	<u>9.6E+02</u>	<u>3.2E+03</u>	<u>3.2E+04</u>	<u>3.2E+03</u>
100	<u>3.6E+03</u>	<u>6.0E+05</u>	<u>1.1E+03</u>	<u>3.6E+03</u>	<u>3.6E+04</u>	<u>3.6E+03</u>
105	<u>4.0E+03</u>	<u>6.8E+05</u>	<u>1.2E+03</u>	<u>4.0E+03</u>	<u>4.0E+04</u>	<u>4.0E+03</u>

## APPENDIX XVI

### Tier I and Tier II Feed Rate and Emissions Screening Limits for Metals

**Table I-A. Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain**

<u>Values for Urban Areas</u>						
<u>TESH</u> <u>(m)</u>	<u>Antimony</u> <u>(g/hr)</u>	<u>Barium</u> <u>(g/hr)</u>	<u>Lead</u> <u>(g/hr)</u>	<u>Mercury</u> <u>(g/hr)</u>	<u>Silver</u> <u>(g/hr)</u>	<u>Thallium</u> <u>(g/hr)</u>
<u>110</u>	<u>4.6E+03</u>	<u>7.8E+05</u>	<u>1.4E+03</u>	<u>4.6E+03</u>	<u>4.6E+04</u>	<u>4.6E+03</u>
<u>115</u>	<u>5.4E+03</u>	<u>8.6E+05</u>	<u>1.6E+03</u>	<u>5.4E+03</u>	<u>5.4E+04</u>	<u>5.4E+03</u>
<u>120</u>	<u>6.0E+03</u>	<u>1.0E+06</u>	<u>1.8E+03</u>	<u>6.0E+03</u>	<u>6.0E+04</u>	<u>6.0E+03</u>

**APPENDIX XVI (continued)**

**Table I-B. Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain**

Values for Rural Areas

<u>TESH (m)</u>	<u>Antimony (g/hr)</u>	<u>Barium (g/hr)</u>	<u>Lead (g/hr)</u>	<u>Mercury (g/hr)</u>	<u>Silver (g/hr)</u>	<u>Thallium (g/hr)</u>
4	3.1E+01	5.2E+03	9.4E+00	3.1E+01	3.1E+02	3.1E+01
6	3.6E+01	6.0E+03	1.1E+01	3.6E+01	3.6E+02	3.6E+01
8	4.0E+01	6.8E+03	1.2E+01	4.0E+01	4.0E+02	4.0E+01
10	4.6E+01	7.8E+03	1.4E+01	4.6E+01	4.6E+02	4.6E+01
12	5.8E+01	9.6E+03	1.7E+01	5.8E+01	5.8E+02	5.8E+01
14	6.8E+01	1.1E+04	2.1E+01	6.8E+01	6.8E+02	6.8E+01
16	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
18	1.1E+02	1.8E+04	3.2E+01	1.1E+02	1.1E+03	1.1E+02
20	1.3E+02	2.2E+04	4.0E+01	1.3E+02	1.3E+03	1.3E+02
22	1.7E+02	2.8E+04	5.0E+01	1.7E+02	1.7E+03	1.7E+02
24	2.2E+02	3.6E+04	6.4E+01	2.2E+02	2.2E+03	2.2E+02
26	2.8E+02	4.6E+04	8.2E+01	2.8E+02	2.8E+03	2.8E+02
28	3.5E+02	5.8E+04	1.0E+02	3.5E+02	3.5E+03	3.5E+02
30	4.3E+02	7.6E+04	1.3E+02	4.3E+02	4.3E+03	4.3E+02
35	7.2E+02	1.2E+05	2.1E+02	7.2E+02	7.2E+03	7.2E+02
40	1.1E+03	1.8E+05	3.2E+02	1.1E+03	1.1E+04	1.1E+03
45	1.5E+03	2.5E+05	4.6E+02	1.5E+03	1.5E+04	1.5E+03
50	2.0E+03	3.3E+05	6.0E+02	2.0E+03	2.0E+04	2.0E+03
55	2.6E+03	4.4E+05	7.8E+02	2.6E+03	2.6E+04	2.6E+03
60	3.4E+03	5.8E+05	1.0E+03	3.4E+03	3.4E+04	3.4E+03
65	4.6E+03	7.6E+05	1.4E+03	4.6E+03	4.6E+04	4.6E+03
70	5.4E+03	9.0E+05	1.6E+03	5.4E+03	5.4E+04	5.4E+03
75	6.4E+03	1.1E+06	1.9E+03	6.4E+03	6.4E+04	6.4E+03
80	7.6E+03	1.3E+06	2.3E+03	7.6E+03	7.6E+04	7.6E+03
85	9.4E+03	1.5E+06	2.8E+03	9.4E+03	9.4E+04	9.4E+03
90	1.1E+04	1.8E+06	3.3E+03	1.1E+04	1.1E+05	1.1E+04
95	1.3E+04	2.2E+06	3.9E+03	1.3E+04	1.3E+05	1.3E+04
100	1.5E+04	2.6E+06	4.6E+03	1.5E+04	1.5E+05	1.5E+04
105	1.8E+04	3.0E+06	5.4E+03	1.8E+04	1.8E+05	1.8E+04
110	2.2E+04	3.6E+06	6.6E+03	2.2E+04	2.2E+05	2.2E+04

**APPENDIX XVI (continued)**

**Table I-B. Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain**

**Values for Rural Areas**

<u>TESH</u> <u>(m)</u>	<u>Antimony</u> <u>(g/hr)</u>	<u>Barium</u> <u>(g/hr)</u>	<u>Lead</u> <u>(g/hr)</u>	<u>Mercury</u> <u>(g/hr)</u>	<u>Silver</u> <u>(g/hr)</u>	<u>Thallium</u> <u>(g/hr)</u>
<u>115</u>	<u>2.6E+04</u>	<u>4.4E+06</u>	<u>7.8E+03</u>	<u>2.6E+04</u>	<u>2.6E+05</u>	<u>2.6E+04</u>
<u>120</u>	<u>3.1E+04</u>	<u>5.0E+06</u>	<u>9.2E+03</u>	<u>3.1E+04</u>	<u>3.1E+05</u>	<u>3.1E+04</u>

**APPENDIX XVI (continued)**

**Table I-C. Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Complex Terrain**

*Values for Urban and Rural Areas*

TESH (m)	Antimony (g/hr)	Barium (g/hr)	Lead (g/hr)	Mercury (g/hr)	Silver (g/hr)	Thallium (g/hr)
4	1.4E+01	2.4E+03	4.3E+00	1.4E+01	1.4E+02	1.4E+01
6	2.1E+01	3.5E+03	6.2E+00	2.1E+01	2.1E+02	2.1E+01
8	3.0E+01	5.0E+03	9.2E+00	3.0E+01	3.0E+02	3.0E+01
10	4.3E+01	7.6E+03	1.3E+01	4.3E+01	4.3E+02	4.3E+01
12	5.4E+01	9.0E+03	1.7E+01	5.4E+01	5.4E+02	5.4E+01
14	6.8E+01	1.1E+04	2.0E+01	6.8E+01	6.8E+02	6.8E+01
16	7.8E+01	1.3E+04	2.4E+01	7.8E+01	7.8E+02	7.8E+01
18	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
20	9.6E+01	1.6E+04	2.9E+01	9.6E+01	9.6E+02	9.6E+01
22	1.0E+02	1.8E+04	3.2E+01	1.0E+02	1.0E+03	1.0E+02
24	1.2E+02	1.9E+04	3.5E+01	1.2E+02	1.2E+03	1.2E+02
26	1.3E+02	2.2E+04	3.6E+01	1.3E+02	1.3E+03	1.3E+02
28	1.4E+02	2.4E+04	4.3E+01	1.4E+02	1.4E+03	1.4E+02
30	1.6E+02	2.7E+04	4.6E+01	1.6E+02	1.6E+03	1.6E+02
35	2.0E+02	3.3E+04	5.8E+01	2.0E+02	2.0E+03	2.0E+02
40	2.4E+02	4.0E+04	7.2E+01	2.4E+02	2.4E+03	2.4E+02
45	3.0E+02	5.0E+04	9.0E+01	3.0E+02	3.0E+03	3.0E+02
50	3.6E+02	6.0E+04	1.1E+02	3.6E+02	3.6E+03	3.6E+02
55	4.6E+02	7.6E+04	1.4E+02	4.6E+02	4.6E+03	4.6E+02
60	5.8E+02	9.4E+04	1.7E+02	5.8E+02	5.8E+03	5.8E+02
65	6.8E+02	1.1E+05	2.1E+02	6.8E+02	6.8E+03	6.8E+02
70	7.8E+02	1.3E+05	2.4E+02	7.8E+02	7.8E+03	7.8E+02
75	8.6E+02	1.4E+05	2.6E+02	8.6E+02	8.6E+03	8.6E+02
80	9.6E+02	1.6E+05	2.9E+02	9.6E+02	9.6E+03	9.6E+02
85	1.1E+03	1.8E+05	3.3E+02	1.1E+03	1.1E+04	1.1E+03
90	1.2E+03	2.0E+05	3.6E+02	1.2E+03	1.2E+04	1.2E+03
95	1.4E+03	2.3E+05	4.0E+02	1.4E+03	1.4E+04	1.4E+03
100	1.5E+03	2.6E+05	4.6E+02	1.5E+03	1.5E+04	1.5E+03
105	1.7E+03	2.8E+05	5.0E+02	1.7E+03	1.7E+04	1.7E+03
110	1.9E+03	3.2E+05	5.8E+02	1.9E+03	1.9E+04	1.9E+03

**APPENDIX XVI (continued)**

**Table I-C. Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Complex Terrain**

*Values for Urban and Rural Areas*

<u>TESH</u> <u>(m)</u>	<u>Antimony</u> <u>(g/hr)</u>	<u>Barium</u> <u>(g/hr)</u>	<u>Lead</u> <u>(g/hr)</u>	<u>Mercury</u> <u>(g/hr)</u>	<u>Silver</u> <u>(g/hr)</u>	<u>Thallium</u> <u>(g/hr)</u>
115	2.1E+03	3.6E+05	6.4E+02	2.1E+03	2.1E+04	2.1E+03
120	2.4E+03	4.0E+05	7.2E+02	2.4E+03	2.4E+04	2.4E+03

**APPENDIX XVI (continued)**

**Table I-D. Tier I and Tier II Feed Rate and Emissions Screening Limits for Carcinogenic Metals for Facilities in Noncomplex Terrain**

Values for Use in <i>Urban Areas</i>					Values for Use in <i>Rural Areas</i>			
TESH (m)	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)
4	4.6E-01	1.1E+00	1.7E-01	8.2E-01	2.4E-01	5.8E-01	8.6E-02	4.3E-01
6	5.4E-01	1.3E+00	1.9E-01	9.4E-01	2.8E-01	6.6E-01	1.0E-01	5.0E-01
8	6.0E-01	1.4E+00	2.2E-01	1.1E+00	3.2E-01	7.6E-01	1.1E-01	5.6E-01
10	6.8E-01	1.6E+00	2.4E-01	1.2E+00	3.6E-01	8.6E-01	1.3E-01	6.4E-01
12	7.6E-01	1.8E+00	2.7E-01	1.4E+00	4.3E-01	1.1E+00	1.6E-01	7.8E-01
14	8.6E-01	2.1E+00	3.1E-01	1.5E+00	5.4E-01	1.3E+00	2.0E-01	9.6E-01
16	9.6E-01	2.3E+00	3.5E-01	1.7E+00	6.8E-01	1.6E+00	2.4E-01	1.2E+00
18	1.1E+00	2.6E+00	4.0E-01	2.0E+00	8.2E-01	2.0E+00	3.0E-01	1.5E+00
20	1.2E+00	3.0E+00	4.4E-01	2.2E+00	1.0E+00	2.5E+00	3.7E-01	1.9E+00
22	1.4E+00	3.4E+00	5.0E-01	2.5E+00	1.3E+00	3.2E+00	4.8E-01	2.4E+00
24	1.6E+00	3.9E+00	5.8E-01	2.8E+00	1.7E+00	4.0E+00	6.0E-01	3.0E+00
26	1.8E+00	4.3E+00	6.4E-01	3.2E+00	2.1E+00	5.0E+00	7.6E-01	3.9E+00
28	2.0E+00	4.8E+00	7.2E-01	3.6E+00	2.7E+00	6.4E+00	9.8E-01	5.0E+00
30	2.3E+00	5.4E+00	8.2E-01	4.0E+00	3.5E+00	8.2E+00	1.2E+00	6.2E+00
35	3.0E+00	6.8E+00	1.0E+00	5.4E+00	5.4E+00	1.3E+01	1.9E+00	9.6E+00
40	3.6E+00	9.0E+00	1.3E+00	6.8E+00	8.2E+00	2.0E+01	3.0E+00	1.5E+01
45	4.6E+00	1.1E+01	1.7E+00	8.6E+00	1.1E+01	2.8E+01	4.2E+00	2.1E+01
50	6.0E+00	1.4E+01	2.2E+00	1.1E+01	1.5E+01	3.7E+01	5.4E+00	2.8E+01
55	7.6E+00	1.8E+01	2.7E+00	1.4E+01	2.0E+01	5.0E+01	7.2E+00	3.6E+01
60	9.4E+00	2.2E+01	3.4E+00	1.7E+01	2.7E+01	6.4E+01	9.6E+00	4.8E+01
65	1.1E+01	2.8E+01	4.2E+00	2.1E+01	3.6E+01	8.6E+01	1.3E+01	6.4E+01
70	1.3E+01	3.1E+01	4.6E+00	2.4E+01	4.3E+01	1.0E+02	1.5E+01	7.6E+01
75	1.5E+01	3.6E+01	5.4E+01	2.7E+01	5.0E+01	1.2E+02	1.8E+01	9.0E+01
80	1.7E+01	4.0E+01	6.0E+00	3.0E+01	6.0E+01	1.4E+02	2.2E+01	1.1E+02
85	1.9E+01	4.6E+01	6.8E+00	3.4E+01	7.2E+01	1.7E+02	2.6E+01	1.3E+02
90	2.2E+01	5.0E+01	7.8E+00	3.9E+01	8.6E+01	2.0E+02	3.0E+01	1.5E+02
95	2.5E+01	5.8E+01	9.0E+00	4.4E+01	1.0E+02	2.4E+02	3.6E+01	1.8E+02
100	2.8E+01	6.8E+01	1.0E+01	5.0E+01	1.2E+02	2.9E+02	4.3E+01	2.2E+02
105	3.2E+01	7.6E+01	1.1E+01	5.6E+01	1.4E+02	3.4E+02	5.0E+01	2.6E+02
110	3.6E+01	8.6E+01	1.3E+01	6.4E+01	1.7E+02	4.0E+02	6.0E+01	3.0E+02
115	4.0E+01	9.6E+01	1.5E+01	7.2E+01	2.0E+02	4.8E+02	7.2E+01	3.6E+02
120	4.6E+01	1.1E+02	1.7E+01	8.2E+01	2.4E+02	5.8E+02	8.6E+01	4.3E+02

**APPENDIX XVI (continued)**

**Table I-E. Tier I and Tier II Feed Rate and Emissions Screening Limits for Carcinogenic Metals for Facilities in Complex Terrain**

*Values for Use in Urban and Rural Areas*

<u>TESH (m)</u>	<u>Arsenic (g/hr)</u>	<u>Cadmium (g/hr)</u>	<u>Chromium (g/hr)</u>	<u>Beryllium (g/hr)</u>
4	1.1E-01	2.6E-01	4.0E-02	2.0E-01
6	1.6E-01	3.9E-01	5.8E-02	2.9E-01
8	2.4E-01	5.8E-01	8.6E-02	4.3E-01
10	3.5E-01	8.2E-01	1.3E-01	6.2E-01
12	4.3E-01	1.0E+00	1.5E-01	7.6E-01
14	5.0E-01	1.3E+00	1.9E-01	9.4E-01
16	6.0E-01	1.4E+00	2.2E-01	1.1E+00
18	6.8E-01	1.6E+00	2.4E-01	1.2E+00
20	7.6E-01	1.8E+00	2.7E-01	1.3E+00
22	8.2E-01	1.9E+00	3.0E-01	1.5E+00
24	9.0E-01	2.1E+00	3.3E-01	1.6E+00
26	1.0E+00	2.4E+00	3.6E-01	1.8E+00
28	1.1E+00	2.7E+00	4.0E-01	2.0E+00
30	1.2E+00	3.0E+00	4.4E-01	2.2E+00
35	1.5E+00	3.7E+00	5.4E-01	2.7E+00
40	1.9E+00	4.6E+00	6.8E-01	3.4E+00
45	2.4E+00	5.4E+00	8.4E-01	4.2E+00
50	2.9E+00	6.8E+00	1.0E+00	5.0E+00
55	3.5E+00	8.4E+00	1.3E+00	6.4E+00
60	4.3E+00	1.0E+01	1.5E+00	7.8E+00
65	5.4E+00	1.3E+01	1.9E+00	9.6E+00
70	6.0E+00	1.4E+01	2.2E+00	1.1E+01
75	6.8E+00	1.6E+01	2.4E+00	1.2E+01
80	7.6E+00	1.8E+01	2.7E+00	1.3E+01
85	8.2E+00	2.0E+01	3.0E+00	1.5E+01
90	9.4E+00	2.3E+01	3.4E+00	1.7E+01
95	1.0E+01	2.5E+01	4.0E+00	1.9E+01
100	1.2E+01	2.8E+01	4.3E+00	2.1E+01
105	1.3E+01	3.2E+01	4.8E+00	2.4E+01
110	1.5E+01	3.5E+01	5.4E+00	2.7E+01

**APPENDIX XVI (continued)**

**Table I-E. Tier I and Tier II Feed Rate and Emissions Screening Limits for Carcinogenic Metals for Facilities in Complex Terrain**

*Values for Use in Urban and Rural Areas*

<u>TESH</u> <u>(m)</u>	<u>Arsenic</u> <u>(g/hr)</u>	<u>Cadmium</u> <u>(g/hr)</u>	<u>Chromium</u> <u>(g/hr)</u>	<u>Beryllium</u> <u>(g/hr)</u>
<u>115</u>	<u>1.7E+01</u>	<u>4.0E+01</u>	<u>6.0E+00</u>	<u>3.0E+01</u>
<u>120</u>	<u>1.9E+01</u>	<u>4.4E+01</u>	<u>6.4E+00</u>	<u>3.3E+01</u>

**APPENDIX XVII**

**Tier I - Feed Rate Screening Limits for Total Chlorine and Chloride**

Tier I Feed Rate Screening Limits for Chlorine for Facilities in Noncomplex and Complex Terrain

TESH (m)	Noncomplex		Complex
	Urban (lb/hr)	Rural (lb/hr)	(lb/hr)
4	1.8E-02	9.2E-03	4.1E-03
6	2.0E-02	1.0E-02	6.1E-03
8	2.2E-02	1.2E-02	9.0E-03
10	2.5E-02	1.4E-02	1.3E-02
12	2.9E-02	1.7E-02	1.6E-02
14	3.3E-02	2.0E-02	2.0E-02
16	3.7E-02	2.5E-02	2.3E-02
18	4.1E-02	3.2E-02	2.5E-02
20	4.7E-02	3.9E-02	2.9E-02
22	5.3E-02	5.0E-02	3.1E-02
24	6.0E-02	6.3E-02	3.5E-02
26	6.8E-02	8.1E-02	3.8E-02
28	7.6E-02	1.0E-01	4.2E-02
30	8.7E-02	1.3E-01	4.7E-02
35	1.2E-01	2.1E-01	5.8E-02
40	1.4E-01	3.2E-01	7.2E-02
45	1.8E-01	4.4E-01	8.8E-02
50	2.3E-01	5.8E-01	1.1E-01
55	2.9E-01	7.7E-01	1.4E-01
60	3.6E-01	1.0E+00	1.7E-01
65	4.3E-01	1.4E+00	2.0E-01
70	5.0E-01	1.6E+00	2.3E-01
75	5.6E-01	1.9E+00	2.5E-01
80	6.3E-01	2.2E+00	2.9E-01
85	7.3E-01	2.8E+00	3.2E-01
90	8.3E-01	3.2E+00	3.6E-01
95	9.3E-01	3.8E+00	4.0E-01
100	1.1E+00	4.6E+00	4.4E-01
105	1.2E+00	5.4E+00	5.0E-01
110	1.4E+00	6.5E+00	5.6E-01
115	1.6E+00	7.7E+00	6.2E-01
120	1.8E+00	9.1E+00	7.1E-01

<b>APPENDIX XVII</b>			
<b>Tier I - Feed Rate Screening Limits for Total Chlorine</b>			
Terrain-Adjusted Effective Stack Heights (TESH) (meters)	Noncomplex Terrain		Complex Terrain
	Urban (g/hr)	Rural (g/hr)	(g/hr)
4	8.2E+01	4.2E+01	1.9E+01
6	9.1E+01	4.8E+01	2.8E+01
8	1.0E+02	5.3E+01	4.1E+01
10	1.2E+02	6.2E+01	5.8E+01
12	1.3E+02	7.7E+01	7.2E+01

**APPENDIX XVII**  
**Tier I - Feed Rate Screening Limits for Total Chlorine**

Terrain-Adjusted Effective Stack Heights (TESH) (meters)	Noncomplex Terrain		Complex Terrain
	Urban (g/hr)	Rural (g/hr)	(g/hr)
14	1.5E+02	9.1E+01	9.1E+01
16	1.7E+02	1.2E+02	1.1E+02
18	1.9E+02	1.4E+02	1.2E+02
20	2.1E+02	1.8E+02	1.3E+02
22	2.4E+02	2.3E+02	1.4E+02
24	2.7E+02	2.9E+02	1.6E+02
26	3.1E+02	3.7E+02	1.7E+02
28	3.5E+02	4.7E+02	1.9E+02
30	3.9E+02	5.8E+02	2.1E+02
35	5.3E+02	9.6E+02	2.6E02
40	6.2E+02	1.4E+03	3.3E+02
45	8.2E+02	2.0E+03	4.0E+02
50	1.1E+03	2.6E+03	4.8E+02
55	1.3E+03	3.5E+03	6.3E+02
60	1.6E+03	4.6E+03	7.7E+02
65	2.0E+03	6.2E+03	9.1E+02
70	2.3E+03	7.2E+03	1.1E+03
75	2.5E+03	8.6E+03	1.2E+03
80	2.9E+03	1.0E+04	1.3E+03
85	3.3E+03	1.2E+04	1.4E+03
90	3.7E+03	1.4E+04	1.6E+03
95	4.2E+03	1.7E+04	1.8E+03
100	4.8E+03	2.1E+04	2.0E+03
105	5.3E+03	2.4E+04	2.3E+03
110	6.2E+03	2.9E+04	2.5E+03
115	7.2E+03	3.5E+04	2.8E+03
120	8.2E+03	4.1E+04	3.2E+03

**APPENDIX XVIII**

**Tier II Emission Rate Screening Limits for Free Chlorine and Hydrogen Chloride**

Tier II Emissions Screening Limits for Cl<sub>2</sub> and HCl in Nonecomplex Terrain

Values for Use in Urban Areas

Values for Use in Rural Areas

FECH (m)	Cl <sub>2</sub> (g/sec)	HCl (g/sec)	Cl <sub>2</sub> (g/sec)	HCl (g/sec)
4	2.9E-03	4.0E-01	1.2E-03	2.0E-01
6	2.5E-03	4.4E-01	1.3E-03	2.3E-01
8	2.0E-03	4.9E-01	1.5E-03	2.6E-01
10	3.2E-03	5.6E-01	1.7E-03	3.0E-01
12	3.6E-03	6.3E-01	2.1E-03	3.7E-01
14	4.1E-03	7.2E-01	2.5E-03	4.4E-01
16	4.7E-03	8.2E-01	3.2E-03	5.6E-01
18	5.2E-03	9.1E-01	4.0E-03	7.0E-01
20	5.9E-03	1.0E+00	4.9E-03	8.6E-01
22	6.7E-03	1.2E+00	6.3E-03	1.1E+00
24	7.6E-03	1.3E+00	8.0E-03	1.4E+00
26	8.5E-03	1.5E+00	1.0E-02	1.8E+00
28	9.6E-03	1.7E+00	1.3E-02	2.3E+00
30	1.1E-02	1.9E+00	1.6E-02	2.8E+00
35	1.5E-02	2.6E+00	2.7E-02	4.7E+00
40	1.7E-02	3.0E+00	4.0E-02	7.0E+00
45	2.3E-02	4.0E+00	5.6E-02	9.8E+00
50	2.9E-02	5.1E+00	7.9E-02	1.3E+01
55	3.6E-02	6.3E+00	9.7E-02	1.7E+01
60	4.5E-02	7.9E+00	1.3E-01	2.2E+01
65	5.5E-02	9.6E+00	1.7E-01	3.0E+01
70	6.3E-02	1.1E+01	2.0E-01	3.5E+01
75	7.1E-02	1.2E+01	2.4E-01	4.2E+01
80	8.0E-02	1.4E+01	2.8E-01	4.9E+01
85	9.2E-02	1.6E+01	3.5E-01	6.1E+01
90	1.0E-01	1.8E+01	4.0E-01	7.0E+01
95	1.2E-01	2.1E+01	4.8E-01	8.4E+01
100	1.3E-01	2.3E+01	5.7E-01	1.0E+02
105	1.5E-01	2.6E+01	6.8E-01	1.2E+02
110	1.7E-01	3.0E+01	8.1E-01	1.4E+02
115	2.0E-01	3.5E+01	9.7E-01	1.7E+02
120	2.3E-01	4.0E+01	1.1E+00	2.0E+02

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Tier II Emissions Screening Limits for Cl<sub>2</sub> and HCl in Complex Terrain

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Values for Use in *Urban* and *Rural* Areas

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TESH (m)	Cl <sub>2</sub> (g/sec)	HCl (g/sec)
4	5.2E-04	9.1E-02
6	7.7E-04	1.4E-01
8	1.1E-03	2.0E-01
10	1.6E-03	2.8E-01
12	2.0E-03	3.5E-01
14	2.5E-03	4.4E-01
16	2.9E-03	5.1E-01
18	3.2E-03	5.6E-01
20	3.6E-03	6.3E-01
22	3.9E-03	6.8E-01
24	4.4E-03	7.7E-01
26	4.8E-03	8.4E-01
28	5.3E-03	9.3E-01
30	5.9E-03	1.0E+00
35	7.3E-03	1.3E+00
40	9.1E-03	1.6E+00
45	1.1E-02	1.9E+00
50	1.3E-02	2.3E+00
55	1.7E-02	3.0E+00
60	2.1E-02	3.7E+00
65	2.5E-02	4.4E+00
70	2.9E-02	5.1E+00
75	3.2E-02	5.6E+00
80	3.6E-02	6.3E+00
85	4.0E-02	7.0E+00
90	4.5E-02	7.9E+00
95	5.1E-02	8.9E+00
100	5.6E-02	9.8E+00
105	6.3E-02	1.1E+01
110	7.1E-02	1.2E+01
115	7.9E-02	1.4E+01
120	8.9E-02	1.6E+01

**APPENDIX XVIII**  
**Tier II- Emission Rate Screening Limits for Free Chlorine and Hydrogen Chloride**

Terrain-Adjusted Effective Stack Heights (TESH) (meters)	Noncomplex Terrain				Complex Terrain	
	Values for Urban Areas		Values for Rural Areas		Values for Use in Urban Areas and Rural Areas	
	Cl <sub>2</sub> (g/hr)	HCl (g/hr)	Cl <sub>2</sub> (g/hr)	HCl (g/hr)	Cl <sub>2</sub> (g/hr)	HCl (g/hr)
4	8.2E+01	1.4E+03	4.2E+01	7.3E+02	1.9E+01	3.3E+02
6	9.1E+01	1.6E+03	4.8E+01	8.3E+02	2.8E+01	4.9E+02
8	1.0E+02	1.8E+03	5.3E+01	9.2E+02	4.1E+01	7.1E+02
10	1.2E+02	2.0E+03	6.2E+01	1.1E+03	5.8E+01	1.0E+03
12	1.3E+02	2.3E+03	7.7E+01	1.3E+03	7.2E+01	1.3E+03
14	1.5E+02	2.6E+03	9.1E+01	1.6E+03	9.1E+01	1.6E+03
16	1.7E+02	2.9E+03	1.2E+02	2.0E+03	1.1E+02	1.8E+03
18	1.9E+02	3.3E+03	1.4E+02	2.5E+03	1.2E+02	2.0E+03
20	2.1E+02	3.7E+03	1.8E+02	3.1E+03	1.3E+02	2.3E+03
22	2.4E+02	4.2E+03	2.3E+02	3.9E+03	1.4E+02	2.4E+03
24	2.7E+02	4.8E+03	2.9E+02	5.0E+03	1.6E+02	2.8E+03
26	3.1E+02	5.4E+03	3.7E+02	6.5E+03	1.7E+02	3.0E+03
28	3.5E+02	6.0E+03	4.7E+02	8.1E+03	1.9E+02	3.4E+03
30	3.9E+02	6.9E+03	5.8E+02	1.0E+04	2.1E+02	3.7E+03
35	5.3E+02	9.2E+03	9.6E+02	1.7E+04	2.6E+02	4.6E+03
40	6.2E+02	1.1E+04	1.4E+03	2.5E+04	3.3E+02	5.7E+03
45	8.2E+02	1.4E+04	2.0E+03	3.5E+04	4.0E+02	7.0E+03
50	1.1E+03	1.8E+04	2.6E+03	4.6E+04	4.8E+02	8.4E+03
55	1.3E+03	2.3E+04	3.5E+03	6.1E+04	6.2E+02	1.1E+04
60	1.6E+03	2.9E+04	4.6E+03	8.1E+04	7.7E+02	1.3E+04
65	2.0E+03	3.4E+04	6.2E+03	1.1E+05	9.1E+02	1.6E+04
70	2.3E+03	3.9E+04	7.2E+03	1.3E+05	1.1E+03	1.8E+04
75	2.5E+03	4.5E+04	8.6E+03	1.5E+05	1.2E+03	2.0E+04
80	2.9E+03	5.0E+04	1.0E+04	1.8E+05	1.3E+03	2.3E+04
85	3.3E+03	5.8E+04	1.2E+04	2.2E+05	1.4E+03	2.5E+04
90	3.7E+03	6.6E+04	1.4E+04	2.5E+05	1.6E+03	2.9E+04
95	4.2E+03	7.4E+04	1.7E+04	3.0E+05	1.8E+03	3.2E+04
100	4.8E+03	8.4E+04	2.1E+04	3.6E+05	2.0E+03	3.5E+04
105	5.3E+03	9.2E+04	2.4E+04	4.3E+05	2.3E+03	3.9E+04
110	6.2E+03	1.1E+05	2.9E+04	5.1E+05	2.5E+03	4.5E+04
115	7.2E+03	1.3E+05	3.5E+04	6.1E+05	2.8E+03	5.0E+04
120	8.2E+03	1.4E+05	4.1E+04	7.2E+05	3.2E+03	5.6E+04

**APPENDIX XIX**  
**Reference Air Concentrations\***

<b>Constituent</b>	<b>CAS No.</b>	<b>Reference Air Concentraion (<math>\mu\text{g}/\text{m}^3</math>)</b>
Acetaldehyde	75-07-0	10
Acetonitrile	75-05-8	10
Acetophenone	98-86-2	100
Acrolein	107-02-8	20
Aldicarb	116-06-3	1
Aluminum Phosphide	20859-73-8	0.3
Allyl Alcohol	107-18-6	5
Antimony	7440-36-0	0.3
Barium	7440-39-3	50
Barium Cyanide	542-62-1	50
Bromomethane	74-83-9	0.8
Calcium Cyanide	592-01-8	30
Carbon Disulfide	75-15-0	200
Chloral	75-87-6	2
Chlorine (free)		0.4
2-Chloro-1,3-butadiene	126-99-8	3
Chromium III	16065-83-1	1000
Copper Cyanide	544-92-3	5
Cresols	1319-77-3	50
Cumene	98-82-8	1
Cyanide (free)	57-12-15	20
Cyanogen	460-19-5	30
Cyanogen Bromide	506-68-3	80
Di-n-butyl Phthalate	84-74-2	100
o-Dichlorobenzene	95-50-1	10
p-Dichlorobenzene	106-46-7	10
Dichlorodifluoromethane	75-71-8	200
2,4-Dichlorophenol	120-83-2	3
Diethyl Phthalate	84-66-2	800
Dimethoate	60-51-5	0.8
2,4-Dinitrophenol	51-28-5	2

**APPENDIX XIX**  
**Reference Air Concentrations\***

<b>Constituent</b>	<b>CAS No.</b>	<b>Reference Air Concentraion (<math>\mu\text{g}/\text{m}^3</math>)</b>
Dinoseb	88-85-7	0.9
Diphenylamine	122-39-4	20
Endosulfan	115-29-1	0.05
Endrin	72-20-8	0.3
Fluorine	7782-41-4	50
Formic Acid	64-18-6	2000
Glycidyaldehyde	765-34-4	0.3
Hexachlorocyclopentadiene	77-47-4	5
Hexachlorophene	70-30-4	0.3
Hydrocyanic Acid	74-90-8	20
Hydrogen Chloride	7647-01-1	7
Hydrogen Sulfide	7783-06-4	3
Isobutyl Alcohol	78-83-1	300
Lead	7439-92-1	0.09
Maleic Anhydride	108-31-6	100
Mercury	7439-97-6	0.3
Methacrylonitrile	126-98-7	0.1
Methomyl	16752-77-5	20
Methoxychlor	72-43-5	50
Methyl Chlorocarbonate	79-22-1	1000
Methyl Ethyl Ketone	78-93-3	80
Methyl Parathion	298-00-0	0.3
Nickel Cyanide	557-19-7	20
Nitric Oxide	10102-43-9	100
Nitrobenzene	98-95-3	0.8
Pentachlorobenzene	608-93-5	0.8
Pentachlorophenol	87-86-5	30
Phenol	108-95-2	30
M-Phenylenediamine	108-45-2	5
Phenylmercuric Acetate	62-38-4	0.075
Phosphine	7803-51-2	0.3

**APPENDIX XIX**  
**Reference Air Concentrations\***

<b>Constituent</b>	<b>CAS No.</b>	<b>Reference Air Concentraion (<math>\mu\text{g}/\text{m}^3</math>)</b>
Phthalic Anhydride	85-44-9	2000
Potassium Cyanide	151-50-8	50
Potassium Silver Cyanide	506-61-6	200
Pyridine	110-86-1	1
Selenious Acid	7783-60-8	3
Selenourea	630-10-4	5
Silver	7440-22-4	3
Silver Cyanide	506-64-9	100
Sodium Cyanide	143-33-9	30
Strychnine	57-24-9	0.3
1,2,4,5-Tetrachlorobenzene	95-94-3	0.3
2,3,4,6-Tetrachlorophenol	58-90-2	30
Tetraethyl Lead	78-00-2	0.0001
Tetrahydrofuran	109-99-9	10
Thallic Oxide	1314-32-5	0.3
Thallium	7440-28-0	0.5
Thallium (I) Acetate	563-68-8	0.5
Thallium (I) Carbonate	6533-73-9	0.3
Thallium (I) Chloride	7791-12-0	0.3
Thallium (I) Nitrate	10102-45-1	0.5
Thallium Selenite	12039-52-0	0.5
Thallium (I) Sulfate	7446-18-6	0.075
Thiram	137-26-8	5
Toluene	108-88-3	300
1,2,4-Trichlorobenzene	120-82-1	20
Trichloromonofluoromethane	75-69-4	300
2,4,5-Trichlorophenol	95-95-4	100
Vanadium Pentoxide	1314-62-1	20
Warfarin	81-81-2	0.3
Xylenes	1330-20-7	80
Zinc Cyanide	557-21-1	50

**APPENDIX XIX**  
**Reference Air Concentrations\***

<b>Constituent</b>	<b>CAS No.</b>	<b>Reference Air Concentraion (<math>\mu\text{g}/\text{m}^3</math>)</b>
Zinc Phosphide	1314-84-7	0.3

\*The reference air concentration for other appendix V of chapter 33-24-02 constituents not listed herein or in appendix XX of chapter 33-24-05 is  $0.1 \mu\text{g}/\text{m}^3$ .

**APPENDIX XX**  
**Risk Specific Doses ( $10^{-5}$ )**

<b>Constituent</b>	<b>CAS No.</b>	<b>Unit Risk (<math>m^3/\mu g</math>)</b>	<b>RSD (<math>\mu g/m^3</math>)</b>
Acrylamide	79-06-1	1.3E-03	7.7E-03
Acrylonitrile	107-13-1	6.8E-05	1.5E-01
Aldrin	309-00-2	4.9E-03	2.0E-03
Aniline	62-53-3	7.4E-06	1.4E+00
Arsenic	7440-38-2	4.3E-03	2.3E-03
Benz(a)anthracene	56-55-3	8.9E-04	1.1E-02
Benzene	71-43-2	8.3E-06	1.2E+00
Benzidine	92-87-5	6.7E-02	1.5E-04
Benzo(a)pyrene	50-32-8	3.3E-03	3.0E-03
Beryllium	7440-41-7	2.4E-03	4.2E-03
Bis(2-chloroethyl)ether	111-44-4	3.3E-04	3.0E-02
Bis(chloromethyl)ether	542-88-1	6.2E-02	1.6E-04
Bis(2-ethylhexyl)-phthalate	117-81-7	2.4E-07	4.2E+01
1,3-Butadiene	106-99-0	2.8E-04	3.6E-02
Cadmium	7440-43-9	1.8E-03	5.6E-03
Carbon Tetrachloride	56-23-5	1.5E-05	6.7E-01
Chlordane	57-74-9	3.7E-04	2.7E-02
Chloroform	67-66-3	2.3E-05	4.3E-01
Chloromethane	74-87-3	3.6E-06	2.8E+00
Chromium VI	7440-47-3	1.2E-02	8.3E-04
DDT	50-29-3	9.7E-05	1.0E-01
Dibenz(a,h)anthracene	53-70-3	1.4E-02	7.1E-04
1,2-Dibromo-3-chloro-propane	96-12-8	6.3E-03	1.6E-03
1,2-Dibromoethane	106-93-4	2.2E-04	4.5E-02
1,1-Dichloroethane	75-34-3	2.6E-05	3.8E-01
1,2-Dichloroethane	107-06-2	2.6E-05	3.8E-01
1,1-Dichloroethylene	75-35-4	5.0E-05	2.0E-01
1,3-Dichloropropene	542-75-6	3.5E-01	2.9E-05
Dieldrin	60-57-1	4.6E-03	2.2E-03
Diethylstilbestrol	56-53-1	1.4E-01	7.1E-05
Dimethylnitrosamine	62-75-9	1.4E-02	7.1E-04
2,4-Dinitrotoluene	121-14-2	8.8E-05	1.1E-01
1,2-Diphenylhydrazine	122-66-7	2.2E-04	4.5E-02
1,4-Dioxane	123-91-1	1.4E-06	7.1E+00
Epichlorohydrin	106-89-8	1.2E-06	8.3E+00
Ethylene Oxide	75-21-8	1.0E-04	1.0E-01
Ethylene Dibromide	106-93-4	2.2E-04	4.5E-02
Formaldehyde	50-00-0	1.3E-05	7.7E-01

<b>Constituent</b>	<b>CAS No.</b>	<b>Unit Risk (m<sup>3</sup>/µg)</b>	<b>RSD (µg/m<sup>3</sup>)</b>
Heptachlor	76-44-8	1.3E-03	7.7E-03
Heptachlor Epoxide	1024-57-3	2.6E-03	3.8E-03
Hexachlorobenzene	118-74-1	4.9E-04	2.0E-02
Hexachlorobutadiene	87-68-3	2.0E-05	5.0E-01
Alpha-hexachloro-cyclo-hexane	319-84-6	1.8E-03	5.6E-03
Beta-hexachloro-cyclo-hexane	319-85-7	5.3E-04	1.9E-02
Gamma-hexachloro-cyclo-hexane	58-89-9	3.8E-04	2.6E-02
Hexachlorocyclohexane, Technical		5.1E-04	2.0E-02
Hexachlorodibenzo-p-dioxin (1,2 Mixture)		1.3E+0	7.7E-06
Hexachloroethane	67-72-1	4.0E-06	2.5E+00
Hydrazine	302-01-2	2.9E-03	3.4E-03
Hydrazine Sulfate	302-01-2	2.9E-03	3.4E-03
3-Methylcholanthrene	56-49-5	2.7E-03	3.7E-03
Methyl Hydrazine	60-34-4	3.1E-04	3.2E-02
Methylene Chloride	75-09-2	4.1E-06	2.4E+00
4,4'-Methylene-bis-2-chloroaniline	101-14-4	4.7E-05	2.1E-01
Nickel	7440-02-0	2.4E-04	4.2E-02
Nickel Refinery Dust	7440-02-0	2.4E-04	4.2E-02
Nickel Subsulfide	12035-72-2	4.8E-04	2.1E-02
2-Nitropropane	79-46-9	2.7E-02	3.7E-04
N-Nitroso-n-butylamine	924-16-3	1.6E-03	6.3E-03
N-Nitroso-n-methylurea	684-93-5	8.6E-02	1.2E-04
N-Nitrosodiethylamine	55-18-5	4.3E-02	2.3E-04
N-Nitrosopyrrolidine	930-55-2	6.1E-04	1.6E-02
Pentachloronitrobenzene	82-68-8	7.3E-05	1.4E-01
PCBs	1336-36-3	1.2E-03	8.3E-03
Pronamide	23950-58-5	4.6E-06	2.2E+00
Reserpine	50-55-5	3.0E-03	3.3E-03
2,3,7,8-Tetrachloro-dibenzo-p-dioxin	1746-01-6	4.5E+01	2.2E-07
1,1,2,2-Tetrachloroethane	79-34-5	5.8E-05	1.7E-01
Tetrachloroethylene	127-18-4	4.8E-07	2.1E+01
Thiourea	62-56-6	5.5E-04	1.8E-02
1,1,2-Trichloroethane	79-00-5	1.6E-05	6.3E-01
Trichloroethylene	79-01-6	1.3E-06	7.7E+00
2,4,6-Trichlorophenol	88-06-2	5.7E-06	1.8E+00
Toxaphene	8001-35-2	3.2E-04	3.1E-02
Vinyl Chloride	75-01-4	7.1E-06	1.4E+00

**APPENDIX XXI**  
**Stack Plume Rise:**  
**[Estimated Plume Rise (In Meters) Based on Stack Exit Flow Rate and Gas Temperature]**

Flow Rate (m <sup>3</sup> /s)	Exhaust Temperature (K°)										
	<325	325-349	350-399	400-449	450-499	500-599	600-699	700-799	800-999	1000-1499	>1499
<0.5	0	0	0	0	0	0	0	0	0	0	0
0.5-0.9	0	0	0	0	0	0	0	0	1	1	1
1.0-1.9	0	0	0	0	1	1	2	3	3	3	4
2.0-2.9	0	0	1	3	4	4	6	6	7	8	9
3.0-3.9	0	1	2	5	6	7	9	10	11	12	13
4.0-4.9	1	2	4	6	8	10	12	13	14	15	17
5.0-7.4	2	3	5	8	10	12	14	16	17	19	21
7.5-9.9	3	5	8	12	15	17	20	22	22	23	24
10.0-12.4	4	6	10	15	19	21	23	24	25	26	27
12.5-14.9	4	7	12	18	22	23	25	26	27	28	29
15.0-19.9	5	8	13	20	23	24	26	27	28	29	31
20.0-24.9	6	10	17	23	25	27	29	30	31	32	34
25.0-29.9	7	12	20	25	27	29	31	32	33	35	36
30.0-34.9	8	14	22	26	29	31	33	35	36	37	39
35.0-39.9	9	16	23	28	30	32	35	36	37	39	41
40.0-49.9	10	17	24	29	32	34	36	38	39	41	42
50.0-59.9	12	21	26	31	34	36	39	41	42	44	46
60.0-69.9	14	22	27	33	36	39	42	43	45	47	49
70.0-79.9	16	23	29	35	38	41	44	46	47	49	51
80.0-89.9	17	25	30	36	40	42	46	48	49	51	54
90.0-99.9	19	26	31	38	42	44	48	50	51	53	56
100.0-119.9	21	26	32	39	43	46	49	52	53	55	58
120.0-139.9	22	28	35	42	46	49	52	55	56	59	61
140.0-159.9	23	30	36	44	48	51	55	58	59	62	65
160.0-179.9	25	31	38	46	50	54	58	60	62	65	67
180.0-199.9	26	32	40	48	52	56	60	63	65	67	70
>199.9	26	33	41	49	54	58	62	65	67	69	73

**APPENDIX XXII**  
**Health-Based Limits for Exclusion of Waste-Derived Residues\***  
**Metals-TCLP Extract Concentration Limits:**

<u>Constituent</u>	<u>CAS No.</u>	<u>Concentration Limits</u> <u>(mg/l)</u>
<u>Antimony</u>	<u>7440-36-0</u>	<u>1xE+00</u>
<u>Arsenic</u>	<u>7440-38-2</u>	<u>5xE+00</u>
<u>Barium</u>	<u>7440-39-3</u>	<u>1xE+02</u>
<u>Beryllium</u>	<u>7440-41-7</u>	<u>7XE-03</u>
<u>Cadmium</u>	<u>7440-43-9</u>	<u>1xE+00</u>
<u>Chromium</u>	<u>7440-47-3</u>	<u>5xE+00</u>
<u>Lead</u>	<u>7439-92-1</u>	<u>5xE+00</u>
<u>Mercury</u>	<u>7439-97-6</u>	<u>2xE-01</u>
<u>Nickel</u>	<u>7440-02-0</u>	<u>7xE+01</u>
<u>Selenium</u>	<u>7782-49-2</u>	<u>1xE+00</u>
<u>Silver</u>	<u>7440-22-4</u>	<u>5xE+00</u>
<u>Thallium</u>	<u>7440-28-0</u>	<u>7xE+00</u>

**Nonmetals-Residue Concentration Limits:**

<u>Constituent</u>	<u>CAS No.</u>	<u>Concentration Limits for Residues (mg/l)</u>
<u>Acetonitrile</u>	<u>75-05-8</u>	<u>2xE-01</u>
<u>Acetophenone</u>	<u>98-86-2</u>	<u>4xE+00</u>
<u>Acrolein</u>	<u>107-02-08</u>	<u>5xE-01</u>
<u>Acrylamide</u>	<u>79-06-1</u>	<u>2xE-04</u>
<u>Acrylonitrile</u>	<u>107-13-1</u>	<u>7xE-04</u>
<u>Aldrin</u>	<u>309-00-2</u>	<u>2xE-05</u>
<u>Allyl alcohol</u>	<u>107-18-6</u>	<u>2xE-01</u>
<u>Aluminum phosphide</u>	<u>20859-73-8</u>	<u>1xE-02</u>
<u>Aniline</u>	<u>62-53-3</u>	<u>6xE-02</u>
<u>Barium cyanide</u>	<u>542-62-1</u>	<u>1xE+00</u>
<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>1xE-04</u>
<u>Benzene</u>	<u>71-43-2</u>	<u>5xE-03</u>
<u>Benzidine</u>	<u>92-87-5</u>	<u>1xE-06</u>
<u>Bis(2-chloroethyl) ether</u>	<u>111-44-4</u>	<u>3xE-04</u>
<u>Bis(chloromethyl) ether</u>	<u>542-88-1</u>	<u>2xE-06</u>
<u>Bis(2-ethylhexyl) phthalate</u>	<u>117-81-7</u>	<u>3xE+01</u>
<u>Bromoform</u>	<u>75-25-2</u>	<u>7xE-01</u>
<u>Calcium cyanide</u>	<u>592-01-8</u>	<u>1xE-06</u>
<u>Carbon disulfide</u>	<u>75-15-0</u>	<u>4xE+00</u>
<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>5xE-03</u>
<u>Chlordane</u>	<u>57-74-9</u>	<u>3xE-04</u>
<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>1xE+00</u>
<u>Chloroform</u>	<u>67-66-3</u>	<u>6xE-02</u>
<u>Copper cyanide</u>	<u>544-92-3</u>	<u>2xE-01</u>
<u>Cresols (Cresylic acid)</u>	<u>1319-77-3</u>	<u>2xE+00</u>
<u>Cyanogen</u>	<u>460-19-5</u>	<u>1xE+00</u>
<u>DDT</u>	<u>50-29-3</u>	<u>1xE-03</u>
<u>Dibenz(a,h)-anthracene</u>	<u>53-70-3</u>	<u>7xE-06</u>
<u>1,2-Dibromo-3-chloropropane</u>	<u>96-12-8</u>	<u>2xE-05</u>
<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>7.5xE-02</u>
<u>Dichlorodifluoromethane</u>	<u>75-71-8</u>	<u>7xE+00</u>
<u>1,1-Dichloroethylene</u>	<u>75-35-4</u>	<u>5xE-03</u>

<u>Constituent</u>	<u>CAS No.</u>	<u>Concentration Limits for Residues (mg/l)</u>
<u>2,4-Dichlorophenol</u>	<u>120-83-2</u>	<u>1xE-01</u>
<u>1,3-Dichloropropene</u>	<u>542-75-6</u>	<u>1xE-03</u>
<u>Dieldrin</u>	<u>60-57-1</u>	<u>2xE-05</u>
<u>Diethyl phthalate</u>	<u>84-66-2</u>	<u>3xE+01</u>
<u>Diethylstilbesterol</u>	<u>56-53-1</u>	<u>7xE-07</u>
<u>Dimethoate</u>	<u>60-51-5</u>	<u>3xE-02</u>
<u>2,4-Dinitrotoluene</u>	<u>121-14-2</u>	<u>5xE-04</u>
<u>Diphenylamine</u>	<u>122-39-4</u>	<u>9xE-01</u>
<u>1,2-Diphenylhydrazine</u>	<u>122-66-7</u>	<u>5xE-04</u>
<u>Endosulfan</u>	<u>115-29-7</u>	<u>2xE-03</u>
<u>Endrin</u>	<u>72-20-8</u>	<u>2xE-04</u>
<u>Epichlorohydrin</u>	<u>106-89-8</u>	<u>4xE-02</u>
<u>Ethylene dibromide</u>	<u>106-93-4</u>	<u>4xE-07</u>
<u>Ethylene oxide</u>	<u>75-21-8</u>	<u>3xE-04</u>
<u>Fluorine</u>	<u>7782-41-4</u>	<u>4xE+00</u>
<u>Formic acid</u>	<u>64-18-6</u>	<u>7xE+01</u>
<u>Heptachlor</u>	<u>76-44-8</u>	<u>8xE-05</u>
<u>Heptachlor epoxide</u>	<u>1024-57-3</u>	<u>4xE-05</u>
<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>2xE-04</u>
<u>Hexachlorobutadiene</u>	<u>87-68-3</u>	<u>5xE-03</u>
<u>Hexachlorocyclopentadiene</u>	<u>77-47-4</u>	<u>2xE-01</u>
<u>Hexachlorodibenzo-p-dioxins</u>	<u>19408-74-3</u>	<u>6xE-08</u>
<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>3xE-02</u>
<u>Hydrazine</u>	<u>302-01-1</u>	<u>1xE-04</u>
<u>Hydrogen cyanide</u>	<u>74-90-8</u>	<u>7xE-05</u>
<u>Hydrogen sulfide</u>	<u>7783-06-4</u>	<u>1xE-06</u>
<u>Isobutyl alcohol</u>	<u>78-83-1</u>	<u>1xE+01</u>
<u>Methomyl</u>	<u>16752-77-5</u>	<u>1xE+00</u>
<u>Methoxychlor</u>	<u>72-43-5</u>	<u>1xE-01</u>
<u>3-Methylcholanthrene</u>	<u>56-49-5</u>	<u>4xE-05</u>
<u>4,4'-Methylenebis (2-chloroaniline)</u>	<u>101-14-4</u>	<u>2xE-03</u>
<u>Methylene chloride</u>	<u>75-09-2</u>	<u>5xE-02</u>
<u>Methyl ethyl ketone (MEK)</u>	<u>78-93-3</u>	<u>2xE+00</u>

<u>Constituent</u>	<u>CAS No.</u>	<u>Concentration Limits for Residues (mg/l)</u>
<u>Methyl hydrazine</u>	<u>60-34-4</u>	<u>3xE-04</u>
<u>Methyl parathion</u>	<u>298-00-0</u>	<u>2xE-02</u>
<u>Naphthalene</u>	<u>91-20-3</u>	<u>1xE+01</u>
<u>Nickel cyanide</u>	<u>557-19-7</u>	<u>7xE-01</u>
<u>Nitric oxide</u>	<u>10102-43-9</u>	<u>4xE+00</u>
<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>2xE-02</u>
<u>N-Nitrosodi-n-butylamine</u>	<u>924-16-3</u>	<u>6xE-05</u>
<u>N-Nitrosodiethylamine</u>	<u>55-18-5</u>	<u>2xE-06</u>
<u>N-Nitroso-N-methylurea</u>	<u>684-93-5</u>	<u>1xE-07</u>
<u>N-Nitrosopyrrolidine</u>	<u>930-55-2</u>	<u>2xE-04</u>
<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>3xE-02</u>
<u>Pentachloronitrobenzene (PCNB)</u>	<u>82-68-8</u>	<u>1xE-01</u>
<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>1xE+00</u>
<u>Phenol</u>	<u>108-95-2</u>	<u>1xE+00</u>
<u>Phenylmercury acetate</u>	<u>62-38-4</u>	<u>3xE-03</u>
<u>Phosphine</u>	<u>7803-51-2</u>	<u>1xE-02</u>
<u>Polychlorinated biphenyls, N.O.S.</u>	<u>1336-36-3</u>	<u>5xE-05</u>
<u>Potassium cyanide</u>	<u>151-50-8</u>	<u>2xE+00</u>
<u>Potassium silver cyanide</u>	<u>506-61-6</u>	<u>7xE+00</u>
<u>Pronamide</u>	<u>23950-58-5</u>	<u>3xE+00</u>
<u>Pyridine</u>	<u>110-86-1</u>	<u>4xE-02</u>
<u>Reserpine</u>	<u>50-55-5</u>	<u>3xE-05</u>
<u>Selenourea</u>	<u>630-10-4</u>	<u>2xE-01</u>
<u>Silver cyanide</u>	<u>506-64-9</u>	<u>4xE+00</u>
<u>Sodium cyanide</u>	<u>143-33-9</u>	<u>1xE+00</u>
<u>Strychnine</u>	<u>57-24-9</u>	<u>1xE-02</u>
<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>1xE-02</u>
<u>1,1,2,2-tetrachloroethane</u>	<u>79-34-5</u>	<u>2xE-03</u>
<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>7xE-01</u>
<u>2,3,4,6-Tetrachlorophenol</u>	<u>58-90-2</u>	<u>1xE-02</u>
<u>Tetraethyl lead</u>	<u>78-00-2</u>	<u>4xE-06</u>
<u>Thiourea</u>	<u>62-56-6</u>	<u>2xE-04</u>
<u>Toluene</u>	<u>108-88-3</u>	<u>1xE+01</u>

<u>Constituent</u>	<u>CAS No.</u>	<u>Concentration Limits for Residues (mg/l)</u>
<u>Toxaphene</u>	<u>8001-35-2</u>	<u>5xE-03</u>
<u>1,1,2-Trichloroethane</u>	<u>79-00-5</u>	<u>6xE-03</u>
<u>Trichloroethylene</u>	<u>79-01-6</u>	<u>5xE-03</u>
<u>Trichloromonofluoromethane</u>	<u>75-69-4</u>	<u>1xE+01</u>
<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>4xE+00</u>
<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>4xE+00</u>
<u>Vanadium pentoxide</u>	<u>1314-62-1</u>	<u>7xE-01</u>
<u>Vinyl chloride</u>	<u>75-01-4</u>	<u>2xE-03</u>

\*Note 1: The health-based concentration limits for appendix V of chapter 33-24-02 constituents for which a health-based concentration is not provided below is 2xE-06 mg/kg.

Note 2: The levels specified in this appendix and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in Note 1 of this appendix are administratively stayed under the condition, for those constituents specified in subdivision a of subsection 2 of section 33-24-05-537, that the owner or operator complies with the alternative levels defined as the land disposal restriction limits specified in section 33-24-05-283 for F039 nonwastewaters. See paragraph 1 of subdivision b of subsection 2 of section 33-24-05-537.

**APPENDIX XXIII**  
**Organic Compounds for Which Residues Must Be Analyzed**

<u>Volatiles:</u>	<u>Semivolatiles:</u>
<u>Benzene</u>	<u>Bis(2-ethylhexyl)phthalate</u>
<u>Toluene</u>	<u>Naphthalene</u>
<u>Carbon tetrachloride</u>	<u>Phenol</u>
<u>Chloroform</u>	<u>Diethyl phthalate</u>
<u>Methylene chloride</u>	<u>Butyl benzyl phthalate</u>
<u>Trichloroethylene</u>	<u>2,4-Dimethylphenol</u>
<u>Tetrachloroethylene</u>	<u>o-Dichlorobenzene</u>
<u>1,1,1-Trichloroethane</u>	<u>m-Dichlorobenzene</u>
<u>Chlorobenzene</u>	<u>p-Dichlorobenzene</u>
<u>cis-1,4-Dichloro-2-butene</u>	<u>Hexachlorobenzene</u>
<u>Bromochloromethane</u>	<u>2,4,6-Trichlorophenol</u>
<u>Bromodichloromethane</u>	<u>Fluoranthene</u>
<u>Bromoform</u>	<u>o-Nitrophenol</u>
<u>Bromomethane</u>	<u>1,2,4-Trichlorobenzene</u>
<u>Methylene bromide</u>	<u>o-Chlorophenol</u>
<u>Methyl ethyl ketone</u>	<u>Pentachlorophenol</u>
	<u>Pyrene</u>
	<u>Dimethyl phthalate</u>
	<u>Mononitrobenzene</u>
	<u>2,6-Toluene diisocyanate</u>
	<u>Polychlorinated dibenzo-p-dioxins<sup>1</sup></u>
	<u>Polychlorinated dibenzo-furans<sup>1</sup></u>

<sup>1</sup>Analyses for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans are required only for residues collected from areas downstream of the combustion chamber (for example, ductwork, boiler tubes, heat exchange surfaces, and air pollution control devices).

**APPENDIX XXIV**  
**Methods Manual for Compliance With the Boiler and Industrial Furnace**  
**Regulations**

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The Methods Manual for Compliance With the Boiler and Industrial Furnace Regulations\* is incorporated by reference in its entirety from Appendix IX to 40 Code of Federal Regulations, Part 266.

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\*Note: Methods Manual for Compliance With Boiler and Industrial Furnace Regulations, U.S. EPA, December 1990, is available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 487-4600, document number PB91-120-006.

**APPENDIX XXV [Reserved]**

## APPENDIX XXVI

### Load-Bearing Materials That May Be Processed in Exempt Lead Smelters

<b>A. Exempt Lead-Bearing Materials When Generated or Originally Produced by Lead-Associated Industries<sup>1</sup></b>
1. Acid dump/fill solids
2. Sump mud
3. Materials from laboratory analyses
4. Acid filters
5. Baghouse bags
6. Clothing (for example, coveralls, aprons, shoes, hats, gloves)
7. Sweepings
8. Air filter bags and cartridges
9. Respiratory cartridge filters
10. Shop abrasives
11. Stacking boards
12. Waste shipping containers (for example, cartons, bags, drums, cardboard)
13. Paper hand towels
14. Wiping rags and sponges
15. Contaminated pallets
16. Water treatment sludges, filter cakes, residues, and solids
17. Emission control dusts, sludges, filter cakes, residues, and solids from lead-associated industries (for example, K069 and D008 wastes)
18. Spent grids, posts, and separators
19. Spent batteries
20. Lead oxide and lead oxide residues
21. Lead plates and groups
22. Spent battery cases, covers, and vents
23. Pasting belts
24. Water filter media
25. Cheesecloth from pasting rollers
26. Pasting additive bags
27. Asphalt paving materials
<sup>1</sup> Lead-associated industries are lead smelters, lead-acid battery manufacturing, and lead chemical manufacturing (for example, manufacturing of lead oxide or other lead compounds).

B. Exempt Lead-Bearing Materials When Generated or Originally Produced by Any Industry

1. Charging jumpers and clips

2. Platen abrasive

3. Fluff from lead wire and cable casings

4. Lead-based pigments and compounding pigment dust

**APPENDIX XXVII**

**Nickel or Chromium-Bearing Materials That May Be Processed in Exempt  
Nickel-Chromium Recovery Furnaces**

<b>A. <u>Exempt Nickel or Chromium-Bearing Materials when Generated by Manufacturers or Users of Nickel, Chromium, or Iron</u></b>
1. <u>Baghouse bags</u>
2. <u>Raney nickel catalyst</u>
3. <u>Floor sweepings</u>
4. <u>Air filters</u>
5. <u>Electroplating bath filters</u>
6. <u>Wastewater filter media</u>
7. <u>Wood pallets</u>
8. <u>Disposable clothing (coveralls, aprons, hats, and gloves)</u>
9. <u>Laboratory samples and spent chemicals</u>
10. <u>Shipping containers and plastic liners from containers or vehicles used to transport nickel or chromium-containing wastes</u>
11. <u>Respirator cartridge filters</u>
12. <u>Paper hand towels</u>
<b>B. <u>Exempt Nickel or Chromium-Bearing Materials When Generated by Any Industry</u></b>
1. <u>Electroplating wastewater treatment sludges (F006)</u>
2. <u>Nickel and/or chromium-containing solutions</u>
3. <u>Nickel, chromium, and iron catalysts</u>
4. <u>Nickel-cadmium and nickel-iron batteries</u>
5. <u>Filter cake from wet scrubber system water treatment plants in the specialty steel industry<sup>1</sup></u>
6. <u>Filter cake from nickel-chromium alloy pickling operations<sup>1</sup></u>
<sup>1</sup> <u>If a hazardous waste under an authorized state program.</u>

**APPENDIX XXVIII**  
**Mercury-Bearing Wastes That May Be Processed in Exempt Mercury Recovery Units**

These are exempt mercury-bearing materials with less than five hundred parts per million of appendix V of chapter 33-24-02 organic constituents when generated by manufacturers or users of mercury or mercury products.

1. Activated carbon.
2. Decomposer graphite.
3. Wood.
4. Paper.
5. Protective clothing.
6. Sweepings.
7. Respiratory cartridge filters.
8. Cleanup articles.
9. Plastic bags and other contaminated containers.
10. Laboratory and process control samples.
11. K106 and other wastewater treatment plant sludge and filter cake.
12. Mercury cell sump and tank sludge.
13. Mercury cell process solids.
14. Recoverable levels or mercury contained in soil.

**APPENDIX XXIX**  
**Metal-Bearing Wastes Prohibited From Dilution in a Combustion Unit**  
**According to Subsection 3 of Section 33-24-05-252<sup>1</sup>**

<u>Waste Code</u>	<u>Waste Description</u>
<u>D004</u>	<u>Toxicity Characteristic for Arsenic.</u>
<u>D005</u>	<u>Toxicity Characteristic for Barium.</u>
<u>D006</u>	<u>Toxicity Characteristic for Cadmium.</u>
<u>D007</u>	<u>Toxicity Characteristic for Chromium.</u>
<u>D008</u>	<u>Toxicity Characteristic for Lead.</u>
<u>D009</u>	<u>Toxicity Characteristic for Mercury.</u>
<u>D010</u>	<u>Toxicity Characteristic for Selenium.</u>
<u>D011</u>	<u>Toxicity Characteristic for Silver.</u>
<u>F006</u>	<u>Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.</u>
<u>F007</u>	<u>Spent cyanide plating bath solutions from electroplating operations.</u>
<u>F008</u>	<u>Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.</u>
<u>F009</u>	<u>Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.</u>
<u>F010</u>	<u>Quenching bath residues from oil baths from metal treating operations where cyanides are used in the process.</u>
<u>F011</u>	<u>Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.</u>
<u>F012</u>	<u>Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.</u>
<u>F019</u>	<u>Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum car washing when such phosphating is an exclusive conversion coating process.</u>
<u>K002</u>	<u>Wastewater treatment sludge from the production of chrome yellow and orange pigments.</u>
<u>K003</u>	<u>Wastewater treatment sludge from the production of molybdate orange pigments.</u>

<u>Waste Code</u>	<u>Waste Description</u>
<u>K004</u>	<u>Wastewater treatment sludge from the production of zinc yellow pigments.</u>
<u>K005</u>	<u>Wastewater treatment sludge from the production of chrome green pigments.</u>
<u>K006</u>	<u>Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).</u>
<u>K007</u>	<u>Wastewater treatment sludge from the production of iron blue pigments.</u>
<u>K008</u>	<u>Oven residue from the production of chrome oxide green pigments.</u>
<u>K061</u>	<u>Emission control dust/sludge from the primary production of steel in electric furnaces.</u>
<u>K069</u>	<u>Emission control dust/sludge from secondary lead smelting.</u>
<u>K071</u>	<u>Brine purification muds from the mercury cell processes in chlorine production, where separately prepurified brine is not used.</u>
<u>K100</u>	<u>Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.</u>
<u>K106</u>	<u>Sludges from the mercury cell processes for making chlorine.</u>
<u>P010</u>	<u>Arsenic acid <math>H_3AsO_4</math></u>
<u>P011</u>	<u>Arsenic oxide <math>As_2O_5</math></u>
<u>P012</u>	<u>Arsenic trioxide</u>
<u>P013</u>	<u>Barium cyanide</u>
<u>P015</u>	<u>Beryllium</u>
<u>P029</u>	<u>Copper cyanide <math>Cu(CN)</math></u>
<u>P074</u>	<u>Nickel cyanide <math>Ni(CN)_2</math></u>
<u>P087</u>	<u>Osmium tetroxide</u>
<u>P099</u>	<u>Potassium silver cyanide</u>
<u>P104</u>	<u>Silver cyanide</u>
<u>P113</u>	<u>Thallic oxide</u>
<u>P114</u>	<u>Thallium (I) selenite</u>
<u>P115</u>	<u>Thallium (I) sulfate</u>
<u>P119</u>	<u>Ammonium vanadate</u>
<u>P120</u>	<u>Vanadium oxide <math>V_2O_5</math></u>
<u>P121</u>	<u>Zinc cyanide</u>
<u>U032</u>	<u>Calcium chromate</u>
<u>U145</u>	<u>Lead phosphate</u>

<u>Waste Code</u>	<u>Waste Description</u>
<u>U151</u>	<u>Mercury</u>
<u>U204</u>	<u>Selenious acid</u>
<u>U205</u>	<u>Selenium disulfide</u>
<u>U216</u>	<u>Thallium (I) chloride</u>
<u>U217</u>	<u>Thallium (I) nitrate</u>

<sup>1</sup>A combustion unit is defined as any thermal technology subject to sections 33-24-05-144 through 33-24-05-159 or sections 33-24-05-525 through 33-24-05-549.

## CHAPTER 33-24-06

### 33-24-06-01. Application for a permit.

1. **Permit application.** Any person who is required to have a permit (including new applicants and permittees with expiring permits) shall complete, sign, and submit an application to the department as described in this section and section 33-24-06-16. Persons currently authorized with interim status shall apply for permits when required by the department. Persons covered by permits by rule (section 33-24-06-18) need not apply. Procedures for applications, issuance, and administration of emergency permits are found exclusively in section 33-24-06-19. Procedures for application, issuance, and administration of research, development, and demonstration permits are found exclusively in section 33-24-06-20.
  
2. **Who must have a permit?** North Dakota Century Code chapter 23-20.3 requires that a permit be obtained for the treatment, storage, or disposal of any hazardous waste as identified or listed in chapter 33-24-02. Owners and operators of hazardous waste management units must have permits during the active life (including the closure period) of the unit, during any compliance period specified under section 33-24-05-53, including any extension of that period under subsection 3 of section 33-24-05-53. Owners or operators of surface impoundments, landfills, land treatment units, and waste pile units that received wastes after July 26, 1982, or that certified closure according to section 33-24-05-64 after January 26, 1983, must have postclosure permits, unless they demonstrate closure by removal as provided under subdivisions d and e. If a postclosure permit is required, the permit must address applicable chapter 33-24-05 ground water monitoring, unsaturated zone monitoring, corrective action, and postclosure care ~~requirements of this article~~. The denial of a permit for the active life of a hazardous waste management facility or unit does not affect the requirement to obtain a postclosure permit under this section.
  - a. **Specific inclusions.** Hazardous waste permits are required for:
    - (1) Injection wells that dispose of hazardous waste, and associated surface facilities that treat, store, or dispose of hazardous waste (see section 33-24-06-20). However, the owner or operator with an underground injection control permit will be deemed to have a hazardous waste permit for the injection well itself if the owner or operator complies with requirements of subsection 2 of section 33-24-06-18.
    - (2) Treatment, storage, or disposal of hazardous waste at facilities requiring a North Dakota pollutant discharge elimination system permit. However, the owner or operator of a publicly owned treatment works receiving hazardous

waste will be deemed to have a hazardous waste permit for that waste if the owner or operator complies with the requirements of subsection 3 of section 33-24-06-18.

b. Specific exclusions. Hazardous waste permits are not required for:

- (1) Generators who accumulate hazardous waste onsite for less than time periods as provided in section 33-24-03-12.
- (2) Farmers who dispose of pesticide containers from their own use as provided in section 33-24-03-40.
- (3) Persons who own or operate facilities solely for the treatment, storage, or disposal of hazardous waste excluded from regulation by section 33-24-02-04 or 33-24-02-05.
- (4) Owners or operators of totally enclosed treatment facilities as defined in section 33-24-01-04.
- (5) Owners or operators of elementary neutralization units or wastewater treatment units as defined in section 33-24-01-04.
- (6) Transporters storing manifested shipments of hazardous waste in containers meeting the requirements of section 33-24-03-08 at a transfer facility for a period of ten days or less.
- (7) Persons mixing absorbent material and waste in a container, provided this mixing occurs at the time waste is first placed in the container, and the person complies with sections 33-24-05-90 and 33-24-05-91, and subsection 2 of section 33-24-05-08.
- (8) Universal waste handlers and universal waste transporters as defined in section 33-24-01-05 33-24-01-04 managing the wastes listed below. These handlers are subject to regulation under sections 33-24-05-700 through 33-24-05-765 33-24-05-799.
  - a. (a) Batteries as described in section 33-24-05-702;
  - b. (b) Pesticides as described in section 33-24-05-703; and
  - e. (c) Mercury containing devices as described in section 33-24-05-704; and
  - (d) Lamps as described in section 33-24-05-705.

(9) Immediate response activities.

(a) A person is not required to obtain a hazardous waste permit for treatment or containment activities taken during immediate response to any of the following situations:

[1] A discharge of a hazardous waste.

[2] An imminent and substantial threat of a discharge of hazardous waste.

[3] A discharge of a material which, when discharged, becomes a hazardous waste.

[4] An immediate threat to human health, public safety, property, or the environment from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an explosive or munitions emergency response specialist as defined in section 33-24-01-04.

(b) Any person who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of this chapter for those activities.

(c) In the case of emergency responses involving military munitions, the responding military emergency response specialist's organizational unit must retain records for three years identifying the dates of the response, the responsible persons responding, the type and description of material addressed and its disposition.

c. Permits for less than an entire facility. The department may issue or deny a permit for one or more units at a facility without simultaneously issuing or denying a permit to all of the units at the facility. The interim status of any unit for which a permit has not been issued or denied is not affected by the issuance or denial of a permit to any other unit at the facility.

d. Closure by removal. Owners or operators of surface impoundments, land treatment units, and waste piles closing by removal or decontamination under chapter 33-24-05 standards must obtain a postclosure permit unless they can demonstrate to the department that the closure met the standards for closure by removal or decontamination in section 33-24-05-122, subsection 5

of section 33-24-05-167, or section 33-24-05-135 respectively. The demonstration may be made in the following ways:

- (1) If the owner or operator has submitted a part B application for a postclosure permit, the owner or operator may request a determination, based on information contained in the application, that chapter 33-24-05 closure by removal standards were met. If the department believes that chapter 33-24-05 standards were met, the department will notify the public of this proposed decision, allow for public comment, and reach a final determination according to the procedures in subdivision e.
- (2) If the owner or operator has not submitted a part B application for a postclosure permit, the owner or operator may petition the department for a determination that a postclosure permit is not required because the closure met the applicable chapter 33-24-05 closure standards.
  - (a) The petition must include data demonstrating that closure by removal or decontamination standards were met, or it must demonstrate that the unit closed under requirements that met or exceeded the chapter 33-24-05 closure by removal standard.
  - (b) The department shall approve or deny the petition according to the procedures outlined in subdivision e.

e. Procedures for closure equivalency determination.

- (1) If a facility owner or operator seeks an equivalency demonstration under subdivision d, the department will provide the public, through a newspaper notice, the opportunity to submit written comments on the information submitted by the owner or operator within thirty days from the notice. The department will also, in response to a request, or at the department's own discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning the equivalence of the closure period. The department will give public notice of the hearing at least thirty days before it occurs (public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.)
- (2) The department will determine whether the chapter 33-24-05 closure met the standards for closure by removal or decontamination in section 33-24-05-122, subsection 5 of section 33-24-05-167, or section 33-24-05-135 respectively

within ninety days of its receipt. If the department finds that the closure did not meet the applicable chapter 33-24-05 standards, the department will provide the owner or operator with a written statement of the reasons why the closure failed to meet chapter 33-24-05 standards. The owner or operator may submit additional information in support of an equivalency demonstration within thirty days after receiving such written statement. The department will review any additional information submitted and make a final determination within sixty days.

- (3) If the department determines that the facility did not close in accordance with chapter 33-24-05 closure by removal standards, the facility is subject to postclosure permitting requirements.
3. **Who applies?** When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit, however, the owner must also sign the permit application.
4. **Completeness.** The department will not issue a permit before receiving a complete application for a permit, except for permits by rule, or emergency permits. An application for a permit is complete when the department receives an application form and any supplemental information which is completed to its satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity. An application for a permit is complete notwithstanding the failure of the owner or operator to submit the exposure information described in subsection 10. The department may deny a permit for the active life of a hazardous waste management facility or unit before receiving a complete application for a permit.
5. **Information requirements.** All applicants for hazardous waste permits shall provide the information required by section 33-24-06-17 to the department.
6. **Recordkeeping.** Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under this chapter for a period of at least three years from the date the application is signed.
7. **When to apply for a permit.**
  - a. Existing hazardous waste management facilities.
    - (1) Owners and operators of existing hazardous waste management facilities shall submit part A of their permit

application (see subsection 1 of section 33-24-06-17) to the department no later than:

- (a) Six months after the date of publication of rules which first require them to comply with the standards set forth in chapter 33-24-05; or
- (b) Thirty days after the date they first become subject to the standards set forth in chapter 33-24-05,

whichever occurs first.

- (2) The department may extend the date by which owners and operators of specified classes of existing hazardous waste management facilities must submit part A of their permit application if it finds that:
  - (a) There has been substantial confusion as to whether the owners and operators of such facilities were required to file a permit application; and
  - (b) Such confusion is attributable to ambiguities in the department's rules in chapters 33-24-01 through 33-24-05.
- (3) The department may, by compliance order, extend the date by which the owner or operator of an existing hazardous waste management facility must submit part A of the permit application.
- (4) The owner and operator of an existing hazardous waste management facility may be required to submit part B of the permit application at any time. Any owner or operator must be allowed at least six months from the date of request to submit the application. Any owner or operator of an existing hazardous waste management facility may voluntarily submit an application at any time.
- (5) Failure to furnish a requested permit application on time or to furnish in full the information required by the application is grounds for termination of the facility's operating status under the procedures of chapter 33-24-07.

b. New hazardous waste management facilities.

- (1) No person may begin physical construction of a new hazardous waste management facility without having submitted a complete permit application (including both

part A and part B) and having received a finally effective hazardous waste permit.

- (2) An application for a permit for a new hazardous waste management facility (including both part A and part B) may be filed ~~any time~~ anytime after promulgation of those standards in sections 33-24-05-89, et seq., applicable to such facility. The application must be submitted to the department at least one hundred eighty days before physical construction is expected to commence.

**8. Updating permit applications.**

- a. If any owner or operator of a hazardous waste management facility has filed part A of a permit application and has not yet filed part B, the owner or operator shall amend part A of the application with the department:
  - (1) No later than the effective date of regulatory provisions listing or designating wastes as hazardous, if the facility is treating, storing, or disposing of any of those newly listed or designated wastes; or
  - (2) As necessary to comply with the provisions of section 33-24-06-16 for changes prior to the department making final administrative disposition of the application.
- b. The owner or operator of a facility who fails to comply with the updating requirements of subdivision a ~~of this subsection~~ is not authorized to treat, store, or dispose of those wastes not covered by a duly filed part A of the application.

- 9. Reapplications.** Any hazardous waste management facility with an effective permit shall submit a new application at least one hundred eighty days before the expiration date of the effective permit unless permission for a later date has been granted by the department (the department shall not grant permission for applications to be submitted later than the expiration date of the existing permit).

**10. Exposure information.**

- a. Any permit part B applications submitted by an owner or an operator of a facility that stores, treats, or disposes of hazardous waste in a surface impoundment or landfill must be accompanied by information, reasonably ascertainable by the owner or operator, on the potential for the public to be exposed to hazardous wastes or hazardous constituents through releases related to the unit. At a minimum, such information must address:

- (1) Reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit;
- (2) The potential pathways of human exposure to hazardous wastes or constituents resulting from the releases described under paragraph 1; and
- (3) The potential magnitude and nature of the human exposure resulting from such releases.

b. Owners and operators of a landfill or surface impoundment who have already submitted a part B application must submit the exposure information required in subdivision a of ~~subsection 10~~.

11. **General requirements.** The department may require a permittee or an applicant to submit information in order to establish permit conditions under subdivision b of subsection 1 of section 33-24-06-05 and subsection 1 of section 33-24-06-06.

**History:** Effective January 1, 1984; amended effective October 1, 1986; December 1, 1988; December 1, 1991; January 1, 1994; July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

### **33-24-06-03. Signatories to permit applications and reports.**

1. **Applications.** All hazardous waste permit applications must be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this section a responsible corporate officer means:

- (1) A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decisionmaking functions for the corporation; or
- (2) The manager of one or more manufacturing, production, or operating facilities employing more than two hundred fifty persons or having gross annual sales or expenditures exceeding twenty-five million dollars (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

**NOTE:** The department does not require specific assignments or delegations of authority to responsible

corporate officers identified in paragraph 1 ~~of subdivision a~~. The department will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the department to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under paragraph 2 ~~of subdivision a~~ rather than to specific individuals.

- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
  - c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes:
    - (1) The chief executive officer of the agency; or
    - (2) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
2. **Reports.** All reports required by permits, and other information requested by the department must be signed by a person described in subsection 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. The authorization is made in writing by a person described in subsection 1;
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
  - c. The written authorization is submitted to the department.
3. **Changes to authorization.** If an authorization under subsection 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of subsection 2 must be submitted to the department prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. **Certification.** ~~Any person signing a document under subsection 1 or 2 of this section shall make the following certification:~~

~~I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.~~

- a. Any persons signing a document under subsection 1 or 2 shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

- b. For remedial action plans under sections 33-24-06-30 through 33-24-06-35, if the operator certifies according to subdivision a, then the owner may make the following certification instead of the certification in subdivision a:

Based on my knowledge of the conditions of the property described in the remedial action plan and my inquiry of the person or persons who manage the system referenced in the operator's certification, or those persons directly responsible for gathering the information, the information submitted is, upon information and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

**History:** Effective January 1, 1984; amended effective October 1, 1986; December 1, 1988; January 1, 1994; July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

**33-24-06-10. Effect of a permit.**

1. Compliance with a hazardous waste permit during its term constitutes compliance, for purposes of enforcement, with North Dakota Century Code chapter 23-20.3 except for those requirements not included in the permit which:
  - a. Become effective by statute;
  - b. Are promulgated under sections 33-24-05-250 through 33-24-05-299 restricting the placement of hazardous wastes in or on the land;
  - c. Are promulgated under ~~chapter 33-24-05~~ sections 33-24-05-01 through 33-24-05-190, 33-24-05-300 through 33-24-05-524, 33-24-05-550 through 33-24-05-599, and 33-24-05-800 through 33-24-05-819 regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detection system requirements include double liners, construction quality assurance (CQA) programs, monitoring, action leakage rates, and response action plans, and will be implemented through the procedures of section 33-24-06-14 class 1 permit modifications; or
  - d. Are promulgated under ~~sections 33-24-05-400 through 33-24-05-474~~ subparts AA, BB, or CC of 40 CFR part 265 limiting air emissions, as incorporated by reference in subsection 5 of section 33-24-06-16.
2. The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.
3. The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.

**History:** Effective January 1, 1984; amended effective October 1, 1986; December 1, 1991; January 1, 1994; July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

**33-24-06-14. Permit modification at the request of the permittee.**

1. **Class 1 modifications.**
  - a. Except as provided in subdivision b, the permittee may put into effect class 1 modifications listed in appendix I of this section under the following conditions:-;

- (1) The permittee must notify the department concerning the modification by certified mail or other means that establish proof of delivery within seven calendar days after the change is put into effect. This notice must specify the changes being made to permit conditions or supporting documents referenced by the permit and must explain why they are necessary. Along with the notice, the permittee must provide applicable information required by section 33-24-06-17 and subsections 2 and 3 of section 33-24-06-19.
  - (2) The permittee must send a notice of the modification to all persons on the facility mailing list, maintained by the department in accordance with chapter 33-24-07, and the appropriate units of state and local governments, as specified in section 33-24-07-06. This notification must be made within ninety calendar days after the change is put into effect. For the class 1 modifications that require prior department approval, the notification must be made within ninety calendar days after the department approves the request.
  - (3) Any person may request the department to review, and the department may for cause reject, any class 1 modification. The department must inform the permittee by certified mail that a class 1 modification has been rejected, explaining the reasons for the rejection. If a class 1 modification has been rejected, the permittee must comply with the original permit conditions.
- b. Class 1 permit modifications identified in appendix I by an asterisk may be made only with the prior written approval of the department.
  - c. For a class 1 permit modification, the permittee may elect to follow the procedures in subsection 2 of section 33-24-06-14 for class 2 modifications instead of the class 1 procedures. The permittee must inform the department of this decision in the notice required in subdivision a of subsection 2 of section 33-24-06-14.

## **2. Class 2 modifications.**

- a. For class 2 modifications listed in appendix I of this section, the permittee must submit a modification request to the department that:
  - (1) Describes the exact change to be made to the permit conditions and supporting documents referenced by the permit;
  - (2) Identifies that the modification is a class 2 modification;

- (3) Explains why the modification is needed; and
  - (4) Provides the applicable information required by section 33-24-06-17 and subsections 2 and 3 of section 33-24-06-19.
- b. The permittee must send a notice of the modification request to all persons on the facility mailing list maintained by the department and to the appropriate units of state and local government as specified in section 33-24-07-06 and must publish this notice in a major local newspaper of general circulation. This notice must be mailed and published within seven days before or after the date of submission of the modification request, and the permittee must provide to the department evidence of the mailing and publication. The notice must include:
- (1) Announcement of a sixty-day comment period, in accordance with subdivision e of subsection 2 of section 33-24-06-14, and the name and address of a department contact to whom comments must be sent;
  - (2) Announcement of the date, time, and place for a public meeting held in accordance with subdivision d of subsection 2 of section 33-24-06-14;
  - (3) Name and telephone number of the permittee's contact person;
  - (4) Name and telephone number of a department contact person;
  - (5) Location where copies of the modification request and any supporting documents can be viewed and copied; and
  - (6) The following statement: "The permittee's compliance history during the life of the permit being modified is available from the department contact person."
- c. The permittee must place a copy of the permit modification request and supporting documents in a location accessible to the public in the vicinity of the permitted facility.
- d. The permittee must hold a public meeting no earlier than fifteen days after the publication of the notice required in subdivision b of ~~subsection 2~~ and no later than fifteen days before the close of the sixty-day comment period. The meeting must be held to the extent practicable in the vicinity of the permitted facility.
- e. The public must be provided sixty days to comment on the modification request. The comment period will begin on the date the permittee publishes the notice in the local newspaper.

Comments should be submitted to the department contact identified in the public notice.

f. Notification request.

(1) No later than ninety days after receipt of the notification request, the department must:

(a) Approve the modification request, with or without changes, and modify the permit accordingly;

(b) Deny the request;

(c) Determine that the modification request must follow the procedures in subsection 3 of section 33-24-06-14 for class 3 modifications for the following reasons:

[1] There is significant public concern about the proposed modification; or

[2] The complex nature of the change requires the more extensive procedures of class 3;

(d) Approve the request, with or without changes, as a temporary authorization having a term of up to one hundred eighty days; or

(e) Notify the permittee that the department will decide on the request within the next thirty days.

(2) If the department notifies the permittee of a thirty-day extension for a decision, the department must, no later than one hundred twenty days after receipt of the modification request:

(a) Approve the modification request with or without changes, and modify the permit accordingly;

(b) Deny the request; or

(c) Determine that the modification request must follow the procedures in subsection 3 of section 33-24-06-14 for class 3 modifications for the following reasons:

[1] There is significant public concern about the proposed modification; or

[2] The complex nature of the change requires the more extensive procedures of class 3.

- (d) Approve the request, with or without changes, as a temporary authorization having a term of up to one hundred eighty days.
- (3) If the department fails to make one of the decisions specified in paragraph 2 of subdivision f ~~of subsection 2~~ by the one hundred twentieth day after receipt of the modification request, the permittee is automatically authorized to conduct the activities described in the modification request for up to one hundred eighty days, without formal department action. The authorized activities must be conducted as described in the permit modification request and must be in compliance with all appropriate standards of section 33-24-06-16. If the department approves, with or without changes, or denies the modification request during the term of the temporary or automatic authorization provided for in paragraph 1, 2, or 3 of subdivision f ~~of subsection 2~~, such action cancels the temporary or automatic authorization.
- (4) The following applies:
- (a) In the case of an automatic authorization under paragraph 3 of subdivision f ~~of subsection 2~~, or a temporary authorization under subparagraph d of paragraph 1 of subdivision f ~~of subsection 2~~ or subparagraph d of paragraph 2, if the department has not made a final approval or denial of the modification request by the date fifty days prior to the end of the temporary or automatic authorization, the permittee must, within seven days of that time, send a notification to persons on the facility mailing list, and make a reasonable effort to notify other persons who submitted written comments on the modification request, that:
    - [1] The permittee has been authorized temporarily to conduct the activities described in the permit modification request; and
    - [2] Unless the department acts to give final approval or denial of the request by the end of the authorization period, the permittee will receive authorization to conduct such activities for the life of the permit.
  - (b) If the owner or operator fails to notify the public by the date specified in subparagraph a of paragraph 4 of subdivision f ~~of subsection 2~~, the effective date of the permanent authorization will be deferred until fifty days after the owner or operator notifies the public.

- (5) Except as provided in paragraph 7 of subdivision f of ~~subsection 2~~, if the department does not finally approve or deny a modification request before the end of the automatic or temporary authorization period or reclassify the modification as a class 3, the permittee is authorized to conduct the activities described in the permit modification request for the life of the permit unless modified later under section 33-24-06-12 or 33-24-06-14. The activities authorized under this paragraph must ~~by~~ be conducted as described in the permit modification request and must be in compliance with all appropriate standards of section 33-24-06-16.
  - (6) In making a decision to approve or deny a modification request including a decision to issue a temporary authorization or to reclassify a modification as a class 3, the department must consider all written comments submitted to the department during the public comment period and must respond in writing to all significant comments in the department's decision.
  - (7) With the written consent of the permittee, the department may extend, indefinitely or for a specified period, the time periods for final approval or denial of a modification request or for reclassifying a modification as a class 3.
9. The department may deny or change the terms of a class 2 permit modification request under paragraphs 1 through 3 of subdivision f of ~~subsection 2~~ for the following reasons:
- (1) Modification request is incomplete;
  - (2) The requested modification does not comply with the appropriate requirements of chapter 33-24-05 or other applicable requirements; or
  - (3) The conditions of the modification fail to protect human health and the environment.
- h. The permittee may perform any construction associated with a class 2 permit modification request beginning sixty days after the submission of the request unless the department establishes a later date for commencing construction and informs the permittee in writing before day sixty.

**3. Class 3 modifications.**

- a. For class 3 modifications listed in appendix I of this section, the permittee must submit a modification request to the department that:

- (1) Describes the exact change to be made to the permit conditions and supporting documents referenced by the permit;
  - (2) Identifies that the modification is a class 3 modification;
  - (3) Explains why the modification is needed; and
  - (4) Provides the applicable information required by section 33-24-06-17 and subsections 2, 3, and 4 of section 33-24-06-19.
- b. The permittee must send a notice of the modification request to all persons on the facility mailing list maintained by the department and to the appropriate units of state and local government as specified in section 33-24-07-06 and must publish this notice in a major local newspaper of general circulation. This notice must be mailed and published within seven days before or after the date of submission of the modification request, and the permittee must provide to the department evidence of the mailing and publication. The notice must include:
- (1) Announcement of a sixty-day comment period, and a name and address of a department contact to whom comments must be sent;
  - (2) Announcement of the date, time, and place for a public meeting on the modification request, in accordance with subdivision d of subsection 3 of section 33-24-06-14;
  - (3) Name and telephone number of the permittee's contact person;
  - (4) Name and telephone number of a department contact person;
  - (5) Location where copies of the modification request and any supporting documents can be viewed and copied; and
  - (6) The following statement: "The permittee's compliance history during the life of the permit being modified is available from the department contact person."
- c. The permittee must place a copy of the permit modification request and supporting documents in a location accessible to the public in the vicinity of the permitted facility.
- d. The permittee must hold a public meeting no earlier than fifteen days after the publication of the notice required in subdivision b of ~~subsection 3~~ and no later than fifteen days before the close of the

sixty-day comment period. The meeting must be held to the extent practicable in the vicinity of the permitted facility.

- e. The public must be provided at least sixty days to comment on modification requests. The comment period will begin on the date the permittee publishes the notice in the local newspaper. Comments should be submitted to the department contact identified in the notice.
- f. After the conclusion of the sixty-day comment period, the department must grant or deny the permit modification request according to the permit modification procedures of chapter 33-24-07. In addition, the department must consider and respond to all significant written comments received during the sixty-day comment period.

#### **4. Other modifications.**

- a. In the case of modifications not explicitly listed in appendix I of this section, the permittee may submit a class 3 modification request to the department, or the permittee may request a determination by the department that the modification should be reviewed and approved as a class 1 or class 2 modification. If the permittee requests that the modification be classified as a class 1 or 2 modification, the permittee must provide the department with the necessary information to support the requested classification.
- b. The department shall make the determination described in subdivision a of ~~subsection 4~~ as promptly as practicable. In determining the appropriate class for a specific modification, the department shall consider the similarity of the modification to other modifications codified in appendix I and the following criteria:
  - (1) Class 1 modifications apply to minor changes to keep the permit current with routine changes to the facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment. In the case of class 1 modifications, the department may require prior approval.
  - (2) Class 2 modifications apply to changes that are necessary to enable a permittee to respond, in a timely manner, to:
    - (a) Common variations in the types and quantities of the wastes managed under the facility permit;
    - (b) Technological advancement; and

(c) Changes necessary to comply with new regulations, where these changes can be implemented without substantially changing design specifications or management practices in the permit.

(3) Class 3 modifications substantially alter the facility or its operation.

**5. Temporary authorizations.**

a. Upon request of the permittee, the department may, without prior public notice and comment, grant the permittee a temporary authorization in accordance with this section. Temporary authorizations must have a term of not more than one hundred eighty days.

b. Temporary authorizations.

(1) The permittee may request a temporary authorization for:

(a) Any class 2 modification meeting the criteria of paragraph 2 of subdivision c of ~~subsection 5;~~ and

(b) Any class 3 modification that meets the criteria in subparagraph a or b of paragraph 2 of subdivision c; or that meets the criteria in subparagraphs c through e of paragraph 2 of subdivision c and provides improved management or treatment of a hazardous waste already listed in the facility permit.

(2) The temporary authorization request must include:

(a) A description of the activities to be conducted under the temporary authorization;

(b) An explanation of why the temporary authorization is necessary; and

(c) Sufficient information to ensure compliance with chapter 33-24-05 standards.

(3) The permittee must send a notice about the temporary authorization request to all persons on the facility mailing list maintained by the department and to appropriate units of state and local governments as specified in section 33-24-07-06. This notification must be made within seven days of submission of the authorization request.

- c. The department shall approve or deny the temporary authorization as quickly as practical. To issue a temporary authorization, the department must find:
  - (1) The authorized activities are in compliance with the standards of chapter 33-24-05.
  - (2) The temporary authorization is necessary to achieve one of the following objectives before action is likely to be taken on a modification request:
    - (a) To facilitate timely implementation of closure or corrective action activities;
    - (b) To allow treatment or storage in tanks or containers, or in containment buildings, in accordance with ~~chapter 33-24-05~~ sections 33-24-05-250 through 33-24-05-299;
    - (c) To prevent disruption of ongoing waste management activities;
    - (d) To enable the permittee to respond to sudden changes in the types or quantities of the wastes managed under the facility permit; or
    - (e) To facilitate other changes to protect human health and the environment.
- d. A temporary authorization may be issued for one additional term of up to one hundred eighty days provided that the permittee has requested a class 2 or 3 permit modification for the activity covered in the temporary authorization, and:
  - (1) The reissued temporary authorization constitutes the department's decision on a class 2 permit modification in accordance with subparagraph d of paragraph 1 of subdivision f of subsection 2 or subparagraph d of paragraph 2; or
  - (2) The department determines that the reissued temporary authorization involving a class 3 permit modification request is warranted to allow the authorized activities to continue while the modification procedures of subsection 3 are conducted.

**6. Public notice and appeals of permit modification decisions.**

- a. The department shall notify persons on the facility mailing list and appropriate units of state and local government within ten days

of any decision under this section to grant or deny a class 2 or 3 permit modification request. The department shall also notify such persons within ten days after an automatic authorization for a class 2 modification goes into effect under paragraph 3 or 5 of subdivision f of subsection 2 ~~of this section~~.

- b. The department's decision to grant or deny a class 2 or 3 permit modification request under this section may be appealed under the permit appeal procedures of section 33-24-07-14.
  - c. An automatic authorization that goes into effect under paragraph 3 or 5 of subdivision f of subsection 2 ~~of this section~~ may be appealed under the permit appeal procedure of section 33-24-07-14; however, the permittee may continue to conduct the activities pursuant to the automatic authorization until the appeal has been granted pursuant to subsection 3 of section 33-24-07-14, notwithstanding the provisions of subsection 2 of section 33-24-07-11.
- 7. Newly regulated wastes and units.**

- a. The permittee is authorized to continue to manage wastes listed or identified as hazardous under chapter 33-24-02 or to continue to manage hazardous waste in units newly regulated as hazardous waste management units if:
  - (1) The unit was in existence as a hazardous waste facility with respect to the newly listed or characterized waste or newly regulated waste management unit ~~on~~ of the effective date of the final rule listing or identifying the waste, or regulating the unit;
  - (2) The permittee submits a class 1 modification request on or before the date on which the waste or unit becomes subject to the new requirements;
  - (3) The permittee is in compliance with the applicable standards of subsection 5 of section 33-24-06-16 and ~~chapter 33-24-05 sections 33-24-05-191 through 33-24-05-249, 33-24-05-525 through 33-24-05-549, and 33-24-05-820 through 33-24-05-849;~~
  - (4) The permittee also submits a complete class 2 or 3 modification request within one hundred eighty days of the effective date of the rule listing or identifying the waste or subjecting the unit to hazardous waste management standards; and

- (5) In the case of land disposal units, the permittee certifies that each such unit is in compliance with all applicable ground water monitoring and financial responsibility requirements in ~~article 33-24~~ subsection 5 of section 33-24-06-16 on the date twelve months after the effective date of the rule identifying or listing the waste as hazardous or regulating the unit as a hazardous waste management unit. If the owner or operator fails to certify compliance with all these requirements, the owner or operator ~~shall~~ will lose authority to operate under this ~~chapter~~ subsection.
- b. New wastes or units added to a facility's permit under this section do not constitute expansions for the purpose of the twenty-five percent capacity expansion limit for class 2 modifications.
8. **Military hazardous waste munitions treatment and disposal.** The permittee is authorized to continue to accept waste military munitions notwithstanding any permit conditions barring the permittee from accepting offsite wastes, if:
- a. The facility was in existence as a hazardous waste facility, and the facility was already permitted to handle the waste military munitions, on the date when the waste military munitions became subject to hazardous waste regulatory requirements;
- b. On or before the date when the waste military munitions become subject to hazardous waste regulatory requirements, the permittee submits a class 1 modification request to remove or amend the permit provision restricting the receipt of offsite waste munitions; and
- c. The permittee submits a complete class 2 modification request within one hundred eighty days of the date when the waste military munitions became subject to hazardous waste regulatory requirements.
9. **Permit modification list.** The department must maintain a list of all approved permit modifications and must publish a notice once a year in a statewide newspaper that an updated list is available for review.
10. **Combustion facility changes to meet 40 CFR part 63 maximum achievable control technology standards.** The following procedures apply to hazardous waste combustion facility permit modifications requested under appendix I to this section, section L(9).
- a. Facility owners or operators must have complied with the notification of intent to comply (NIC) requirements of 40 CFR 63.1210 that was in effect prior to October 11, 2000 (see 40 CFR

part 63 revised as of July 1, 2000) in order to request a permit modification under this section.

- b. If the department does not approve or deny the requests within ninety days of receiving it, the request shall be deemed approved. The department may, at the department's discretion, extend this ninety-day deadline one time for up to thirty days by notifying the facility owner or operator.

**History:** Effective January 1, 1984; amended effective December 1, 1988; December 1, 1991; January 1, 1994; July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

**33-24-06-16. Operating status prior to final administrative disposition of the permit application.**

1. Qualifying for operating status prior to final administrative disposition of the permit application. Any person who owns or operates an existing hazardous waste management facility shall be treated as having been issued a permit to the extent that person has:
  - a. Complied with section 3010(a) of the Resource Conservation and Recovery Act by filing a notification of hazardous waste activity form with the department.
  - b. Complied with the requirements of subsections 7 and 8 of section 33-24-06-01 governing submission of part A of the application.
2. Failure to qualify for operating status prior to final administrative disposition of the permit application. If the department has reason to believe upon examination of a part A application that it fails to meet the requirements of subsection 1 of section 33-24-06-17, it shall notify the owner or operator in writing of the apparent deficiency. Such notice must specify the grounds for the department's belief that the application is deficient. The owner or operator has thirty days from receipt to respond to such a notification and to explain or cure the alleged deficiency in its part A application. If, after such notification and opportunity for response, the department determines that the application is deficient it may take appropriate enforcement action.
3. Coverage. During the period of operating status prior to final administrative disposition of the permit application, the facility may not:
  - a. Treat, store, or dispose of hazardous waste not specified in part A of the permit application;
  - b. Employ processes not specified in part A of the permit application;  
or

- c. Exceed the design capacities specified in part A of the permit application.
- 4. Changes during operating status prior to final administrative disposition of the permit application.
  - a. New hazardous waste not previously identified in part A of the permit application may be treated, stored, or disposed of at a facility if the owner or operator submits a revised part A of the permit application prior to such a change.
  - b. Increases in the design capacity of processes used at a facility may be made if the owner or operator submits a revised part A of the permit application prior to such a change (along with a justification explaining the need for the change) and the department approves the change because of a lack of available treatment, storage, or disposal capacity at other hazardous waste management facilities, or the change is necessary to comply with federal, state, or local requirements.
  - c. Changes in the processes for the treatment, storage, or disposal of hazardous waste may be made at a facility or additional processes may be added if the owner or operator submits a revised part A of the permit application prior to such a change (along with a justification explaining the need for the change) and the department approves the change because:
    - (1) It is necessary to prevent a threat to human health or the environment because of an emergency situation; or
    - (2) It is necessary to comply with federal, state, or local laws or regulations.
  - d. Changes in the ownership or operational control of a facility may be made if the new owner or operator submits a revised part A permit application no later than ninety days prior to the scheduled change. When a transfer of ownership or operational control of a facility occurs, the old owner or operator shall comply with the requirements of sections 33-24-05-74 through 33-24-05-88 (financial requirements), until the new owner or operator has demonstrated to the department that the owner or operator is complying with the requirements of sections 33-24-05-74 through 33-24-05-88. The new owner or operator must demonstrate compliance with sections 33-24-05-74 through 33-24-05-88 within six months of the date of the change in the ownership or operational control of the facility. Upon demonstration to the department by the new owner or operator of compliance with sections 33-24-05-74 through 33-24-05-88, the department shall notify the old owner or operator in writing that the owner or operator no longer needs to

comply with sections 33-24-05-74 through 33-24-05-88 as of the date of demonstration. All other duties concerning operating status prior to final administrative disposition of the permit application are transferred effective immediately upon the date of the change of ownership or operational control of the facility.

- e. In no event may changes be made to a hazardous waste facility during operating status prior to final administrative disposition of the permit application which amounts to reconstruction of the facility. Reconstruction occurs when the capital investment and the changes to the facility exceed fifty percent of the capital cost of a comparable entirely new hazardous waste management facility. Changes prohibited under this section do not include changes to treat or store in containers, tanks, or containment buildings hazardous waste subject to land disposal restrictions imposed by sections 33-24-05-250 through 33-24-05-299 or Resource Conservation and Recovery Act section 3004, provided that such changes are made solely for the purpose of complying with sections 33-24-05-250 through 33-24-05-299 or Resource Conservation and Recovery Act section 3004.
  - f. Changes made in accordance with an interim status corrective action order issued by the department under state authority or by a court in a judicial action brought by the department. Changes under this subdivision are limited to the treatment, storage, or disposal of solid waste from releases that originate within the boundary of the facility.
- 5. During operating status prior to final administrative disposition of the permit application, owners or operators shall comply with the federal interim status standards, 40 CFR parts 265 and 270, effective March 1, 2003.
  - 6. Operating status prior to final administrative disposition of the permit application terminates when:
    - a. Final administrative disposition of a permit application, except an application for a remedial action plan under sections 33-24-06-30 through 33-24-06-35, is made; or
    - b. Operating status prior to final administrative disposition of the permit application is terminated as provided in paragraph 5 of subdivision a of subsection 7 of section 33-24-06-01.

7. Subsection 1 does not apply to any facility which has been previously denied a hazardous waste permit or if authority to operate the facility under article 33-24 has been previously terminated.

**History:** Effective January 1, 1984; amended effective October 1, 1986; December 1, 1988; December 1, 1991; January 1, 1994; July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

**33-24-06-17. Contents of a permit application.**

1. Part A of the application must include the following information:
  - a. The activities conducted by the applicant which require it to obtain a permit.
  - b. Name, mailing address, and location of the facility for which the application is submitted.
  - c. Up to four standard industrial codes which best reflect the principle principal products or services provided by the facility.
  - d. The operator's name, address, telephone number, ownership status and status as a federal, state, private, public, or other entity.
  - e. A listing of all permits or construction approvals at all governmental levels received or applied for under any of the following programs:
    - (1) Hazardous waste management program under the Resource Conservation and Recovery Act.
    - (2) Underground injection control program under the Safe Drinking Water Act.
    - (3) North Dakota pollutant discharge elimination system program under the Clean Water Act.
    - (4) Prevention of significant deterioration program under the Clean Air Act.
    - (5) Nonattainment program under the Clean Air Act.
    - (6) National emissions standards for hazardous air pollutants preconstruction approval under the Clean Air Act.
    - (7) Dredge or fill permits under section 404 of the Clean Water Act.

(8) Other relevant environmental permits.

- f. A topographic map (or other map if a topographic map is unavailable), extending one mile [1.61 kilometers] beyond the property boundaries of the source, depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant in the map area.
  - g. A brief description of the nature of the business.
  - h. The latitude and longitude of the facility.
  - i. The name, address, and telephone number of the owner of the facility.
  - j. An indication of whether the facility is new or existing and whether it is a first or revised application.
  - k. For existing facilities, a scale drawing of the facility showing the location of all past, present, and future treatment, storage, and disposal areas.
  - l. For existing facilities, photographs of the facility clearly delineating all existing structures; existing treatment, storage, and disposal areas; and types of future treatment, storage, and disposal areas.
  - m. A description of the processes to be used for treating, storing, and disposing of hazardous waste, and the design capacity of these items.
  - n. A specification of the hazardous wastes listed or designated under chapter 33-24-02 to be treated, stored, or disposed at the facility; an estimate of the quantity of such waste to be treated, stored, or disposed annually; and a general description of the processes to be used for such wastes.
  - o. For hazardous debris, a description of the debris categories and contaminant categories to be treated, stored, or disposed of at the facility.
2. The information requirements for part B of the permit application presented below reflect the standards in chapter 33-24-05. These information requirements are necessary in order for the department to determine compliance with chapter 33-24-05 standards. If owners and operators of hazardous waste management facilities can demonstrate that the information required for part B of the application cannot

be provided to the extent required, the department may make allowances for submission of such information on a case-by-case basis. Information required for part B of the application must be submitted to the department and signed in accordance with requirements in section 33-24-06-03. Certain technical data, such as design drawings and specifications, and engineering studies must be certified by a registered professional engineer. Part B of the application includes the following (information in subdivisions a through r is required for all hazardous waste management facilities except as section 33-24-05-01 provides otherwise; that in subdivisions s through y and hh is additional information required for specific types of facilities; and that in subdivisions z through gg is additional information regarding protection of ground water, and is required for surface impoundments, piles, land treatment units, and landfills, except as otherwise provided in subsection 2 of section 33-24-05-47):

- a. General description of the facility.
- b. Chemical and physical analyses of the hazardous waste and hazardous debris to be handled at the facility. At a minimum, these analyses must contain all the information which must be known to treat, store, or dispose of the wastes properly in accordance with chapter 33-24-05.
- c. A copy of the waste analysis plan required by subsection 2 of section 33-24-05-04 and, if applicable, subsection 3 of section 33-24-05-04.
- d. A description of the security procedures and equipment required by section 33-24-05-05, or a justification demonstrating the reason for requesting a waiver of this requirement.
- e. A copy of the general inspection schedule required by subsection 2 of section 33-24-05-06; include, where applicable, as part of the inspection schedule, specific requirements in section 33-24-05-93, subsection 9 of section 33-24-05-106, sections 33-24-05-108, 33-24-05-120, 33-24-05-132, 33-24-05-163, 33-24-05-178, 33-24-05-302, 33-24-05-403, 33-24-05-422, 33-24-05-423, 33-24-05-428, 33-24-05-454, 33-24-05-455, 33-24-05-456, and 33-24-05-458.
- f. A justification of any request for waivers of the preparedness and prevention requirements of sections 33-24-05-15 through 33-24-05-25.
- g. A copy of the contingency plan required by sections 33-24-05-26 through 33-24-05-36. Include, where applicable, as part of the contingency plan, specific requirements in sections 33-24-05-110 and 33-24-05-121.

- h. A description of procedures, structures, or equipment used at the facility to:

  - (1) Prevent hazards in unloading operations, for example, ramps and special forklifts;
  - (2) Prevent runoff from hazardous waste handling areas to other areas of the facility or environment, or to prevent flooding, for example, berms, dikes, and trenches;
  - (3) Prevent contamination of water supplies;
  - (4) Mitigate effects of equipment failure and power outages;
  - (5) Prevent undue exposure of personnel to hazardous waste (for example, protective clothing); and
  - (6) Prevent releases to atmosphere.
  
- i. A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with section 33-24-05-08, including documentation demonstrating compliance with subsection 3 of section 33-24-05-08.
  
- j. Traffic pattern, estimated volume (number, type of vehicles) and control, for example, show turns across traffic lanes and stacking lanes, if appropriate; describe access road, surfacing and load-bearing capacity; show traffic control signals.
  
- k. [Reserved]

  - l. An outline of both the introductory and continuing programs by owners or operators to prepare persons to operate and maintain a hazardous waste management facility in a safe manner as required to demonstrate compliance with section 33-24-05-07. A brief description of how training will be designed to meet actual job tasks in accordance with requirements in subdivision c of subsection 1 of section 33-24-05-07.
  
- m. A copy of the closure plan and where applicable, the postclosure plan required by sections 33-24-05-61, 33-24-05-67, and 33-24-05-110. Include, where applicable, as part of the plans, specific requirements in sections 33-24-05-97, 33-24-05-110, 33-24-05-122, 33-24-05-135, 33-24-05-151, 33-24-05-167, 33-24-05-180, 33-24-05-301, and 33-24-05-303.

- n. For hazardous waste disposal units that have been closed, documentation that notices required under section 33-24-05-68 have been filed.
- o. The most recent closure and, where applicable, postclosure cost estimate for the facility prepared in accordance with section 33-24-05-76 and a copy of the documentation required to demonstrate financial assurance under section 33-24-05-77. For a new facility, a copy of the required documentation may be submitted sixty days prior to the initial receipt of hazardous waste, if that is later than the submission of the part B application.
- p. Where applicable, a copy of the insurance policy or other documentation which comprises compliance with the requirements of section 33-24-05-79. For a new facility, documentation showing the amount of insurance meeting the specification of subsection 1, and subsection 2, if applicable, of section 33-24-05-79, that the owner or operator plans to have in effect before initial receipt of hazardous waste for treatment, storage, or disposal. A request for a variance in the amount of required coverage, for a new or existing facility, may be submitted as specified in subsection 3 of section 33-24-05-79.
- q. A topographic map showing a distance of one thousand feet [304.8 meters] around the facility at a scale of two and five-tenths centimeters [1 inch] equal to not more than sixty-one meters [200 feet]. (The department may allow the use of other scales on a case-by-case basis.) Contours must be shown on the map. The contour interval must be sufficient to clearly show the pattern of surface water flow in the vicinity of and from each operational unit of the facility. For example, contours with an interval of one and five-tenths meters [5 feet], if relief is greater than six and one-tenth meters [20 feet], or an interval of six-tenths meter [2 feet], if relief is less than six and one-tenth meters [20 feet]. Owners and operators of hazardous waste management facilities located in mountainous areas should use larger contour intervals to adequately show topographic profiles of the facilities. The map must clearly show the following:
  - (1) Map scale and date.
  - (2) One hundred-year floodplain area.
  - (3) Surface waters including intermittent streams.
  - (4) Surrounding land uses (residential, commercial, agricultural, recreational).

- (5) A wind rose, for example, prevailing wind speed and direction.
  - (6) Orientation of the map (north arrow).
  - (7) Legal boundaries of the hazardous waste management facility site.
  - (8) Access control (fences, gates).
  - (9) Injection and withdrawal wells, both onsite and offsite.
  - (10) Buildings; treatment, storage, or disposal operations; or other structures (recreation areas, runoff control systems, access and internal roads, storm, sanitary, and processed sewerage systems, loading and unloading areas, fire control facilities, etc.).
  - (11) Barriers for drainage or flood control.
  - (12) Location of operational units within the hazardous waste management facility site, where hazardous waste is (or will be) treated, stored, or disposed (include equipment cleanup areas).
- r. Applicants may be required to submit such information as may be necessary to enable the department to carry out its duties under federal or other state laws as required in section 33-24-06-09.
- s. For facilities that store containers of hazardous waste, except as otherwise provided in section 33-24-05-89:
- (1) A description of the containment system to demonstrate compliance with section 33-24-05-94. Show at least the following:
    - (a) Basic design parameters, dimensions, and materials of construction.
    - (b) How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system.
    - (c) Capacity of the containment system relative to the number and volume of containers to be stored.
    - (d) Provisions for preventing or managing run-on.

- (e) How accumulated liquids can be analyzed and removed to prevent overflow.
  - (2) For storage areas that store containers holding wastes that do not contain free liquids, a demonstration of compliance with subsection 3 of section 33-24-05-94, including:
    - (a) Test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and
    - (b) A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids.
  - (3) Sketches, drawings, or data demonstrating compliance with section 33-24-05-95 (location of buffer zone and containers holding ignitable or reactive wastes) and subsection 3 of section 33-24-05-96 (location of incompatible wastes), where applicable.
  - (4) Where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with subsections 1 and 2 of section 33-24-05-96 and subsections 2 and 3 of section 33-24-05-08.
  - (5) Information on air emission control equipment as required in subdivision hh.
- t. Except as otherwise provided in section 33-24-05-103, owners and operators of facilities that use tanks to store or treat hazardous waste shall provide the following additional information:
  - (1) A written assessment that is reviewed and certified by an independent, qualified, registered professional engineer to the structural integrity and suitability for handling hazardous waste of each tank system, as required under sections 33-24-05-104 and 33-24-05-105;
  - (2) Dimensions and capacity of each tank;
  - (3) Description of feed systems, safety cutoff, bypass systems, and pressure controls, for example, vents;
  - (4) A diagram of piping, instrumentation, and process flow for each tank system;

- (5) A description of materials and equipment used to provide external corrosion protection, as required under paragraph 2 of subdivision c of subsection 1 of section 33-24-05-105;
  - (6) For new tank systems, a detailed description of how the tank systems will be installed in compliance with subsections 2, 3, 4, and 5 of section 33-24-05-105;
  - (7) Detailed plans and description of how the secondary containment system for each tank system is or will be designed, constructed, and operated to meet the requirements of subsections 1, 2, 3, 4, 5, and 6 of section 33-24-05-106;
  - (8) For tank systems for which a variance from the requirements of section 33-24-05-106 is sought (as provided by subsection 7 of section 33-24-05-106):
    - (a) Detailed plans and engineering and hydrogeologic reports, as appropriate, describe alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous waste or hazardous constituents into the ground water or surface water during the life of the facility; or
    - (b) A detailed assessment of the substantial present or potential hazards posed to human health or the environment should a release enter the environment;
  - (9) Description of controls and practices to prevent spills and overflows, as required under subsection 2 of section 33-24-05-107; ~~and~~
  - (10) For tank systems in which ignitable, reactive, or incompatible wastes are to be stored or treated, a description of how operating procedures and tank system and facility design will achieve compliance with the requirements of sections 33-24-05-111 and 33-24-05-112; ~~and~~
  - (11) Information on air emission control equipment as required in subdivision hh.
- u. For facilities that store, treat, or dispose of hazardous waste in surface impoundments, except as otherwise provided in section 33-24-05-01:
- (1) A list of the hazardous wastes placed or to be placed in each surface impoundment.

- (2) Detailed plans and an engineering report describing how the surface impoundment is designed and is or will be constructed, operated, and maintained to meet the requirements of sections 33-24-05-10, 33-24-05-119, 33-24-05-126, and 33-24-05-127. This submission must address the following items as specified in those sections.
- (a) ~~The liner system (except for an existing portion of a surface impoundment). Submit detailed plans and an engineering report explaining the location of the saturated zone in relation to the surface impoundment, and the design of the double-liner system that incorporates a leak detection system between the liners. If an exemption from the requirement for a liner system is sought as provided by subsection 2 of section 33-24-05-119, submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time. If an exemption is sought from the design and operating requirements for an existing portion of the surface impoundment as provided by subsection 3 of section 33-24-05-119, the owner or operator shall submit detailed plans and engineering and hydrogeologic reports as appropriate, describing how the existing design and operating practices, together with the location of the facility will prevent migration of any hazardous constituents into the ground water or surface water during the active life of the facility (for impoundments to be closed in accordance with subdivision a of subsection 1 of section 33-24-05-122), or the active life and the postclosure care period (for impoundments to be closed in accordance with subdivision b of subsection 1 of section 33-24-05-122).~~
- (b) The double liner and leak (leachate) detection, collection, and removal system, if the surface impoundment must meet the requirements of subsection 3 of section 33-24-05-119. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by subsections 4, 5, or 6 of section 33-24-05-119, submit appropriate information.
- (c) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report

explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system.

- (d) The construction quality assurance (CQA) plan if required under section 33-24-05-10.
  - (e) Proposed action leakage rate, with rationale, if required under section 33-24-05-126, and response action plan, if required under section 33-24-05-127.
  - (f) Prevention of overtopping.
  - (g) Structural integrity of dikes.
- (3) A description of how each surface impoundment, including the double liner system, leak detection system, cover system, and appurtenances for control of overtopping will be inspected in order to meet the requirements of subsections 1, 2, and 4 of section 33-24-05-120. This information must be included in the inspection plan submitted under subdivision e of subsection 2 of this section.
- (4) A certification by a qualified engineer which attests to the structural integrity of each dike as required under subsection 3 of section 33-24-05-120. For new units, the owner or operator must submit a statement by a qualified engineer that the engineer will provide such a certification upon completion of construction in accordance with the plans and specifications.
- (5) A description of the procedure to be used for removing a surface impoundment from service as required under subsections 2 and 3 of section 33-24-05-121. This information should be included in the contingency plan submitted under subdivision g of subsection 2 of this section.
- (6) A description of how hazardous waste residues and contaminated materials will be removed from the unit at closure as required under subdivision a of subsection 1 of section 33-24-05-122. For any wastes not to be removed from the unit upon closure, the owner or operator shall submit detailed plans and an engineering report describing how subsection 2 and subdivision b of subsection 1 of section 33-24-05-122 will be complied with. This information should be included in the closure plan and where applicable, the postclosure plan submitted under subdivision m of subsection 2 of this section.

- (7) If ignitable or reactive wastes are to be placed in a surface impoundment, an explanation of how section 33-24-05-123 will be complied with.
  - (8) If incompatible wastes or incompatible wastes and materials will be placed in the surface impoundment, an explanation of how section 33-24-05-124 will be complied with.
  - (9) A waste management plan for hazardous wastes F020, F021, F022, F023, F026, and F027 describing how the surface impoundment is or will be designed, constructed, operated, and maintained to meet the requirements of section 33-24-05-125. This submission must address the following items as specified in section 33-24-05-125:
    - (a) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere.
    - (b) The attenuative properties of underlying and surrounding soils or other materials.
    - (c) The mobilizing properties of other materials codisposed with these wastes.
    - (d) The effectiveness of additional treatment, design, or monitoring techniques.
  - (10) Information on air emission control equipment as required in subdivision hh.
- v. For facilities that treat or store hazardous waste in waste piles, except as otherwise provided in section 33-24-05-01:
- (1) A list of hazardous wastes placed, or to be placed, in each waste pile.
  - (2) If an exemption is sought to section 33-24-05-131 and sections 33-24-05-47 through 33-24-05-58, as provided by subsection 3 of section 33-24-05-130 or subdivision b of subsection 2 of section 33-24-05-47, an explanation of how the requirements of subsection 3 of section 33-24-05-130 will be complied with or detailed plans and an engineering report describing how the requirements of subdivision b of subsection 2 of section 33-24-05-47 will be met.
  - (3) Detailed plans and an engineering report describing how the waste pile is designed and is or will be constructed, operated, and maintained to meet the requirements of

sections 33-24-05-10, 33-24-05-131, 33-24-05-137, and 33-24-05-138. This submission must address the following items as specified in those sections:

(a) The liner system.

- [1] The liner system (except for an existing portion of a waste pile), if the waste pile must meet the requirements of subsection 1 of section 33-24-05-131. If an exemption from the requirement for a liner is sought as provided by subsection 2 of section 33-24-05-131, submit detailed plans, and engineering and hydrogeological reports, as appropriate, describing alternate designs and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;
- [2] The double liner and leak (leachate) detection, collection, and removal system, if the waste pile must meet the requirements of subsection 3 of section 33-24-05-131. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by subsection 4, 5, or 6 of section 33-24-05-131, submit appropriate information;
- [3] If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;
- [4] The construction quality assurance (CQA) plan if required under section 33-24-05-10; and
- [5] Proposed action leakage rate, with rationale, if required under section 33-24-05-137, and response action plan, if required under section 33-24-05-138.

(b) Control of run-on.

(c) Control of runoff.

- (d) Management of collection and holding units associated with run-on and runoff control systems.
  - (e) Control of wind dispersal of particulate matter, where applicable.
- (4) A description of how each waste pile, including the double liner system, leachate collection and removal system, leak detection system, cover system, and appurtenances for control of run-on and runoff, will be inspected in order to meet the requirements of subsections 1, 2, and 3 of section 33-24-05-132. This information must be included in the inspection plan submitted under subdivision e of subsection 2 ~~of this section~~.
  - (5) If treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quality of the residuals.
  - (6) If ignitable or reactive wastes are to be placed in a waste pile, an explanation of how the requirements of section 33-24-05-133 will be complied with.
  - (7) If incompatible wastes or incompatible wastes and materials will be placed in a waste pile, an explanation of how section 33-24-05-134 will be complied with.
  - (8) A description of how hazardous waste residues and contaminated materials will be removed from the waste pile at the closure, as required under subsection 1 of section 33-24-05-135. For any wastes not to be removed from the waste pile upon closure, the owner or operator must submit detailed plans and an engineering report describing how subsections 1 and 2 of section 33-24-05-180 will be complied with. This information should be included in the closure plan and where applicable, the postclosure plan, submitted under subdivision m of subsection 2 ~~of this section~~.
  - (9) A waste management plan for hazardous wastes F020, F021, F022, F023, F026, and F027 describing how a waste pile that is not enclosed (as defined in subsection 3 of section 33-24-05-130) is or will be designed, constructed, operated, and maintained to meet the requirements of section 33-24-05-136. This submission must address the following items as specified in section 33-24-05-136:
    - (a) The volume, physical, and chemical characteristics of the wastes to be disposed in the waste pile, including

their potential to migrate through soil or to volatilize or escape into the atmosphere.

- (b) The attenuative properties of underlying and surrounding soils or other materials.
  - (c) The mobilizing properties of other materials codisposed with these wastes.
  - (d) The effectiveness of additional treatment, design, or monitoring techniques.
- w. For facilities that incinerate hazardous waste, except as section 33-24-05-144 and paragraph 5 provides otherwise, the applicant must fulfill the requirements of paragraph 1, 2, or 3.
- (1) When seeking an exemption in accordance with subsection 2 of section 33-24-05-144, submit a demonstration that the waste to be burned:
    - (a) Is hazardous (either listed in or fails the characteristic tests in chapter 33-24-02) solely because it is:
      - [1] Ignitable, or corrosive, or both; or
      - [2] Reactive for characteristics other than those in subdivisions d and e of subsection 1 of section 33-24-02-13, and will not be burned when other hazardous wastes are present in the combustion zone; and
    - (b) Contains insignificant concentrations of the hazardous constituents listed in appendix V of chapter 33-24-02.
  - (2) Submit a trial burn plan or the results of a trial burn, including all required determinations in accordance with subsection 2 of section 33-24-06-19.
  - (3) In lieu of a trial burn, the applicant may submit the following information:
    - (a) An analysis of each waste or mixture of wastes to be burned, including:
      - [1] Heat value of the waste in the form and composition in which it will be burned.
      - [2] Viscosity (if applicable), or description of physical form of the waste.

[3] An identification of any hazardous organic constituents listed in chapter 33-24-02, appendix V of this article which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in chapter 33-24-02, appendix V, of this article which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion stated. The waste analysis must rely on analytical techniques specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as incorporated by reference in section 33-24-01-05, or their equivalent.

[4] An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by the analytical methods specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as incorporated by reference in section 33-24-01-05.

[5] A quantification of those hazardous constituents in the waste which may be designated as ~~principle~~ principal organic hazardous constituents based on data submitted from the other trial or operational burns which demonstrate compliance with the performance standard in section 33-24-05-147.

(b) A detailed engineering description of the incinerator, including:

[1] Manufacturer's name and model number of incinerator.

[2] Type of incinerator.

[3] Linear dimension of incinerator unit including cross-sectional area of combustion chamber.

[4] Description of auxiliary fuel system (type/feed).

[5] Capacity of prime mover.

- [6] Description of automatic waste feed cutoff systems.
  - [7] Stack gas monitoring and pollution control monitoring system.
  - [8] Nozzle and burner design.
  - [9] Construction materials.
  - [10] Location and description and temperature, pressure, and flow indicating devices and control devices.
- (c) A description and analysis of the waste to be burned compared with the waste for which data from operational or trial burns are provided to support the contention that a trial burn is not needed. The data should include those items listed in subparagraph a ~~of paragraph 3 of subdivision w.~~ This analysis should specify the ~~principle~~ principal organic hazardous constituents which the applicant has identified in the waste for which a permit is sought and any differences from the ~~principle~~ principal organic hazardous constituents in the waste for which burn data are provided.
- (d) The design and operating conditions of the incinerator unit to be used, compared with that for which comparable burn data are available.
- (e) A description of the results submitted from any previously conducted trial burns, including:
- [1] Sampling and analysis techniques used to calculate performance standards in section 33-24-05-147.
  - [2] Methods and results of monitoring temperatures, waste feed rates, carbon monoxide, and an appropriate indicator of combustion gas velocity (including a statement concerning the precision and accuracy of this measurement).
  - [3] The certification and results required by paragraph 7 of subdivision b of subsection 2 of section 33-24-06-19.

- (f) The expected incinerator operation information to demonstrate compliance with sections 33-24-05-147 and 33-24-05-149, including:
    - [1] Expected carbon ~~monoxides~~ monoxide level in the stack exhaust gas.
    - [2] Waste feed rate.
    - [3] Combustion zone temperature.
    - [4] Indication of combustion gas velocity.
    - [5] Expected stack gas volume, flow rate, and temperature.
    - [6] Computed residence time for waste in the combustion zone.
    - [7] Expected hydrochloric acid removal efficiency.
    - [8] Expected fugitive emissions and their control procedures.
    - [9] Proposed waste feed cutoff limits based on the identified significant operating parameters.
  - (g) Such supplemental information as the department finds necessary to achieve the purposes of this subdivision.
  - (h) Waste analysis data, including that submitted in subparagraph a of ~~paragraph 3 of subdivision w,~~ sufficient to allow the department to specify as permit ~~principle~~ principal organic hazardous constituents those constituents for which destruction and removal efficiencies will be required.
- (4) The department shall approve a permit application without a trial burn if it finds that:
- (a) The wastes are sufficiently similar; and
  - (b) The incinerator units are sufficiently similar, and the data from other trial burns are adequate to specify (under section 33-24-05-149) operating conditions that will ensure that the performance standards in section 33-24-05-147 will be met.

(5) When an owner or operator demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (for example, by conducting a comprehensive performance test and submitting a notification of compliance), the requirements of this subdivision do not apply, except those provisions the department determines are necessary to ensure compliance with subsections 1 and 3 of section 33-24-06-100 if the permittee elects to comply with paragraph 1 of subdivision a of subsection 1 of section 33-24-06-100 to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the department may apply the provisions of this subdivision, on a case-by-case basis, for purposes of information collection in accordance with subsection 11 of section 33-24-06-01 and section 33-24-06-05.

x. For facilities that use land treatment to dispose of hazardous waste, except as otherwise provided in section 33-24-05-01:

(1) A description of plans to conduct a treatment demonstration as required under section 33-24-05-162. The description must include the following information:

(a) The wastes for which the demonstration will be made and the potential hazardous constituents in the waste.

(b) The data sources to be used to make the demonstration, for example, literature, laboratory data, field data, or operating data.

(c) Any specific laboratory or field test that will be conducted, including:

[1] The type of test, for example, column leaching, degradation.

[2] Materials and methods, including analytical procedures.

[3] Expected time for completion.

[4] Characteristics of the unit that will be simulated in the demonstration, including treatment zone characteristics, climatic conditions, and operating practices.

- (2) A description of a land treatment program as required under section 33-24-05-161. This information must be submitted with the plans for the treatment demonstration and updated following the treatment demonstration. The land treatment program must address the following items:
- (a) The wastes to be land treated.
  - (b) Design measures and operating practices necessary to maximize treatment in accordance with subsection 1 of section 33-24-05-163, including:
    - [1] Waste application method and rate.
    - [2] Measures to control soil pH.
    - [3] Enhancement of microbial or chemical reactions.
    - [4] Control of moisture content.
  - (c) Provisions for unsaturated zone monitoring, including:
    - [1] Sampling equipment, procedures, and frequency.
    - [2] Procedures for selecting sampling locations.
    - [3] Analytical procedures.
    - [4] Chain of custody control.
    - [5] Procedures for establishing background values.
    - [6] Statistical methods for interpreting results.
    - [7] Justification for any hazardous constituents recommended for selection as ~~principle~~ principal hazardous constituents in accordance with the criteria for such selection in subsection 1 of section 33-24-05-165.
  - (d) A list of hazardous constituents reasonably expected to be in, or derived from, the waste to be land treated based on waste analysis performed pursuant to section 33-24-05-04.
  - (e) The proposed dimensions of the treatment zone.
- (3) A description of how the unit is, or will be designed, constructed, operated, and maintained in order to meet the

requirements of section 33-24-05-163. This submission must address the following items:

- (a) Control of run-on.
  - (b) Collection and control of runoff.
  - (c) Minimization of runoff of hazardous constituents from the treatment zone.
  - (d) Management of collection and holding facilities associated with run-on and runoff control systems.
  - (e) Periodic inspection of the unit. This information should be included in the inspection plan submitted under subdivision e.
  - (f) Control of wind dispersal of particulate matter, if applicable.
- (4) If food chain crops are to be grown in or on the treatment zone of the land treatment unit, a description of how the demonstration required under subsection 1 of section 33-24-05-164 will be conducted, including:
- (a) Characteristics of the food chain crop for which the demonstration will be made.
  - (b) Characteristics of the waste treatment zone and waste application method and rate to be used in the demonstration.
  - (c) Procedures for crop growth, sample collection, sample analysis, and data evaluation.
  - (d) Characteristics of the comparison crop, including the location and conditions under which it was or will be grown.
- (5) If food chain crops are to be grown and cadmium is present in the land treated waste, a description of how the requirements of subsection 5 of section 33-24-05-164 will be complied with.
- (6) A description of the vegetative cover to be applied to closed portions of the facility and a plan for maintaining such cover during the postclosure care period as required under subdivision h of subsection 1 and subdivision b of subsection 3 of section 33-24-05-167. This information

should be included in the closure plan and where applicable, the postclosure care plan submitted under subdivision m.

- (7) If ignitable or reactive wastes will be placed in or on the treatment zone, an explanation of how the requirements of section 33-24-05-168 will be complied with.
- (8) If incompatible wastes or incompatible wastes or materials will be placed in or on the same treatment zone, an explanation of how section 33-24-05-169 will be complied with.
- (9) A waste management plan for hazardous wastes F020, F021, F022, F023, F026, and F027 describing how a land treatment facility is or will be designed, constructed, operated, and maintained to meet the requirements of section 33-24-05-170. This submission must address the following items as specified in section 33-24-05-170:
  - (a) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere.
  - (b) The attenuative properties of underlying and surrounding soils or other materials.
  - (c) The mobilizing properties of other materials codisposed with these wastes.
  - (d) The effectiveness of additional treatment, design, or monitoring techniques.

y. For facilities that dispose of hazardous waste in landfills, except as otherwise provided in section 33-24-05-01:

- (1) A list of the hazardous wastes placed or to be placed in each landfill or landfill cell.
- (2) Detailed plans and an engineering report describing how the landfill is designed and is or will be constructed, operated, and maintained to comply with the requirements of sections 33-24-05-10, 33-24-05-177, 33-24-05-178, and 33-24-05-187. This submission must address the following items as specified in those sections:
  - (a) The liner system.

[1] The liner system (except for an existing portion of a landfill), if the landfill must meet

the requirements of subsection 1 of section 33-24-05-177. If an exemption from the requirement for a liner is sought as provided by subsection 2 of section 33-24-05-177, submit detailed plans, and engineering and hydrogeological reports, as appropriate, describing alternate designs and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;

- [2] The double liner and leak (leachate) detection, collection, and removal system, if the landfill must meet the requirements of subsection 3 of section 33-24-05-177. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by subsections 4, 5, or 6 of section 33-24-05-177, submit appropriate information;
  - [3] If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;
  - [4] The construction quality assurance (CQA) plan if required under section 33-24-05-10; and
  - [5] Proposed action leakage rate, with rationale, if required under section 33-24-05-187, and response action plan, if required under section 33-24-05-178; and
- (b) Control of run-on.
  - (c) Control of runoff.
  - (d) Management of collection and holding facilities associated with run-on and runoff control systems.
  - (e) Control of wind dispersal of particulate matter where applicable.
- (3) A description of how each landfill, including the double liner system, leachate collection and removal system, leak

detection system, cover system, and appurtenances for control of run-on and runoff, will be inspected in order to meet the requirements of subsections 1, 2, and 3 of section 33-24-05-178. This information must be included in the inspection plan submitted under subdivision e of ~~subsection 2~~.

- (4) A description of how each landfill, including the liner and cover systems will be inspected in order to meet the requirements of subsections 1 and 2 of section 33-24-05-178. This information should be included in the inspection plan submitted under subdivision e.
- (5) Detailed plans and an engineering report describing the final cover which will be applied to each landfill or landfill cell at closure in accordance with subsection 1 of section 33-24-05-180 and a description of how each landfill will be maintained and monitored after closure in accordance with subsection 2 of that section 33-24-05-180. This information should be included in the closure and postclosure plans submitted under subdivision m.
- (6) If ignitable or reactive wastes will be landfilled, an explanation of how the requirements of section 33-24-05-181 will be complied with.
- (7) If incompatible wastes or incompatible wastes and materials will be landfilled, an explanation of how section 33-24-05-182 will be complied with.
- (8) If containers of hazardous waste are to be landfilled, an explanation of how the requirements of section 33-24-05-184 or 33-24-05-185, as applicable, will be complied with.
- (9) A waste management plan for hazardous wastes F020, F021, F022, F023, F026, and F027 describing how a landfill is or will be designed, constructed, operated, and maintained to meet the requirements of section 33-24-05-186. This submission must address the following items as specified in section 33-24-05-186:
  - (a) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere.
  - (b) The attenuative properties of underlying and surrounding soils or other materials.

- (c) The mobilizing properties of other materials codisposed with these wastes.
- (d) The effectiveness of additional treatment, design, or monitoring techniques.

**z. [Reserved]**

- aa.** For land disposal facilities, if a case-by-case extension has been approved under section 33-24-05-254 or a petition has been approved under section 33-24-05-255, a copy of the notice of approval for the extension or petition is required.
- bb.** Except as otherwise provided in section 33-24-05-300, owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units must provide the following additional information:
  - (1) A detailed description of the unit being used or proposed for use, including the following:
    - (a) Physical characteristics, materials of construction, and dimensions of the unit;
    - (b) Detailed plans and engineering reports describing how the unit will be located, designed, constructed, operated, maintained, monitored, inspected, and closed to comply with the requirements of sections 33-24-05-301 and 33-24-05-302; and
    - (c) For disposal units, a detailed description of the plans to comply with the postclosure requirements of section 33-24-05-303.
  - (2) Detailed hydrologic, geologic, and meteorologic assessments and land use maps for the region surrounding the site that address and ensure compliance of the unit with each factor in the environmental performance standards of section 33-24-05-301. If the applicant can demonstrate that the applicant does not violate the environmental performance standards of section 33-24-05-301 and the department agrees with such demonstration, preliminary hydrologic, geologic, and meteorologic assessments will suffice.
  - (3) Information on the potential pathways of exposure of humans or environmental receptors to hazardous waste or hazardous constituents and on the potential magnitude and nature of such exposures.

- (4) For any treatment unit, a report on a demonstration of the effectiveness of the treatment based on laboratory or field data.
  - (5) Any additional information determined by the department to be necessary for evaluation of compliance of the unit with the environmental performance standards of section 33-24-05-301.
- cc. Except as otherwise provided in section 33-24-05-01, owners and operators of facilities that have process vents to which sections 33-24-05-400 through 33-24-05-419 apply must provide the following additional information:
- (1) For facilities that cannot install a closed-vent system and control device to comply with the provisions of sections 33-24-05-400 through 33-24-05-419 on the effective date that the facility becomes subject to the provisions of these sections, an implementation schedule as specified in subdivision b of subsection 1 of section 33-24-05-403.
  - (2) Documentation of compliance with the process vent standards in section 33-24-05-402, including:
    - (a) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility, for example, the total emissions for all affected vents at the facility, and the approximate location within the facility of each affected unit, for example, identify the hazardous waste management units on a facility plot plan.
    - (b) Information and data supporting estimates of vent emissions and emission reduction achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, estimates of vent emissions and emission reductions must be made using operating parameter values, for example, temperatures, flow rates, or concentrations, that represent the conditions that exist when the waste management unit is operating at the highest load or capacity level reasonably expected to occur.
    - (c) Information and data used to determine whether or not a process vent is subject to the requirements of section 33-24-05-402.

(3) ~~Where~~ If an owner or operator applies for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with the requirements of section 33-24-05-402, and chooses to use the test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device, a performance test plan as specified in subdivision c of subsection 2 of section 33-24-05-405.

(4) Documentation of compliance with section 33-24-05-403, including:

(a) A list of all information references and sources used in preparing the documentation.

(b) Records, including the dates, of each compliance test required by subsection 11 of section 33-24-05-403.

(c) A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI course 415: control of gaseous emissions" (incorporated by reference as specified in section 33-24-01-05) or other engineering texts acceptable to the department that present basic control device design information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in paragraph 3 of subdivision d of subsection 2 of section 33-24-05-405.

(d) A statement signed and dated by the owner or operator certifying the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(e) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of ninety-five weight percent or greater unless the total organic emission limits of subsection 1 of section 33-24-05-402 for affected access vents at the facility can be attained by a control device involving vapor recovery at an efficiency level less than ninety-five weight percent.

dd. Except as otherwise provided in section 33-24-05-01, owners and operators of facilities that have equipment to which sections

33-24-05-420 through 33-24-05-449 apply must provide the following additional information:

- (1) For each piece of equipment to which sections 33-24-05-420 through 33-24-05-449 apply:
  - (a) Equipment identification number and hazardous waste management unit identification.
  - (b) Approximate locations within the facility, for example, identify the hazardous waste management unit on a facility plot plan.
  - (c) Type of equipment, for example, a pump or pipeline valve.
  - (d) Percent by weight total organics in the hazardous waste stream at the equipment.
  - (e) Hazardous waste state at the equipment, for example, gas or vapor or liquid.
  - (f) Method of compliance with the standard, for example, "monthly leak detection and repairs" or "equipped with dual mechanical seals".
- (2) For facilities that do not install a closed-vent system and control device to comply with the provisions of sections 33-24-05-420 through 33-24-05-449 on the effective date that the facility becomes subject to the provisions of these sections, an implementation schedule as specified in subdivision b of subsection 1 of section 33-24-05-403.
- (3) ~~Where~~ If an owner or operator applies for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, and chooses to use test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device, a performance test plan as specified in subdivision c of subsection 2 of section 33-24-05-405.
- (4) Documentation that demonstrates compliance with the equipment standards in sections 33-24-05-422 to 33-24-05-429. This documentation must contain the records required under section 33-24-05-434. The department may request further documentation before deciding if compliance has been demonstrated.

(5) Documentation to demonstrate compliance with section 33-24-05-430 must include the following information:

- (a) A list of all information references and sources used in preparing the documentation.
- (b) Records, including the dates, of each compliance test required by subsection 10 of section 33-24-05-403.
- (c) A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on appropriate sections of "ATPI course 415: control of gaseous emissions" (incorporated by reference as specified in section 33-24-01-05) or other engineering texts acceptable to the department that present basic control device design information. The design analysis should address the vent stream characteristics and control device operation parameters as specified in paragraph 3 of subdivision d of subsection 2 of section 33-24-05-405.
- (d) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur.
- (e) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of ninety-five weight percent or greater.

ee. Except as otherwise provided by section 33-24-05-01, owners and operators of hazardous waste treatment, storage, or disposal facilities that collect, store, or treat hazardous waste on drip pads must provide the following additional information:

- (1) A list of hazardous wastes placed or to be placed on each drip pad.
- (2) If an exemption is sought to sections 33-24-05-47 through 33-24-05-58, detailed plans and an engineering report describing how the requirements of subdivision b of subsection 2 of section 33-24-05-47 will be met.
- (3) Detailed plans and an engineering report describing how the drip pad is or will be designed, constructed, operated, and maintained to meet the requirements of section 33-24-05-504, including the ~~as-built~~ as-built drawings and

specifications. This submission must address the following items as specified in section 33-24-05-502:

- (a) The design characteristics of the drip pad;
- (b) The liner system;
- (c) The leakage detection system, including the leak detection system and how it is designed to detect the failure of the drip pad or the presence of any releases of hazardous waste or accumulated liquid at the earliest practicable time;
- (d) Practices designed to maintain drip pads;
- (e) The associated collection system;
- (f) Control of run-on to the drip pad;
- (g) Control of runoff from the drip pad;
- (h) The interval at which drippage and other materials will be removed from the associated collection system and a statement demonstrating that the interval will be sufficient to prevent overflow onto the drip pad;
- (i) Procedures for cleaning the drip pad at least once every seven days to ensure the removal of any accumulated residues of waste or other materials, including rinsing, washing with detergents or other appropriate solvents, or steam cleaning and provisions for documenting the date, time, and cleaning procedure used each time the pad is cleaned-;
- (j) Operating practices and procedures that will be followed to ensure that tracking of hazardous waste or waste constituents off the drip pad due to activities by personnel or equipment is minimized;
- (k) Procedures for ensuring that, after removal from the treatment vessel, treated wood from pressure and nonpressure processes is held on the drip pad until drippage has ceased, including recordkeeping practices;
- (l) Provisions for ensuring that collection and holding units associated with the run-on and runoff control systems are emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system;

- (m) If treatment is carried out on the drip pad, details of the process equipment used, and the nature and quality of the residuals-;
  - (n) A description of how each drip pad, including appurtenances for control of run-on and runoff, will be inspected in order to meet the requirements of section 33-24-05-504. This information should be included in the inspection plan submitted under subdivision e of subsection 2 of section 33-24-06-17-;
  - (o) A certification signed by an independent, qualified, registered professional engineer, stating that the drip pad design meets the requirements of subsections 1 through 6 of section 33-24-05-504-; and
  - (p) A description of how hazardous waste residues and contaminated materials will be removed from the drip pad at closure, as required under subsection 1 of section 33-24-05-506. For any waste not to be removed from the drip pad upon closure, the owner or operator must submit detailed plans and an engineering report describing how section 33-24-05-180 will be complied with. This information should be included in the closure plan and, where applicable, the postclosure plan submitted under subdivision m of subsection 2 of section 33-24-06-17.
- ff. When an owner or operator of a cement or lightweight aggregate kiln demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (for example, by conducting a comprehensive performance test and submitting a notification of compliance), the requirements of this subdivision do not apply, except those provisions the department determines are necessary to ensure compliance with subdivision a of subsection 5 of section 33-24-05-527 and paragraph 3 of subdivision b of subsection 5 of section 33-24-05-527 if the permittee elects to comply with paragraph 1 of subdivision a of subsection 1 of section 33-24-06-100 to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the department may apply the provisions of this subdivision, on a case-by-case basis, for purposes of information collection in accordance with subsection 11 of section 33-24-06-01 and section 33-24-06-05. Except as otherwise provided by section 33-24-05-01, owners and operators of hazardous waste treatment, storage, or disposal facilities that collect, store, or treat hazardous waste in boilers or industrial furnaces must provide the following additional information:

(1) Trial burns.

- (a) General. Except as provided below, owners and operators that are subject to the standards to control organic emissions provided by section 33-24-05-529, standards to control particulate matter provided by section 33-24-05-530, standards to control metals emissions provided by section 33-24-05-531, or standards to control hydrogen chloride or chlorine gas emissions provided by section 33-24-05-532 must conduct a trial burn to demonstrate conformance with those standards and must submit a trial burn plan or the results of a trial burn, including all required determinations, in accordance with subsection 4 of section 33-24-06-19.

[1] A trial burn to demonstrate conformance with a particular emission standard may be waived under provisions of sections 33-24-05-529 through 33-24-05-532 and subdivisions b through e of subsection 1; and

[2] The owner or operator may submit data in lieu of a trial burn, as prescribed in subdivision f of subsection 1.

- (b) Waiver of trial burn for destruction and removal efficiency.

[1] Boilers operated under special operating requirements. When seeking to be permitted under subdivision d of subsection 1 of section 33-24-05-529 and section 33-24-05-535 that automatically waive the destruction and removal efficiency trial burn, the owner or operator of a boiler must submit documentation that the boiler operates under the special operating requirements provided by section 33-24-05-535.

[2] Boilers and industrial furnaces burning low risk waste. When seeking to be permitted under the provisions for low risk waste provided by subdivision e of subsection 1 of section 33-24-05-529 and subsection 1 of section 33-24-05-534 that waive the destruction and removal efficiency trial burn, the owner or operator must submit:

- [a] Documentation that the device is operated in conformance with the requirements of subdivision a of subsection 1 of section 33-24-05-534.
- [b] Results of analyses of each waste to be burned, documenting the concentrations of nonmetal compounds listed in appendix V of chapter 33-24-02, except for those constituents that would reasonably not be expected to be in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion explained. The analysis must rely on analytical techniques specified in "Test Methods for the Evaluating Solid Waste, Physical/Chemical Methods" SW-846, as incorporated by reference in section 33-24-01-05.
- [c] Documentation of hazardous waste firing rates and calculations of reasonable, worst-case emission rates of each constituent identified in subparagraph b of paragraph 2 of subdivision b of subsection 1 using procedures provided by paragraph 2 of subdivision b of subsection 1 of section 33-24-05-534.
- [d] Results of emissions dispersion modeling for emissions identified in subparagraph c of paragraph 2 of subdivision b of subsection 1 using modeling procedures prescribed by subsection 8 of section 33-24-05-531. The department will review the emission modeling conducted by the applicant to determine conformance with these procedures. The department will either approve the modeling or determine that alternate or supplementary modeling is appropriate.
- [e] Documentation that the maximum annual average ground level concentration of each constituent identified in subparagraph b of paragraph 2 of subdivision b of subsection 1 quantified in conformance with subparagraph d of paragraph 2 of subdivision b of subsection 1 does

not exceed the allowable ambient level established in appendices XIX or XX of chapter 33-24-05. The acceptable ambient concentration for emitted constituents for which a specific reference air concentration has not been established in appendix XIX of chapter 33-24-05 or risk-specific dose has not been established in appendix XX of chapter 33-24-05 is 0.1 micrograms per cubic meter, as noted in the footnote to appendix XIX of chapter 33-24-05.

- (c) Waiver of trial burn for metals. When seeking to be permitted under the tier I (or adjusted tier I) metals feed rate screening limits provided by subsections 2 and 5 of section 33-24-05-531 that control metals emissions without requiring a trial burn, the owner or operator must submit:
- [1] Documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feedstocks;
  - [2] Documentation of the concentration of each metal controlled by subsection 2 or 5 of section 33-24-05-531 in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of each metal;
  - [3] Documentation of how the applicant will ensure that the tier I feed rate screening limits provided by subsection 2 or 5 of section 33-24-05-531 will not be exceeded during the averaging period provided by that ~~paragraph~~ subsection;
  - [4] Documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by subdivisions c through e of subsection 2 of section 33-24-05-531;
  - [5] Documentation of compliance with the provisions of subdivision f of subsection 2 of section 33-24-05-531, if applicable, for facilities with multiple stacks;
  - [6] Documentation that the facility does not fail the criteria provided by subdivision g of subsection 2

of section 33-24-05-531 for eligibility to comply with the screening limits; and

- [7] Proposed sampling and metals analysis plan for the hazardous waste, other fuels, and industrial furnace feedstocks.
- (d) Waiver of trial burn for particulate matter. When seeking to be permitted under the low risk waste provisions of subsection 2 of section 33-24-05-534 which waives the particulate standard (and trial burn to demonstrate conformance with the particulate standard), applicants must submit documentation supporting conformance with paragraph 2 of subdivision b of subsection 1 and subdivision c of subsection 1.
- (e) Waiver of trial burn for hydrogen chloride and chlorine. When seeking to be permitted under the tier I (or adjusted tier I) feed rate screening limits for total chloride and chlorine provided by subdivision a of subsection 2 and subsection 5 of section 33-24-05-532 that control emissions of hydrogen chloride and chlorine gas without requiring a trial burn, the owner or operator must submit:
- [1] Documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feedstocks;
  - [2] Documentation of the levels of total chloride and chlorine in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of total chloride and chlorine;
  - [3] Documentation of how the applicant will ensure that the tier I (or adjusted tier I) feed rate screening limits provided by subdivision a of subsection 2 or subsection 5 of section 33-24-05-532 will not be exceeded during the averaging period provided by that ~~paragraph~~ subsection;
  - [4] Documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by subdivision c of subsection 2 of section 33-24-05-532;
  - [5] Documentation of compliance with the provisions of subdivision d of subsection 2 of section

33-24-05-532, if applicable, for facilities with multiple stacks;

- [6] Documentation that the facility does not fail the criteria provided by subdivision c of subsection 2 of section 33-24-05-532 for eligibility to comply with the screening limits; and
  - [7] Proposed sampling and analysis plan for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks.
- (f) Data in lieu of trial burn. The owner or operator may seek an exemption from the trial burn requirements to demonstrate conformance with sections 33-24-05-529 through 33-24-05-532 and subsection 4 of section 33-24-06-19 by providing the information required by subsection 4 of section 33-24-06-19 from previous compliance testing of the device in conformance with section 33-24-05-528, or from compliance testing or trial or operational burns of similar boilers or industrial furnaces burning similar hazardous wastes under similar conditions. If data from a similar device is used to support a trial burn waiver, the design and operating information required by subsection 4 of section 33-24-06-19 must be provided for both the similar device and the device to which the data is to be applied, and a comparison of the design and operating information must be provided. The department shall approve a permit application without a trial burn if the department finds that the hazardous wastes are sufficiently similar, the devices are sufficiently similar, the operating conditions are sufficiently similar, and the data from other compliance tests, trial burns, or operational burns are adequate to specify (under section 33-24-05-527) operating conditions that will ensure conformance with subsection 3 of section 33-24-05-527. In addition, the following information shall be submitted:

[1] For a waiver from any trial burn:

- [a] A description and analysis of the hazardous waste to be burned compared with the hazardous waste for which data from compliance testing, or operational or trial burns are provided to support the contention that a trial burn is not needed;

[b] The design and operating conditions of the boiler or industrial furnace to be used, compared with that for which comparative burn data are available; and

[c] Such supplemental information as the department finds necessary to achieve the purposes of this ~~item~~ subparagraph.

[2] For a waiver of the destruction and removal efficiency trial burn, the basis for selection of ~~principle~~ principal organic hazardous constituents used in the other trial or operational burns which demonstrate compliance with the destruction and removal efficiency performance standard in subsection 1 of section 33-24-05-529. This analysis should specify the constituents in appendix V of chapter 33-24-02, that the applicant has identified in the hazardous waste for which a permit is sought, and any differences from the ~~principle~~ principal organic hazardous constituents in the hazardous waste for which burn data are provided.

(2) Alternative hydrocarbon limit for industrial furnaces with organic matter in raw materials. Owners and operators of industrial furnaces requesting an alternative hydrocarbon limit under subsection 6 of section 33-24-05-529 shall submit the following information at a minimum:

(a) Documentation that the furnace is designed and operated to minimize hydrocarbon emissions from fuels and raw materials;

(b) Documentation of the proposed baseline flue gas hydrocarbon (and carbon monoxide) concentration, including data on hydrocarbon (and carbon monoxide) levels during tests when the facility produced normal products under normal operating conditions from normal raw materials while burning normal fuels and when not burning hazardous waste;

(c) Test burn protocol to confirm the baseline hydrocarbon (and carbon monoxide) level, including information on the type and flow rate of all feed streams, point of introduction of all feed streams, total organic carbon content (or other appropriate measure of organic content) of all nonfuel feed streams, and operating conditions that affect combustion of fuels

and destruction of hydrocarbon emissions from nonfuel sources;

- (d) Trial burn plan to:
    - [1] Demonstrate that flue gas hydrocarbon (and carbon monoxide) concentrations when burning hazardous waste do not exceed the baseline hydrocarbon (and carbon monoxide) level; and
    - [2] Identify the types and concentrations of organic compounds listed in appendix V of chapter 33-24-02, that are emitted when burning hazardous waste in conformance with procedures prescribed by the department;
  - (e) Implementation plan to monitor over time changes in the operation of the facility that could reduce the baseline hydrocarbon level and procedures to periodically confirm the baseline hydrocarbon level; and
  - (f) Such other information as the department finds necessary to achieve the purposes of this paragraph.
- (3) Alternative metals implementation approach. When seeking to be permitted under an alternative metals implementation approach under subsection 6 of section 33-24-05-531, the owner or operator must submit documentation specifying how the approach ensures compliance with the metals emissions standards of subsection 3 or 4 of section 33-24-05-531 and how the approach can be effectively implemented and monitored. Further, the owner or operator shall provide such other information that the department finds necessary to achieve the purposes of this paragraph.
  - (4) Automatic waste feed cutoff system. Owners and operators shall submit information describing the automatic waste feed cutoff system, including any prealarm systems that may be used.
  - (5) Direct transfer. Owners and operators that use direct transfer operations to feed hazardous waste from transport vehicles (containers, as defined in section 33-24-05-536) directly to the boiler or industrial furnace shall submit information supporting conformance with the standards for direct transfer provided by section 33-24-05-536.

- (6) Residues. Owners and operators that claim that their residues are excluded from regulation under the provisions of section 33-24-05-537 must submit information adequate to demonstrate conformance with those provisions.
- gg. A summary of the preapplication meeting, along with a list of attendees and their addresses, and copies of any written comments or materials submitted at the meeting, as required under subsection 3 of section 33-24-07-25.
- hh. Except as otherwise provided in section 33-24-05-01, owners and operators of tanks, surface impoundments, or containers that use air emission controls in accordance with the requirements of sections 33-24-05-450 through 33-24-05-474 must provide the following additional information:
- (1) Documentation for each floating roof cover installed on a tank subject to subdivision a or b of subsection 4 of section 33-24-05-454 that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the applicable design specifications as listed in subdivision a of subsection 5 or subdivision a of subsection 6 of section 33-24-05-454.
  - (2) Identification of each container area subject to the requirements of sections 33-24-05-450 through 33-24-05-474 and certification by the owner or operator that the requirements of chapter 33-24-06 are met.
  - (3) Documentation for each enclosure used to control air pollutant emissions from tanks or containers in accordance with the requirements of subdivision e of subsection 4 of section 33-24-05-454 or paragraph 2 of subdivision a of subsection 5 of section 33-24-05-456 that includes records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.
  - (4) Documentation for each floating membrane cover installed on a surface impoundment in accordance with the requirements of subsection 3 of section 33-24-05-455 that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the

cover meets the specifications listed in subdivision a of subsection 3 of section 33-24-05-455.

- (5) Documentation for each closed-vent system and control device installed in accordance with the requirements of section 33-24-05-457 that includes design and performance information as specified in paragraphs 3 and 4 of subdivision cc.
  - (6) An emission monitoring plan for both method 21 in 40 CFR part 60, appendix A and control device monitoring methods. This plan shall include the following information: monitoring point or points, monitoring methods for control devices, monitoring frequency, procedures for documenting exceedances, and procedures for mitigating noncompliances.
  - (7) When an owner or operator of a facility subject to subpart CC of 40 CFR part 265 as incorporated by reference at subsection 5 of section 33-24-06-16 cannot comply with the requirements of sections 33-24-05-450 through 33-24-05-474 by the date of permit issuance, the schedule of implementation required under 40 CFR 265.1082 as incorporated by reference at subsection 5 of section 33-24-06-16 must be provided.
3. Additional information requirements. The following additional information regarding protection of ground water is required from owners or operators of hazardous waste facilities containing a regulated unit except as provided in subsection 2 of section 33-24-05-47.
- a. A summary of the ground water monitoring data obtained during the interim status period under section 33-24-06-16, where applicable.
  - b. Identification of the uppermost aquifer and aquifers hydrologically interconnected beneath the facility property, including ground water flow direction and rate, and the basis for such identification, for example, the information obtained from hydrogeologic investigations of the facility area.
  - c. On the topographic map required under subdivision q of subsection 2, a delineation of the waste management area, the property boundary, the proposed "point of compliance" as defined under section 33-24-05-52, the proposed location of ground water monitoring wells as required under section 33-24-05-54, and to the extent possible, the information required in subdivision b.

- d. A description of any plume of contamination that has entered the ground water from a regulated unit at the time that the application was submitted:
  - (1) Delineates the extent of the plume on the topographic map required under subdivision q of subsection 2; and
  - (2) Identifies the concentration of each appendix IX, of chapter 33-24-05, constituent throughout the plume or identifies the maximum concentrations of each appendix IX constituent in the plume.
- e. Detailed plans and an engineering report describing the proposed ground water monitoring program to be implemented to meet the requirements of section 33-24-05-54.
- f. If the presence of hazardous constituents has not been detected in the ground water at the time of permit application, the owner or operator must submit sufficient information, supporting data, and analysis to establish a detection monitoring program which meets the requirements of section 33-24-05-55. This submission must address the following items specified under section 33-24-05-55:
  - (1) A proposed list of indicator parameters, waste constituents, or reaction products that can provide a reliable indication of the presence of hazardous constituents in the ground water;
  - (2) A proposed ground water monitoring system;
  - (3) Background values for each proposed monitoring parameter or constituent, or procedures to calculate such values; and
  - (4) A description of proposed sampling, analysis, and statistical comparison procedures to be analyzed in evaluating ground water monitoring data.
- g. If the presence of hazardous constituents has been detected in the ground water at the point of compliance at the time of the permit application, the owner or operator must submit sufficient information, supporting data, and analysis to establish a compliance monitoring program which meets the requirements of section 33-24-05-56. Except as provided in subdivision e of subsection 8 of section 33-24-05-55, the owner or operator must also submit an engineering feasibility plan for a corrective action program necessary to meet the requirements of section 33-24-05-57 unless the owner or operator obtains a written authorization in advance from the department to submit a proposed permit schedule for submittal of such a plan. To

demonstrate compliance with section 33-24-05-56, the owner or operator must address the following items:

- (1) A description of the wastes previously handled at the facility;
  - (2) A characterization of the contaminated ground water, including concentrations of hazardous constituents;
  - (3) A list of hazardous constituents for which compliance monitoring will be undertaken in accordance with sections 33-24-05-54 and 33-24-05-56;
  - (4) Proposed concentration limits for each hazardous constituent, based on the criteria set forth in subsection 1 of section 33-24-05-51, including a justification for establishing any alternate concentration limit;
  - (5) Detailed plans and an engineering report describing the proposed ground water monitoring system, in accordance with the requirements of section 33-24-05-54; and
  - (6) A description of proposed sampling, analysis, and statistical comparison procedures to be utilized in evaluating ground water monitoring data.
- h. If hazardous constituents have been measured in the ground water which exceed the concentration limits established under section 33-24-05-51, table 1, or if ground water monitoring conducted at the time of permit application under sections 33-24-05-47 through 33-24-05-51 at the waste boundary indicates the presence of hazardous constituents from the facility in ground water over the background concentrations, the owner or operator must submit sufficient information, supporting data, and analysis to establish a corrective action program which meets the requirements of section 33-24-05-57. However, an owner or operator is not required to submit information to establish a corrective action program if he the owner or operator demonstrates to the department that alternate concentration limits will protect human health and the environment after considering the criteria listed in subsection 2 of section 33-24-05-51. An owner or operator who is not required to establish a corrective action program for this reason must instead submit sufficient information to establish a compliance monitoring program which meets the requirements of section 33-24-05-56 and subdivision f. To demonstrate compliance with section 33-24-05-57, the owner or operator must address, at a minimum, the following items:
- (1) A characterization of the contaminated ground water, including concentrations of hazardous constituents;

- (2) The concentration limit for each hazardous constituent found in the ground water as set forth in section 33-24-05-51;
- (3) Detailed plans and an engineering report describing the corrective action to be taken; and
- (4) A description of how the ground water monitoring program will demonstrate the adequacy of the corrective action.
- (5) The permit may contain a schedule for submittal of the information required in paragraphs 3 and 4 provided the owner or operator obtains written authorization from the department prior to submittal of the complete permit application.

4. Information requirements for solid waste management units.

- a. The following information is required for each solid waste management unit at a facility seeking a permit:
  - (1) The location of a unit on the topographic map required under subdivision g of subsection 2.
  - (2) Designation of type of unit.
  - (3) General dimensions and structural description (supply any available drawings).
  - (4) When the unit was operated.
  - (5) Specification of all wastes that have been managed at the unit to the extent available.
- b. The owner or operator of any facility containing one or more solid waste management units must submit all available information pertaining to any release of hazardous wastes or hazardous constituents from such unit or units.
- c. The owner or operator must conduct and provide the results of sampling and analysis of ground water, land surface, and subsurface strata, surface water, or air, which may include the installation of wells, where the department ascertains it is

necessary to complete a hazardous waste facility assessment that will determine if a more complete investigation is necessary.

**History:** Effective January 1, 1984; amended effective October 1, 1986; December 1, 1988; December 1, 1991; January 1, 1994; July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05, 23-20.3-09

**33-24-06-19. Special forms of permits.**

1. **Emergency permits.** Notwithstanding any other provisions of this chapter or chapter 33-24-07, if the department finds an imminent and substantial endangerment to human health or the environment, the department may issue a temporary emergency permit to a nonpermitted facility to allow treatment, storage, or disposal of hazardous waste or a permitted facility to allow treatment, storage, or disposal of a hazardous waste not covered by an effective permit. This emergency permit:
  - a. May be oral or written. If oral, it shall be followed in five days by a written emergency permit;
  - b. May not exceed ninety days in duration;
  - c. Must clearly specify the hazardous wastes to be received and the manner and location of their treatment, storage, or disposal;
  - d. May be terminated by the department at any time without process if it determines that termination is appropriate to protect human health and the environment;
  - e. Must be accompanied by a public notice published under subsection 4 of section 33-24-07-06, including:
    - (1) Name and address of the office granting the emergency authorization;
    - (2) Name and location of the permitted hazardous waste management facility;
    - (3) A brief description of the wastes involved;
    - (4) A brief description of the action authorized and reasons for authorizing it; and
    - (5) Duration of the emergency permit; and

- f. Must incorporate, to the extent possible and not inconsistent with the emergency situation, all applicable requirements of this chapter and chapter 33-24-05.

2. **Hazardous waste incinerator permits.** When an owner or operator demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (for example, by conducting a comprehensive performance test and submitting a notification of compliance), the requirements of this subsection do not apply, except those provisions the department determines are necessary to ensure compliance with subsections 1 and 3 of section 33-24-06-100 if the permittee elects to comply with paragraph 1 of subdivision a of subsection 1 of section 33-24-06-100 to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the department may apply the provisions of this subsection, on a case-by-case basis, for purposes of information collection in accordance with subsection 11 of section 33-24-06-01 and section 33-24-06-05.

- a. For the purposes of determining operational readiness following completion of physical construction, the department shall establish permit conditions, including, but not limited to, allowable waste feeds and operating conditions in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to bring the incinerator to a point of operational readiness sufficient to conduct a trial burn, not to exceed seven hundred twenty hours operating time for treatment of hazardous waste. The department may extend the duration of this operational period once for up to seven hundred twenty additional hours at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to section 33-24-06-14.

- (1) Applicants shall submit a statement with the permit application which suggests the conditions necessary to operate in compliance with the performance standards of section 33-24-05-147 during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates, and the operating parameters identified in section 33-24-05-149.

- (2) The department will review this statement and any other relevant information submitted with the permit application and specify requirements for this period sufficient to meet the performance standards of section 33-24-05-147 based on its engineering judgment.

- b. For the purposes of determining feasibility of compliance with the performance standards of section 33-24-05-147 and of determining

adequate operating conditions under section 33-24-05-149, the department shall establish conditions in the permit to a new hazardous waste incinerator to be effective during the trial burn.

- (1) Applicants must propose a trial burn plan prepared under paragraph 2 with the permit application.
- (2) The trial burn plan must include the following information:
  - (a) An analysis of each waste or mixture of wastes to be burned which includes:
    - [1] Heat value of the waste in the form and composition in which it will be burned.
    - [2] Viscosity (if applicable), or description of physical form of the waste.
    - [3] An identification of any hazardous organic constituents listed in chapter 33-24-02, appendix V, which are present in the wastes to be burned, except that the applicant need not analyze for constituents listed in chapter 33-24-02, appendix V, which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion stated. The waste analysis must rely on analytical techniques specified in "Test Methods for ~~the Evaluation of~~ Evaluating Solid Waste, Physical/Chemical Methods" SW-846, as incorporated by reference in section 33-24-01-05, or their equivalent.
    - [4] An approximate quantification of the hazardous constituents identified in the waste within the precision produced by the analytical methods specified in "Test Methods for ~~the Evaluation of~~ Evaluating Solid Waste, Physical/Chemical Methods" SW-846, as incorporated by reference in section 33-24-01-05, or their equivalent.
  - (b) A detailed engineering description of the incinerator for which the trial burn permit is sought, including:
    - [1] Manufacturer's name and model number of incinerator (if available).
    - [2] Type of incinerator.

- [3] Linear dimensions of the incinerator unit, including cross-sectional area of combustion chamber.
  - [4] Description of the auxiliary fuel system (type/feed).
  - [5] Capacity of prime mover.
  - [6] Description of automatic waste feed cutoff system or systems.
  - [7] Stack gas monitoring and pollution control equipment.
  - [8] Nozzle and burner design.
  - [9] Construction materials.
  - [10] Location and description of temperature, pressure, and flow indicating and control devices.
- (c) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.
  - (d) A detailed test schedule for each waste for which the trial burn is planned, including dates, duration, quantity of waste to be burned, and other factors relevant to the department's decision under paragraph 5.
  - (e) A detailed test protocol, including, for each waste identified, the ranges of temperature, waste feed rate, combustion gas velocity, use of auxiliary fuel, and any other relevant parameters that will be varied to affect the destruction and removal efficiency of the incinerator.
  - (f) A description of, and planned operating conditions for, any emission control equipment which will be used.
  - (g) Procedures for rapidly stopping waste feed, shutting down the incinerator, and controlling emissions in the event of an equipment malfunction.
  - (h) Such other information as the department reasonably finds necessary to determine whether to approve the

trial burn plan in light of the purposes of this paragraph and the criteria in paragraph 5.

- (3) In reviewing the trial burn plan, the department shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the purposes of this subsection.
- (4) Based on the waste analysis data in the trial burn plan, the department will specify as ~~trial principle~~ principal organic hazardous constituents those constituents for which destruction and removal efficiencies must be calculated during the trial burn. These ~~trial principle~~ principal organic hazardous constituents will be specified by the department based on its estimate of the difficulty of incineration of the constituents identified in the waste analysis, the concentration or mass in the waste feed, and, for wastes listed in chapter 33-24-02, the hazardous waste organic constituent or constituents identified in appendix IV of that chapter as the basis for listing.
- (5) The department shall approve a trial burn plan if it finds that:
  - (a) The trial burn is likely to determine whether the incinerator performance standard required by section 33-24-05-147 can be met;
  - (b) The trial burn itself will not present an imminent hazard to human health or the environment;
  - (c) The trial burn will help the department determine operating requirements to be specified under section 33-24-05-149; and
  - (d) The information sought in subparagraphs a and c cannot reasonably be developed through other means.
- (6) The department must send a notice to all persons on the facility mailing list as set forth in paragraph 4 of subdivision a of subsection 3 of section 33-24-07-06 and to the appropriate units of state and local government as set forth in subdivision b of subsection 3 of section 33-24-07-06 announcing the scheduled commencement and completion dates for the trial burn. The applicant may not commence the trial burn until after the department has issued such notice.
  - (a) This notice must be mailed within a reasonable time period before the scheduled trial burn. An additional notice is not required if the trial burn is delayed due to

circumstances beyond the control of the facility or the department.

- (b) This notice must contain:
  - [1] The name and telephone number of the applicant's contact person;
  - [2] The name and telephone number of the department's contact office;
  - [3] The location where the approved trial burn plan and any supporting documents can be reviewed and copied; and
  - [4] An expected time period for commencement and completion of the trial burn.
  
- (7) During each approved trial burn (or as soon after the burn as practicable), the applicant must make the following determinations:
  - (a) A quantitative analysis of the trial ~~principle~~ principal organic hazardous constituents in the waste feed to the incinerator.
  - (b) A quantitative analysis of the exhaust gas for the concentration and mass emissions of the trial ~~principle~~ principal organic hazardous constituents, oxygen, and hydrogen chloride.
  - (c) A quantitative analysis of the scrubber water (if any), ash residues, and other residues, for the purpose of estimating the fate of the trial ~~principle~~ principal organic hazardous constituents.
  - (d) A computation of destruction and removal efficiency, in accordance with the destruction and removal efficiency formula specified in subsection 1 of section 33-24-05-147.
  - (e) If the hydrogen chloride emission rate exceeds one and eight-tenths kilograms of hydrogen chloride per hour [4 pounds per hour], a computation of the hydrogen chloride removal efficiency in accordance with subsection 2 of section 33-24-05-147.
  - (f) A computation of particulate emissions, in accordance with subsection 3 of section 33-24-05-147.

- (g) An identification of sources of fugitive emissions and their means of control.
  - (h) A measurement of average, maximum, and minimum temperatures and combustion gas velocity.
  - (i) A continuous measurement of carbon monoxides in the exhaust gas.
  - (j) Such other information as the department may specify as necessary to ensure that the trial burn will determine compliance with the performance standard in section 33-24-05-147 and to establish the operating conditions required by section 33-24-05-149 as necessary to meet that performance standard.
- (8) The applicant shall submit to the department a certification that the trial burn has been carried out in accordance with the approved trial burn plan; and shall submit the results of all the determinations required in paragraph 6. This submission must be made within ninety days of the completion of the trial burn, or later if approved by the department.
  - (9) All data collected during any trial burn must be submitted to the department following the completion of the trial burn.
  - (10) All submissions required by this subsection must be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under section 33-24-06-03.
  - (11) Based on the results of the trial burn, the department shall set the operating requirements in the final permit according to section 33-24-05-149. The permit modification shall proceed according to section 33-24-06-14.
- c. For the purposes of allowing operation of a new hazardous waste incinerator following completion of the trial burn and prior to final modification of the permit conditions to reflect the trial burn results, the department may establish permit conditions including, but not limited to, allowable waste feeds and operating conditions sufficient to meet the requirements of section 33-24-05-149 in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to complete sample analysis, data computation, and submission of the trial burn results by the applicant, and modification of the facility permit by the department.

- (1) Applicants shall submit a statement with the permit application which identifies the conditions necessary to operate in compliance with the performance standards of section 33-24-05-147 during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates, and the operating parameters identified in section 33-24-05-149.
  - (2) The department will review this statement and any other relevant information submitted with the permit application and specify those requirements for this period most likely to meet the performance standards of section 33-24-05-147 based on its engineering judgment.
- d. For the purpose of determining feasibility of compliance with the performance standards of section 33-24-05-147 and of determining adequate operating conditions under section 33-24-05-149, the applicant for a permit for an existing hazardous waste incinerator must prepare and submit a trial burn plan and perform a trial burn in accordance with paragraph 2 of subdivision w of subsection 2 of section 33-24-06-17 and paragraphs 2 through 9 10 of subdivision b or, instead, submit other information as specified in paragraph 3 of subdivision w of subsection 2 of section 33-24-06-17. Applicants submitting information under paragraph 1 of subdivision w of subsection 2 of section 33-24-06-17 are exempt from compliance with sections 33-24-05-147 and 33-24-05-149 and, therefore, are exempt from the requirement to conduct a trial burn. Applicants who submit trial burn plans and receive approval before submission of a permit application must complete the trial burn and submit the results specified in paragraph 6 of subdivision b, with part B of the permit application. If completion of this process conflicts with the date set for submission of the part B application, the applicant must contact the department to establish a later date for submission of the part B application or the trial burn results. Trial burn results must be submitted prior to issuance of the permit. When the applicant submits a trial burn plan with part B of the permit application, the department will specify a time period prior to permit issuance in which the trial burn must be conducted and the results submitted.

**3. Permits for land treatment demonstrations using field tests or laboratory analyses.**

- a. For the purpose of allowing an owner or operator to meet the treatment demonstration requirements of section 33-24-05-162, the department may issue a treatment demonstration permit. The permit must contain only those requirements necessary to meet the standards in subsection 3 of section 33-24-05-162. The permit may be issued either as a treatment or disposal permit covering

only the field test or laboratory analyses or as a two-phase facility permit covering field tests or laboratory analyses and design construction, operation, and maintenance of the land treatment unit.

- (1) The department may issue a two-phase facility permit if the department finds that based on information submitted in the permit application substantial, although incomplete or inconclusive, information already exists on which to base the issuance of a facility permit.
  - (2) If the department finds that not enough information exists upon which the department can establish permit conditions to attempt to provide for compliance with all the requirements of the land treatment requirements in sections 33-24-05-160 through 33-24-05-175, the department shall issue a treatment demonstration permit covering only the field test or laboratory analyses.
- b. If the department finds that a phased permit may be issued, the department will establish as requirements in the first phase of the facility permit conditions for conducting a field test or laboratory analyses. These permit conditions will contain design and operating parameters (including the duration of the tests or analyses and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone), monitoring procedures, postdemonstration cleanup activities, and any other conditions which the department finds may be necessary under subsection 3 of section 33-24-05-162. The department will include conditions in the second phase of the facility permit to attempt to meet all the land treatment requirements in sections 33-24-05-160 through 33-24-05-175 pertaining to unit design, construction, operation, and maintenance. The department will establish these conditions in the second phase of the permit, based upon the substantial but incomplete or inconclusive information contained in the permit application.
- (1) The first phase of the permit will be effective as provided in subsection 2 of section 33-24-07-11.
  - (2) The second phase of the permit will be effective as provided in subdivision d.
- c. When the owner or operator who has been issued a two-phase permit has completed the treatment demonstration, the owner or operator shall submit to the department a certification signed by a person authorized to sign a permit application or report under section 33-24-06-03 that the field tests or laboratory analyses have been carried out in accordance with the conditions specified in

phase one of the permit for conducting such tests or analyses. The owner or operator shall also submit all data collected during the field tests or laboratory analyses within ninety days of completion of those tests or analyses, unless the department approves a later date.

d. If the department determines that the results of the field tests or laboratory analyses meet the requirements of section 33-24-05-162, the department will modify the second phase of the permit to incorporate any requirements necessary for operation of the facility in compliance with the land treatment requirements of sections 33-24-05-160 through 33-24-05-175, based upon the results of the field tests or laboratory analyses.

(1) This permit modification may proceed under section 33-24-06-14, or otherwise proceed as a modification under subdivision b of subsection 1 of section 33-24-06-12. If such modifications are necessary, the second phase of the permit will become effective only after those modifications have been made.

(2) If no modifications of the second phase of the permit are necessary, the department will give notice of the department's final decision to the permit applicant and to each person who submitted written comments on the phased permit or who requested notice of the final decision on the second phase of the permit. The second phase of the permit then will become effective as specified in subsection 2 of section 33-24-07-11.

4. **Permits for boilers and industrial furnaces burning hazardous waste.** When an owner or operator of a cement or lightweight aggregate kiln demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (for example, by conducting a comprehensive performance test and submitting a notification of compliance), the requirements of this subsection do not apply, except those provisions the department determines are necessary to ensure compliance with subdivision a of subsection 5 of section 33-24-05-527 and paragraph 3 of subdivision b of subsection 5 of section 33-24-05-527 if the permittee elects to comply with paragraph 1 of subdivision a of subsection 1 of section 33-24-06-100 to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the department may apply the provisions of this subsection, on a case-by-case basis, for purposes of information collection in accordance with subsection 11 of section 33-24-06-01 and section 33-24-06-05.

a. General. Owners and operators of new boilers and industrial furnaces (those not operating under the interim status standards of section 33-24-05-528) are subject to subsections 2 through 6

subdivisions b through f. Boilers and industrial furnaces operating under the interim status standards of section 33-24-05-528 are subject to ~~subsection 7~~ subdivision g.

- b. Permit operating periods for new boilers and industrial furnaces. A permit for a new boiler or industrial furnace shall specify appropriate conditions for the following operating periods:
- (1) Pretrial burn period. For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the boiler or industrial furnace to a point of operational readiness to conduct a trial burn, not to exceed seven hundred twenty hours operating time when burning hazardous waste, the department must establish in the pretrial burn period of the permit conditions, including, but not limited to, allowable hazardous waste feed rates and operating conditions. The department may extend the duration of this operational period once, for up to seven hundred twenty additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to section 33-24-06-14.
    - (a) Applicants must submit a statement, with part B of the permit application, that suggests the conditions necessary to operate in compliance with the standards of sections 33-24-05-529 through 33-24-05-532 during this period. This statement should include, at a minimum, restrictions on the applicable operating requirements identified in subsection 5 of section 33-24-05-527.
    - (b) The department will review this statement and any other relevant information submitted with part B of the permit application and specify requirements for this period sufficient to meet the performance standards of sections 33-24-05-529 through 33-24-05-532 based on the department's engineering judgment.
  - (2) Trial burn period. For the duration of the trial burn, the department must establish conditions in the permit for the purposes of determining feasibility of compliance with the performance standards of sections 33-24-05-529 through 33-24-05-532 and determining adequate operating conditions under subsection 5 of section 33-24-05-527. Applicants must propose a trial burn plan, prepared under ~~subsection 3~~ subdivision c, to be submitted with part B of the permit application.

- (3) Posttrial burn period.
- (a) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, and submission of the trial burn results by the applicant, and review of the trial burn results and modification of the facility permit by the department to reflect the trial burn results, the department will establish the operating requirements most likely to ensure compliance with the performance standards of sections 33-24-05-529 through 33-24-05-532 based on the department's engineering judgment.
  - (b) Applicants must submit a statement, with part B of the application, that identifies the conditions necessary to operate during this period in compliance with the performance standards of sections 33-24-05-529 through 33-24-05-532. This statement should include, at a minimum, restrictions on the operating requirements provided by subsection 5 of section 33-24-05-527.
  - (c) The department will review this statement and any other relevant information submitted with part B of the permit application and specify requirements for this period sufficient to meet the performance standards of sections 33-24-05-529 through 33-24-05-532 based on the department's engineering judgment.
- (4) Final permit period. For the final period of operation, the department will develop operating requirements in conformance with subsection 5 of section 33-24-05-527 that reflect conditions in the trial burn plan and are likely to ensure compliance with the performance standards of sections 33-24-05-529 through 33-24-05-532. Based on the trial burn results, the department shall make any necessary modifications to the operating requirements to ensure compliance with the performance standards. The permit modification shall proceed according to section 33-24-06-14.
- C. Requirements for trial burn plans. The trial burn plan must include the following information. The department, in reviewing the trial burn plan, shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the purposes of this paragraph:

- (1) An analysis of each feed stream, including hazardous waste, other fuels, and industrial furnace feedstocks, as fired, that includes:
  - (a) Heating value, levels of antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, thallium, total chlorine/chloride, and ash; and
  - (b) Viscosity or description of the physical form of the feed stream;
- (2) An analysis of each hazardous waste, as fired, including:
  - (a) An identification of any hazardous organic constituents listed in appendix V of chapter 33-24-02, that are present in the feed stream, except that the applicant need not analyze for constituents listed in appendix V of chapter 33-24-02 that would reasonably not be expected to be found in the hazardous waste. The constituents excluded from analysis must be identified and the basis for this exclusion explained. The analysis must be conducted in accordance with analytical techniques specified in "Test Methods for the Evaluating Solid Waste, Physical/Chemical Methods" SW-846, as incorporated by reference in section 33-24-01-05, or their equivalent.
  - (b) An approximate quantification of the hazardous constituents identified in the hazardous waste, within the precision produced by the analytical methods specified in "~~Test Methods for the Evaluation of~~ Evaluating Solid Waste, Physical/Chemical Methods" as incorporated by reference in section 33-24-01-05, or other equivalent.
  - (c) A description of blending procedures, if applicable, prior to firing the hazardous waste, including a detailed analysis of the hazardous waste prior to blending, an analysis of the material with which the hazardous waste is blended, and blending ratios.
- (3) A detailed engineering description of the boiler or industrial furnace, including:
  - (a) Manufacturer's name and model number of the boiler or industrial furnace;
  - (b) Type of boiler or industrial furnace;

- (c) Maximum design capacity in appropriate units;
  - (d) Description of the feed system for the hazardous waste, and, as appropriate, other fuels and industrial furnace feedstocks;
  - (e) Capacity of hazardous waste feed system;
  - (f) Description of automatic hazardous waste feed cutoff systems;
  - (g) Description of any air pollution control system; and
  - (h) Description of stack gas monitoring and any pollution control monitoring systems.
- (4) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.
- (5) A detailed test schedule for each hazardous waste for which the trial burn is planned, including dates, duration, quantity of hazardous waste to be burned, and other factors relevant to the department's decision under subdivision b of subsection 2 paragraph 2 of subdivision b.
- (6) A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feed rate, and, as appropriate, the feed rates of other fuels and industrial furnace feedstocks, and any other relevant parameters that may affect the ability of the boiler or industrial furnace to meet the performance standards in sections 33-24-05-529 through 33-24-05-532.
- (7) A description of, and planned operating conditions for, any emission control equipment that will be used.
- (8) Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction.
- (9) Such other information as the department reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of this paragraph and the criteria in subdivision b of subsection 2 paragraph 2 of subdivision b.
- d. Trial burn procedures.

- (1) A trial burn must be conducted to demonstrate conformance with the standards of sections 33-24-05-529 through 33-24-05-532 under an approved trial burn plan.
- (2) The department shall approve a trial burn plan if the ~~owner or operator~~ department finds that:
  - (a) The trial burn is likely to determine whether the boiler or industrial furnace can meet the performance standards of sections 33-24-05-529 through 33-24-05-532;
  - (b) The trial burn itself will not present an imminent hazard to human health and the environment;
  - (c) The trial burn will help the department to determine operating requirements to be specified under subsection 5 of section 33-24-05-527; and
  - (d) The information sought in the trial burn cannot reasonably be developed through other means.
- (3) The department must send a notice to all persons on the facility mailing list as set forth in subdivision a of subsection 3 of section 33-24-07-06 and to the appropriate units of local government as set forth in subdivision b of subsection 3 of section 33-24-07-06 announcing the scheduled commencement and completion dates for the trial burn. The applicant may not commence the trial burn until after the department has issued such notice. This notice must be mailed within a reasonable time period before the trial burn. An additional notice is not required if the ~~trial~~ trial burn is delayed due to circumstances beyond the control of the facility or the department. This notice must contain:
  - (a) The name and telephone number of the applicant's contact person;
  - (b) The name and telephone number of the department contact;
  - (c) The location where the approved trial burn plan and any supporting documents can be reviewed and copied; and
  - (d) An expected time period for commencement and completion of the trial burn.
- (4) The applicant must submit to the department a certification that the trial burn has been carried out in accordance with the

approved trial burn plan; and must submit the results of all the determinations required in subdivision c. This submission shall be made within ninety days of completion of the trial burn, or later if approved by the department.

- (5) All data collected during any trial burn must be submitted to the department following completion of the trial burn.
  - (6) All submissions required by this paragraph must be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under section 33-24-06-03.
- e. Special procedures for destruction and removal efficiency trial burns. When a destruction and removal efficiency trial burn is required under subsection 1 of section 33-24-05-529, the department will specify (based on the hazardous waste analysis data and other information in the trial burn plan) as trial ~~principle~~ principal organic hazardous constituents those compounds for which destruction and removal efficiencies must be calculated during the trial burn. These trial ~~principle~~ principal organic hazardous constituents will be specified by the department based on information, including the department's estimate of the difficulty of destroying the constituents identified in the hazardous waste analysis, their concentrations or mass in the hazardous waste feed, and, for hazardous waste containing or derived from wastes listed in sections 33-24-02-15 through 33-24-05-19, the hazardous waste organic constituent or constituents identified in appendix ~~V~~ IV of chapter 33-24-02 as the basis for listing.
- f. Determinations based on trial burn. During each approved trial burn (or as soon after the burn as is practicable), the applicant must make the following determinations:
- (1) A quantitative analysis of the levels of antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, thallium, silver, and chlorine/chloride, in the feed streams (hazardous waste, other fuels, and industrial furnace feedstocks);
  - (2) When a destruction and removal efficiency trial burn is required under subsection 1 of section 33-24-05-529:
    - (a) A quantitative analysis of the trial ~~principle~~ principal organic hazardous constituents in the hazardous waste feed;

- (b) A quantitative analysis of the stack gas for the concentration and mass emissions of the ~~trial principle~~ principal organic hazardous constituents; and
  - (c) A computation of destruction and removal efficiency, in accordance with the destruction and removal efficiency formula specified in subsection 1 of section 33-24-05-529;
- (3) When a trial burn for chlorinated dioxins and furans is required under subsection 5 of section 33-24-05-529, a quantitative analysis of the stack gas for the concentration and mass emission rate of the 2,3,7,8-chlorinated tetra-octa congeners of chlorinated dibenzo-p-dioxins and furans, and a computation showing conformance with the emission standard;
- (4) When a trial burn for particulate matter, metals, hydrogen chloride or chlorine is required under section 33-24-05-530, subsection 3 or 4 of section 33-24-05-531, or subdivision b of subsection 2 or subsection 3 of section 33-24-05-532, a quantitative analysis of the stack gas for the concentrations and mass emissions of particulate matter, metals, or hydrogen chloride and chlorine, and computations showing conformance with the applicable emission performance standards;
- (5) When a trial burn for destruction and removal efficiency, metals, or hydrogen chloride or chlorine is required under subsection 1 of section 33-24-05-529, subsection 3 or 4 of section 33-24-05-531, or subdivision b of subsection 2 or subsection 3 of section 33-24-05-532, a quantitative analysis of the scrubber water (if any), ash residues, other residues, and products for the purpose of estimating the fate of the ~~trial principle~~ principal organic hazardous constituents, metals, and chlorine/chloride;
- (6) An identification of sources of fugitive emissions and their means of control;
- (7) A continuous measurement of carbon monoxide, oxygen, and where required, hydrocarbons, in the stack gas; and
- (8) Such other information as the department may specify as necessary to ensure that the trial burn will determine compliance with the performance standards in sections 33-24-05-529 through 33-24-05-532 and to establish the operating conditions required by subsection 5 of section

33-24-05-527 as necessary to meet those performance standards.

9. Interim status boilers and industrial furnaces. For the purpose of determining feasibility of compliance with the performance standards of sections 33-24-05-529 through 33-24-05-532 and of determining adequate operating conditions under section 33-24-05-528, applicants owning or operating existing boilers or industrial furnaces operated under the interim status standards of section 33-24-05-528 must either prepare and submit a trial burn plan and perform a trial burn in accordance with the requirements of this section or submit other information as specified in subparagraph 6 f of paragraph 1 of subdivision ff of subsection 2 of section 33-24-06-17. The department must announce its intention to approve of the trial burn plan in accordance with the timing and distribution requirements of paragraph 3 of subdivision d. The contents of the notice must include: the name and telephone number of a contact person at the facility; the name and telephone number of a contact office at the permitting agency; the location where the trial burn plan and any supporting documents can be reviewed and copied; and a schedule of the activities that are required prior to permit issuance, including the anticipated time schedule for department approval of the plan and the time periods during which the trial burn would be conducted. Applicants who submit a trial burn plan and receive approval before submission of the part B permit application must complete the trial burn and submit the results specified in ~~subsection 6~~ subdivision f with the part B permit application. If completion of this process conflicts with the date set for submission of the part B application, the applicant must contact the department to establish a later date for submission of the part B application or the trial burn results. If the applicant submits a trial burn plan with part B of the permit application, the trial burn must be conducted and the results submitted within a time period prior to permit issuance to be specified by the department.

5. Remedial action plans. Remedial action plans (RAPs) are special forms of permits that are regulated under sections 33-24-06-30 through 33-24-06-35.

**History:** Effective January 1, 1984; amended effective December 1, 1988; December 1, 1991; January 1, 1994; July 1, 1997; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05, 23-20.3-09

33-24-06-22. [Reserved]

33-24-06-23. [Reserved]

33-24-06-24. [Reserved]

33-24-06-25. [Reserved]

33-24-06-26. [Reserved]

33-24-06-27. [Reserved]

33-24-06-28. [Reserved]

33-24-06-29. [Reserved]

33-24-06-30. Remedial action plan - General information.

1. General information.

- a. A remedial action plan is a special form of hazardous waste permit that an owner or operator may obtain, instead of a permit issued under sections 33-24-06-01 through 33-24-06-21, to authorize the owner or operator to treat, store, or dispose of hazardous remediation waste (as defined in section 33-24-01-04) at a remediation waste management site. A remedial action plan may only be issued for the area of contamination where the remediation wastes to be managed under the remedial action plan originated, or areas in close proximity to the contaminated area, except as allowed in limited circumstances under subsection 1 of section 33-24-06-35.
- b. The requirements in sections 33-24-06-01 through 33-24-06-21 do not apply to remedial action plans unless those requirements for traditional hazardous waste permits are specifically required under sections 33-24-06-30 through 33-24-06-35.
- c. Notwithstanding any other provision of chapter 33-24-06 or 33-24-07, any document that meets the requirements in this section constitutes a hazardous waste permit under Resource Conservation and Recovery Act section 3005(c).
- d. A remedial action plan may be:
  - (1) A stand-alone document that includes only the information and conditions required by sections 33-24-06-30 through 33-24-06-35; or
  - (2) Part or parts of another document that includes information or conditions, or both, for other activities at the remediation waste management site, in addition to the information and conditions required by sections 33-24-06-30 through 33-24-06-35.

- e. If the owner or operator is treating, storing, or disposing of hazardous remediation wastes as part of a cleanup compelled by federal or state cleanup authorities, the remedial action plan does not affect the owner's or operator's obligations under those authorities in any way.
  - f. If the owner or operator receives a remedial action plan at a facility operating under interim status, the remedial action plan does not terminate interim status.
2. A remedial action plan is necessary when:
- a. Whenever the owner or operator treats, stores, or disposes of hazardous remediation wastes in a manner that requires a hazardous waste permit, the owner or operator must either obtain:
    - (1) A hazardous waste permit according to sections 33-24-06-01 through 33-24-06-21; or
    - (2) A remedial action plan according to sections 33-24-06-30 through 33-24-06-35.
  - b. Treatment units that use combustion of hazardous remediation wastes at a remediation waste management site are not eligible for remedial action plans under sections 33-24-06-30 through 33-24-06-35.
  - c. The owner or operator may obtain a remedial action plan for managing hazardous remediation waste at an already permitted Resource Conservation and Recovery Act facility. The owner or operator must have these remedial action plans approved as a modification to an existing permit according to the requirements of section 33-24-06-12 or 33-24-06-14 instead of the requirements in sections 33-24-06-30 through 33-24-06-35. When the owner or operator submits an application for such a modification, however, the information requirements in paragraph 1 of subdivision a of subsection 1, paragraph 4 of subdivision a of subsection 2, and paragraph 4 of subdivision a of subsection 3 of section 33-24-06-14 do not apply; instead, the owner or operator must submit the information required under subsection 4 of section 33-24-06-31. When the permit is modified, the remedial action plan becomes part of the hazardous waste permit. Therefore, when a permit (including the remedial action plan portion) is modified, revoked and reissued, terminated or when it expires, it will be modified according to the applicable requirements in sections 33-24-06-11, 33-24-06-12 and 33-24-06-14, revoked and reissued according to the applicable requirements in sections 33-24-06-12 and 33-24-06-13, terminated according to the applicable requirements

in section 33-24-06-13, and expire according to the applicable requirements in sections 33-24-06-02 and 33-24-06-06.

3. Rights and obligations under a remedial action plan. The provisions of section 33-24-06-10 apply to remedial action plans. (Note: The provisions of subsection 1 of section 33-24-06-10 provide the owner or operator assurance that, as long as the owner or operator complies with the remedial action plan, the department will consider the owner or operator in compliance with this article and will not take enforcement actions against the owner or operator. However, the owner or operator should be aware of four exceptions to this provision that are listed in section 33-24-06-10.)

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-30.3-04, 23-20.3-05, 23-20.3-09

**33-24-06-31. Remedial action plan application process.**

1. To apply for a remedial action plan, the owner or operator must complete an application, sign it, and submit it to the department according to the requirements in sections 33-24-06-30 through 33-24-06-35.
2. Who applies. When a facility or remediation waste management site is owned by one person, but the treatment, storage, or disposal activities are operated by another person, it is the operator's duty to obtain a remedial action plan, except that the owner must also sign the remedial action plan application.
3. Signatory requirements. Both the owner and the operator must sign the remedial action plan application and any required reports according to subsections 1, 2, and 3 of section 33-24-06-03. In the application, both the owner and the operator must also make the certification required under subdivision a of subsection 4 of section 33-24-06-03. However, the owner may choose the alternative certification under subdivision b of subsection 4 of section 33-24-06-03 if the operator certifies under subdivision a of subsection 4 of section 33-24-06-03.
4. Information to be included in the application. The owner or operator must include the following information in the application for a remedial action plan:
  - a. The name, address, and identification number of the remediation waste management site;
  - b. The name, address, and telephone number of the owner and operator;
  - c. The latitude and longitude of the site;

- d. The United States geological survey or county map showing the location of the remediation waste management site;
  - e. A scaled drawing of the remediation waste management site showing:
    - (1) The remediation waste management site boundaries;
    - (2) Any significant physical structures; and
    - (3) The boundary of all areas onsite where remediation waste is to be treated, stored, or disposed;
  - f. A specification of the hazardous remediation waste to be treated, stored, or disposed of at the facility or remediation waste management site. This must include information on:
    - (1) Constituent concentrations and other properties of the hazardous remediation wastes that may affect how such materials should be treated or otherwise managed;
    - (2) An estimate of the quantity of these wastes; and
    - (3) A description of the processes the owner or operator will use to treat, store, or dispose of this waste, including technologies, handling systems, and design and operating parameters the owner or operator will use to treat hazardous remediation wastes before disposing of them according to the land disposal restrictions standards of sections 33-24-05-250 through 33-24-05-299, as applicable;
  - g. Enough information to demonstrate that operations that follow the provisions in the remedial action plan application will ensure compliance with applicable requirements of sections 33-24-05-01 through 33-24-05-599 and 33-24-05-800 through 33-24-05-949;
  - h. Such information as may be necessary to enable the department to carry out its duties under other federal laws as is required for traditional hazardous waste permits under subdivision r of subsection 2 of section 33-24-06-17; and
  - i. Any other information the department decides is necessary for demonstrating compliance with sections 33-24-06-30 through 33-24-06-35 or for determining any additional remedial action plan conditions that are necessary to protect human health and the environment.
5. Confidentiality of remedial action plan information. The owner or operator may assert any such claim at the time that the owner

or operator submits the remedial action plan application or other submissions by stamping the words "confidential business information" on each page containing such information. If the owner or operator asserts a claim at the time of the submission, the department will treat the information as confidential and will not release this information to the public. If the owner or operator does not assert a claim at the time of the submission, the department may make the information available to the public without further notice to the owner or operator. The department will deny any requests for confidentiality of an owner's or operator's name or address, or both.

6. The owner or operator must submit the completed, signed application for a remedial action plan to the department for approval.
7. If the owner or operator submits an application for a remedial action plan as a part of another document, the owner or operator must clearly identify the components of that document that constitute the remedial action plan application.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

### **33-24-06-32. Remedial action plan approval process.**

1. Completeness and technical review. The department will not issue a permit before receiving a complete application for a remedial action plan. An application for a remedial action plan is complete when the department receives an application form and any supplemental information which is completed to its satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity. An application for a permit is complete notwithstanding the failure of the owner or operator to submit the exposure information described in subsection 10 of section 33-24-06-01. The department may deny a permit for a remedial action plan before receiving a complete application for a permit.
  - a. If the department tentatively finds that a remedial action plan application includes all of the information required by subsection 4 of section 33-24-06-31 and that the proposed remediation waste management activities meet the regulatory standards, the department may make a tentative decision to approve the remedial action plan application. The department will then prepare a draft remedial action plan and provide an opportunity for public comment before making a final decision on the remedial action plan application, according to sections 33-24-06-30 through 33-24-06-35.

- b. If the department tentatively finds that the remedial action plan application does not include all of the information required by subsection 4 of section 33-24-06-31 or that the proposed remediation waste management activities do not meet the regulatory standards, the department may request additional information or ask the owner or operator to correct deficiencies in the application. If the owner or operator fails or refuses to provide any additional information the department requests, or to correct any deficiencies in the remedial action plan application, the department may make a tentative decision to deny the remedial action plan application. After making this tentative decision, the department will prepare a notice of intent to deny the remedial action plan application ("notice of intent to deny") and provide an opportunity for public comment before making a final decision on the remedial action plan application, according to the requirements in sections 33-24-06-30 through 33-24-06-35. The department may deny the remedial action plan application either in its entirety or in part.
2. Contents of the draft remedial action plan. If the department prepares a draft remedial action plan, it must include the following information:
- a. Information required under subdivisions a through f of subsection 4 of section 33-24-06-31:
  - b. The following terms and conditions:
    - (1) Terms and conditions necessary to ensure that the operating requirements specified in the remedial action plan comply with applicable requirements of chapter 33-24-05 (including any recordkeeping and reporting requirements). In satisfying this provision, the department may incorporate, expressly or by reference, applicable requirements of chapter 33-24-05 into the remedial action plan or establish site-specific conditions as required or allowed by sections 33-24-05-01 through 33-24-05-599 and 33-24-05-800 through 33-24-05-949;
    - (2) Terms and conditions in section 33-24-06-04;
    - (3) Terms and conditions for modifying, revoking and reissuing, and terminating the remedial action plan, as provided in subsection 1 of section 33-24-06-33; and
    - (4) Any additional terms or conditions that the department determines are necessary to protect human health and the environment, including any terms and conditions necessary to respond to spills and leaks during use of any units permitted under the remedial action plan; and

- c. If the draft remedial action plan is part of another document, as described in paragraph 2 of subdivision d of subsection 1 of section 33-24-06-30, the department must clearly identify the components of that document that constitute the draft remedial action plan.
- 3. Statement of basis and administrative record. Once the department has prepared the draft remedial action plan or notice of intent to deny, then the department must also prepare the following documents:
  - a. A statement of basis that briefly describes the derivation of the conditions of the draft remedial action plan and the reasons for them, or the rationale for the notice of intent to deny;
  - b. An administrative record, including:
    - (1) The remedial action plan application, and any supporting data furnished by the applicant;
    - (2) The draft remedial action plan or notice of intent to deny;
    - (3) The statement of basis and all documents cited therein (material readily available at the department or published material that is generally available need not be physically included with the rest of the record, as long as it is specifically referred to in the statement of basis); and
    - (4) Any other documents that support the decision to approve or deny the remedial action plan; and
  - c. Information contained in the administrative record, which must be available for review by the public upon request.
- 4. Procedures for public comment.
  - a. The department must:
    - (1) Send notice to the owner or operator of the intention to approve or deny the remedial action plan application and send the owner or operator a copy of the statement of basis;
    - (2) Publish a notice of the intention to approve or deny the remedial action plan application in a major local newspaper of general circulation;
    - (3) Broadcast the intention to approve or deny the remedial action plan application over a local radio station; and
    - (4) Send a notice of the intention to approve or deny the remedial action plan application to each unit of local government

having jurisdiction over the area in which the site is located, and to each state agency having any authority under state law with respect to any construction or operations at the site.

b. The notice required by subdivision a must provide an opportunity for the public to submit written comments on the draft remedial action plan or notice of intent to deny within at least forty-five days.

c. The notice required by subdivision a must include:

(1) The name and address of the office processing the remedial action plan application;

(2) The name and address of the remedial action plan applicant, and if different, the remediation waste management site or activity the remedial action plan will regulate;

(3) A brief description of the activity the remedial action plan will regulate;

(4) The name, address, and telephone number of a person from whom interested persons may obtain further information, including copies of the draft remedial action plan or notice of intent to deny, statement of basis, and the remedial action plan application;

(5) A brief description of the comment procedures in this section, and any other procedures by which the public may participate in the remedial action plan decision;

(6) If a hearing is scheduled, the date, time, location, and purpose of the hearing;

(7) If a hearing is not scheduled, a statement of procedures to request a hearing;

(8) The location of the administrative record and times when it will be open for public inspection; and

(9) Any additional information the department considers necessary or proper.

d. If, within the comment period, the department receives written notice of opposition to the intention to approve or deny the remedial action plan application and a request for a hearing, the department must hold an informal public hearing to discuss issues relating to the approval or denial of the remedial action plan application. The department may also determine on the department's own initiative that an informal hearing is appropriate. The hearing must include

an opportunity for any person to present written or oral comments. Whenever possible, the department must schedule this hearing at a location convenient to the nearest population center to the remediation waste management site and give notice according to the requirements in subdivision a. This notice must, at a minimum, include the information required by subdivision c and:

- (1) Reference to the date of any previous public notices relating to the remedial action plan application;
- (2) The date, time, and place of the hearing; and
- (3) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

5. Basis for final decision.

- a. The department must consider and respond to any significant comments raised during the public comment period, or during any hearing on the draft remedial action plan or notice of intent to deny, and revise the draft remedial action plan based on those comments, as appropriate.
- b. If the department determines that the remedial action plan includes the information and terms and conditions required in subsection 2, then the department will issue a final decision approving the remedial action plan and, in writing, notify the owner or operator and all commenters on the draft remedial action plan that the remedial action plan application has been approved.
- c. If the department determines that the remedial action plan does not include the information required in subsection 2, then the department will issue a final decision denying the remedial action plan and, in writing, notify the owner or operator and all commenters on the draft remedial action plan that the remedial action plan application has been denied.
- d. If the department's final decision is that the tentative decision to deny the remedial action plan application was incorrect, the department will withdraw the notice of intent to deny and proceed to prepare a draft remedial action plan, according to the requirements in sections 33-24-06-30 through 33-24-06-35.
- e. When the department issues a final remedial action plan decision, the final decision must refer to the procedures for appealing the decision under subsection 6.
- f. Before issuing the final remedial action plan decision, the department must compile an administrative record. Material

readily available at the department or published materials which are generally available and which are included in the administrative record need not be physically included with the rest of the record as long as it is specifically referred to in the statement of basis or the response to comments. The administrative record for the final remedial action plan must include information in the administrative record for the draft remedial action plan (subdivision b of subsection 3) and:

- (1) All comments received during the public comment period;
- (2) Tapes or transcripts of any hearings;
- (3) Any written materials submitted at these hearings;
- (4) The responses to comments;
- (5) Any new material placed in the record since the draft remedial action plan was issued;
- (6) Any other documents supporting the remedial action plan; and
- (7) A copy of the final remedial action plan.

9. The department must make information contained in the administrative record available for review by the public upon request.
6. Administrative appeal process of the department's decision to approve or deny a remedial action plan application.
- a. Any commenter on the draft remedial action plan or notice of intent to deny, or any participant in any public hearing on the draft remedial action plan, may appeal the department's decision to approve or deny the remedial action plan application. Any person who did not file comments, or did not participate in any public hearing on the draft remedial action plan, may petition for administrative review only to the extent of the changes from the draft to the final remedial action plan decision. Appeals of remedial action plans may be made to the same extent as for final permit decisions under section 33-24-07-11. Instead of the notice required under subsection 3 of section 33-24-07-14, and section 33-24-07-06, the department will give public notice of any grant of review of remedial action plans through the same means used to provide notice under subsection 4 of section 33-24-06-32. The notice will include:

- (1) The briefing schedule for the appeal as provided by the department;
    - (2) A statement that any interested person may file an amicus brief with the department; and
    - (3) The information specified in subdivision c of subsection 4, as appropriate.
  - b. This appeal is a prerequisite to seeking judicial review of these department actions.
7. Effective date of a remedial action plan. A remedial action plan becomes effective thirty days after the department notifies the owner or operator and all commenters that the remedial action plan is approved unless:
- a. The department specifies a later effective date in the final decision;
  - b. The owner or operator or another person has appealed the remedial action plan under subsection 6 (if the remedial action plan is appealed, and the request for review is granted under subsection 6, conditions of the remedial action plan are stayed according to section 33-24-07-12); or
  - c. No commenters requested a change in the draft remedial action plan, in which case the remedial action plan becomes effective immediately when it is issued.
8. The owner or operator may not begin physical construction of new units permitted under the remedial action plan for treating, storing, or disposing of hazardous remediation waste before receiving a finally effective remedial action plan.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05, 23-20.3-09

**33-24-06-33. Modification, revocation and reissuance, or termination of a remedial action plan.**

1. In the remedial action plan, the department must specify, either directly or by reference, procedures for future modifications, revocations and reissuance, or terminations of the remedial action plan. These procedures must provide adequate opportunities for public review and comment on any modification, revocation and reissuance, or termination that would significantly change the management of the remediation waste, or that otherwise merits public review and comment. If the remedial action plan has been incorporated into a traditional hazardous waste permit, as allowed under subdivision c of subsection 2

of section 33-24-06-30, then the remedial action plan will be modified according to the applicable requirements in sections 33-24-06-11, 33-24-06-12, and 33-24-06-14, revoked and reissued according to the applicable requirements in sections 33-24-06-12 and 33-24-06-13, or terminated according to the applicable requirements of section 33-24-06-13.

2. Modifications by the department.

a. The department may modify the final remedial action plan on the department's own initiative only if one or more of the following reasons exist. If one or more of these reasons do not exist, then the department will not modify the final remedial action plan, except at the request of the owner or operator. Reasons for modification are:

- (1) The owner or operator made material and substantial alterations or additions to the activity that justify applying different conditions;
- (2) The department finds new information that was not available at the time of remedial action plan issuance and would have justified applying different remedial action plan conditions at the time of issuance;
- (3) The standards or regulations on which the remedial action plan was based have changed because of new or amended statutes, standards, or regulations, or by judicial decision after the remedial action plan was issued;
- (4) If the remedial action plan includes any schedules of compliance, the department may find reasons to modify the compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the owner or operator as the owner or operator have little or no control and for which there is no reasonably available remedy;
- (5) The owner or operator is not in compliance with conditions of the remedial action plan;
- (6) The owner or operator failed in the application or during the remedial action plan issuance process to disclose fully all relevant facts, or the owner or operator misrepresented any relevant facts at the time;
- (7) The department has determined that the activity authorized by the remedial action plan endangers human health or the environment and can only be remedied by modifying; or



- a. Any commenter on the modification, revocation and reissuance, or termination, or any person who participated in any hearing on these actions, may appeal the department's decision to approve a modification, revocation and reissuance, or termination of the remedial action plan, according to subsection 6 of section 33-24-06-32. Any person who did not file comments or did not participate in any public hearing on the modification, revocation and reissuance, or termination may petition for administrative review only of the changes from the draft to the final remedial action plan decision.
  - b. Any commenter on the modification, revocation and reissuance, or termination, or any person who participated in any hearing on these actions, may informally appeal the department's decision to deny a request for modification, revocation and reissuance, or termination to the department. Any person who did not file comments, or did not participate in any public hearing on the modification, revocation and reissuance, or termination may petition for administrative review only of the changes from the draft to the final remedial action plan decision.
  - c. The process for informal appeals of remedial action plans is as follows:
    - (1) The person appealing the decision must send a letter to the department. The letter must briefly set forth the relevant facts.
    - (2) The department has sixty days after receiving the letter to act on it.
    - (3) If the department does not take action on the letter within sixty days after receiving it, the appeal shall be considered denied.
  - d. This informal appeal is a prerequisite to seeking judicial review of these department actions.
6. Expiration of a remedial action plan. Remedial action plans must be issued for a fixed term, not to exceed ten years, although they may be renewed upon approval by the department in fixed increments of no more than ten years. In addition, the department must review any remedial action plan for hazardous waste land disposal five years after the date of issuance or reissuance and the owner or operator or the department must follow the requirements for modifying the remedial action plan as necessary to assure that the owner or operator continues to comply with currently applicable requirements in Resource Conservation and Recovery Act sections 3004 and 3005.
7. Renewal. Any facility with an effective remedial action plan shall submit a new application at least one hundred eighty days before the

expiration date of the effective remedial action plan unless permission for a later date has been granted by the department (the department shall not grant permission for applications to be submitted later than the expiration date of the existing remedial action plan). The owner or operator must follow the process for application and issuance of remedial action plans in sections 33-24-06-30 through 33-24-06-35.

8. Continuance of an expiring remedial action plan. The conditions of an expired remedial action plan continue in force until the effective date of a new remedial action plan if:
  - a. The owner or operator has submitted a timely application which is a complete application for a new remedial action plan; and
  - b. The department, through no fault of the owner or operator, does not issue a new remedial action plan with an effective date on or before the expiration date of the previous remedial action plan (for example, when issuance is impractical due to time or resource constraints) or the denial of the remedial action plan application.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05, 23-20.3-09

### **33-24-06-34. Remedial action plan operations.**

1. **Recordkeeping requirements.** The owner or operator is required to keep records of:
  - a. All data used to complete remedial action plan applications and any supplemental information that the owner or operator submits for a period of at least three years from the date the application is signed; and
  - b. Any operating records and other records the department requires the owner or operator to maintain as a condition of the remedial action plan.
2. **Time period computation.**
  - a. Any time period scheduled to begin on the occurrence of an act or event must begin on the day after the act or event. (For example, if the remedial action plan specifies that the owner or operator must close a staging pile within one hundred eighty days after the operating term for that staging pile expires, and the operating term expires on June first, then June second counts as day one of the one hundred eighty days, and the owner or operator would have to complete closure by November twenty-eighth.)

- b. Any time period scheduled to begin before the occurrence of an act or event must be computed so that the period ends on the day before the act or event. (For example, if the owner or operator is transferring ownership or operational control of the site, and transfers the remedial action plan to the new owner or operator, the new owner or operator must submit a revised remedial action plan application no later than ninety days before the scheduled change. Therefore, if the owner or operator plans to change ownership on January first, the new owner or operator must submit the revised remedial action plan application no later than October third, so that the ninetieth day would be December thirty-first.)
  - c. If the final day of any time period falls on a weekend or legal holiday, the time period must be extended to the next working day. (For example, if the owner or operator wishes to appeal the department's decision to modify the remedial action plan, then the owner or operator must petition the department within thirty days after the department has issued the final remedial action plan decision. If the thirtieth day falls on Sunday, then the owner or operator may submit the appeal by the Monday after. If the thirtieth day falls on July fifth, then the owner or operator may submit the appeal by July fifth.)
  - d. Whenever a party or interested person has the right to or is required to act within a prescribed period after the service of notice or other paper upon them by mail, three days must be added to the prescribed term. (For example, if the owner or operator wishes to appeal the department's decision to modify the remedial action plan, then the owner or operator must petition the department within thirty days after the department has issued the final remedial action plan decision. However, if the department notifies the owner or operator of the decision by mail, then the owner or operator may have thirty-three days to petition the department.)
- 3. Transfer of a remedial action plan to a new owner or operator.**
- a. An owner or operator may transfer the remedial action plan to a new owner or operator, provided the owner or operator follows the requirements specified in the remedial action plan for modification to identify the new owner or operator, and incorporate any other necessary requirements with prior approval of the department. These modifications do not constitute "significant" modifications for purposes of subsection 1 of section 33-24-05-33. The new owner or operator must submit a revised remedial action plan application no later than ninety days before the scheduled change along with a written agreement containing a specific date for transfer of remedial action plan responsibility between the owner or operator and the new owner or operator.

b. When a transfer of ownership or operational control occurs, the owner or operator as the old owner or operator must comply with the applicable requirements in sections 33-24-05-74 through 33-24-05-88 until the new owner or operator has demonstrated compliance with the financial assurance requirements. The new owner or operator must demonstrate compliance with sections 33-24-05-74 through 33-24-05-88 within six months of the date of the change in ownership or operational control of the facility or remediation waste management site. When the new owner or operator demonstrates compliance with sections 33-24-05-74 through 33-24-05-88 to the department, the department will notify the old owner or operator that that person no longer needs to comply with sections 33-24-05-74 through 33-24-05-88 as of the date of demonstration.

4. Noncompliance and program reporting by the department. The department must report noncompliance with remedial action plans according to the provisions of section 33-24-06-15.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05, 23-20.3-09

**33-24-06-35. Remedial action plans for offsite locations. For offsite locations:**

1. The owner or operator may request a remedial action plan for remediation waste management activities at a location removed from the area where the remediation wastes originated if the owner or operator believes such a location would be more protective than the contaminated area or areas in close proximity.
2. If the department determines that an alternative location, removed from the area where the remediation waste originated, is more protective than managing remediation waste at the area of contamination or areas in close proximity, then the department may approve a remedial action plan for this alternative location.
3. The owner or operator must request the remedial action plan, and the department will approve or deny the remedial action plan, according to the procedures and requirements in sections 33-24-06-30 through 33-24-06-35.
4. A remedial action plan for an alternative location must also meet the following requirements, which the department must include in the remedial action plan for such locations:

- a. The remedial action plan for the alternative location must be issued to the person responsible for the cleanup from which the remediation wastes originated;
  - b. The remedial action plan is subject to the expanded public participation requirements in sections 33-24-07-25 through 33-24-07-27; and
  - c. The remedial action plan is subject to the public notice requirements in subsection 3 of section 33-24-07-06.
5. These alternative locations are remediation waste management sites and retain the following benefits of remediation waste management sites:
- a. Exclusion from facilitywide corrective action under section 33-24-05-58; and
  - b. Application of subsection 10 of section 33-24-05-01 in lieu of sections 33-24-05-02 through 33-24-05-36.

History: Effective December 1, 2003.

General Authority: NDCC 23-20.3-03

Law Implemented: NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

33-24-06-36. [Reserved]

33-24-06-37. [Reserved]

33-24-06-38. [Reserved]

33-24-06-39. [Reserved]

33-24-06-40. [Reserved]

33-24-06-41. [Reserved]

33-24-06-42. [Reserved]

33-24-06-43. [Reserved]

33-24-06-44. [Reserved]

33-24-06-45. [Reserved]

33-24-06-46. [Reserved]

33-24-06-47. [Reserved]

**33-24-06-48. [Reserved]**

**33-24-06-49. [Reserved]**

**33-24-06-50. [Reserved]**

**33-24-06-51. [Reserved]**

**33-24-06-52. [Reserved]**

**33-24-06-53. [Reserved]**

**33-24-06-54. [Reserved]**

**33-24-06-55. [Reserved]**

**33-24-06-56. [Reserved]**

**33-24-06-57. [Reserved]**

**33-24-06-58. [Reserved]**

**33-24-06-59. [Reserved]**

**33-24-06-60. [Reserved]**

**33-24-06-61. [Reserved]**

**33-24-06-62. [Reserved]**

**33-24-06-63. [Reserved]**

**33-24-06-64. [Reserved]**

**33-24-06-65. [Reserved]**

**33-24-06-66. [Reserved]**

**33-24-06-67. [Reserved]**

**33-24-06-68. [Reserved]**

**33-24-06-69. [Reserved]**

**33-24-06-70. [Reserved]**

**33-24-06-71. [Reserved]**

**33-24-06-72. [Reserved]**

33-24-06-73. [Reserved]  
33-24-06-74. [Reserved]  
33-24-06-75. [Reserved]  
33-24-06-76. [Reserved]  
33-24-06-77. [Reserved]  
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33-24-06-79. [Reserved]  
33-24-06-80. [Reserved]  
33-24-06-81. [Reserved]  
33-24-06-82. [Reserved]  
33-24-06-83. [Reserved]  
33-24-06-84. [Reserved]  
33-24-06-85. [Reserved]  
33-24-06-86. [Reserved]  
33-24-06-87. [Reserved]  
33-24-06-88. [Reserved]  
33-24-06-89. [Reserved]  
33-24-06-90. [Reserved]  
33-24-06-91. [Reserved]  
33-24-06-92. [Reserved]  
33-24-06-93. [Reserved]  
33-24-06-94. [Reserved]  
33-24-06-95. [Reserved]  
33-24-06-96. [Reserved]  
33-24-06-97. [Reserved]

**33-24-06-98. [Reserved]**

**33-24-06-99. [Reserved]**

**33-24-06-100. Options for incinerators and cement and lightweight aggregate kilns to minimize emissions from startup, shutdown, and malfunction events.**

**1. Facilities with existing permits.**

**a. Revisions to permit conditions after documenting compliance with maximum achievable control technology. The owner or operator of a hazardous waste permitted incinerator, cement kiln, or lightweight aggregate kiln may request that the department address permit conditions that minimize emissions from startup, shutdown, and malfunction events under any of the following options when requesting removal of permit conditions that are no longer applicable according to subsection 2 of section 33-24-05-144 and subsection 2 of section 33-24-05-525:**

**(1) Retain relevant permit conditions. Under this option, the department will:**

**(a) Retain permit conditions that address releases during startup, shutdown, and malfunction events, including releases from emergency safety vents, as these events are defined in the facility's startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2); and**

**(b) Limit applicability of those permit conditions only to when the facility is operating under its startup, shutdown, and malfunction plan.**

**(2) Revise relevant permit conditions.**

**(a) Under this option, the department will:**

**[1] Identify a subset of relevant existing permit requirements, or develop alternative permit requirements, that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information, including the source's startup, shutdown, and malfunction plan, design, and operating history.**

[2] Retain or add these permit requirements to the permit to apply only when the facility is operating under its startup, shutdown, and malfunction plan.

(b) Changes that may significantly increase emissions.

[1] The permittee must notify the department in writing of changes to the startup, shutdown, and malfunction plan or changes to the design of the source that may significantly increase emissions of toxic compounds from startup, shutdown, or malfunction events, including releases from emergency safety vents. The permittee must notify the department of such changes within five days of making such changes. The permittee must identify in the notification recommended revisions to permit conditions necessary as a result of the changes to ensure that emissions of toxic compounds are minimized during these events.

[2] The department may revise permit conditions as a result of these changes to ensure that emissions of toxic compounds are minimized during startup, shutdown, or malfunction events, including releases from emergency safety vents either:

[a] Upon permit renewal, or, if warranted; or

[b] By modifying the permit under subsection 1 of section 33-24-06-12 or section 33-24-06-14.

(3) Remove permit conditions. Under this option:

(a) The owner or operator must document that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2) has been approved by the department under 40 CFR 63.1206(c)(2)(ii)(B); and

(b) The department will remove permit conditions that are no longer applicable according to subsection 2 of section 33-24-05-144 and subsection 2 of section 33-24-05-525.

b. Addressing permit conditions upon permit reissuance. The owner or operator of an incinerator, cement kiln, or lightweight aggregate kiln that has conducted a comprehensive performance

test and submitted to the department a notification of compliance documenting compliance with the standards of 40 CFR part 63, subpart EEE, may request in the application to reissue the permit for the combustion unit that the department control emissions from startup, shutdown, and malfunction events under any of the following options:

(1) Hazardous waste option A. Under this option, the department will:

- (a) Include, in the permit, conditions that ensure compliance with subsections 1 and 3 of section 33-24-05-149 or subdivision a of subsection 5 of section 33-24-05-527 and paragraph 3 of subdivision b of subsection 5 of section 33-24-05-527 to minimize emissions of toxic compounds from startup, shutdown, and malfunction events, including releases from emergency safety vents; and
- (b) Specify that these permit requirements apply only when the facility is operating under its startup, shutdown, and malfunction plan; or

(2) Hazardous waste option B.

(a) Under this option, the department will:

- [1] Include in the permit conditions that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information, including the source's startup, shutdown, and malfunction plan, design, and operating history; and
- [2] Specify that these permit requirements apply only when the facility is operating under its startup, shutdown, and malfunction plan.

(b) Changes that may significantly increase emissions.

- [1] The permittee must notify the department in writing of changes to the startup, shutdown, and malfunction plan or changes to the design of the source that may significantly increase emissions of toxic compounds from startup, shutdown, or malfunction events, including releases from emergency safety vents. The permittee must notify the department of such changes within five

days of making such changes. The permittee must identify in the notification recommended revisions to permit conditions necessary as a result of the changes to ensure that emissions of toxic compounds are minimized during these events.

[2] The department may revise permit conditions as a result of these changes to ensure that emissions of toxic compounds are minimized during startup, shutdown, or malfunction events, including releases from emergency safety vents either:

[a] Upon permit renewal, or, if warranted; or

[b] By modifying the permit under subsection 1 of section 33-24-06-12 or section 33-24-06-14; or

(3) Clean Air Act option. Under this option:

(a) The owner or operator must document that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2) has been approved by the department under 40 CFR 63.1206(c)(2)(ii)(B); and

(b) The department will omit from the permit conditions that are not applicable under subsection 2 of section 33-24-05-144 and subsection 2 of section 33-24-05-525.

## **2. Interim status facilities.**

a. Interim status operations. In compliance with subsection 5 of section 33-24-06-16 and subsection 2 of section 33-24-05-525, the owner or operator of an incinerator, cement kiln, or lightweight aggregate kiln that is operating under the interim status standards of subsection 5 of section 33-24-06-16 or sections 33-24-05-201 through 33-24-05-249 and sections 33-24-05-525 through 33-24-05-549 may control emissions of toxic compounds during startup, shutdown, and malfunction events under either of the following options after conducting a comprehensive performance test and submitting to the department a notification of compliance documenting compliance with the standards of 40 CFR part 63, subpart EEE:

(1) Hazardous waste option. Under this option, the owner or operator continues to comply with the interim status emission

standards and operating requirements of subsection 5 of section 33-24-06-16 or sections 33-24-05-201 through 33-24-05-249 and sections 33-24-05-525 through 33-24-05-549 relevant to control of emissions from startup, shutdown, and malfunction events. Those standards and requirements apply only during startup, shutdown, and malfunction events; or

(2) Clean Air Act option. Under this option, the owner or operator is exempt from the interim status standards of subsection 5 of section 33-24-06-16 or sections 33-24-05-201 through 33-24-05-249 and sections 33-24-05-525 through 33-24-05-549 relevant to control of emissions of toxic compounds during startup, shutdown, and malfunction events upon submission of written notification and documentation to the department that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2) has been approved by the department under 40 CFR 63.1206(c)(2)(ii)(B).

b. Operations under a subsequent hazardous waste permit. When an owner or operator of an incinerator, cement kiln, or lightweight aggregate kiln that is operating under the interim status standards of subsection 5 of section 33-24-06-16 or sections 33-24-05-201 through 33-24-05-249 and sections 33-24-05-525 through 33-24-05-549 submits a hazardous waste permit application, the owner or operator may request that the department control emissions from startup, shutdown, and malfunction events under any of the options provided by paragraphs 1, 2, or 3 of subdivision b of subsection 1 of section 33-24-06-100.

**History:** Effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

**Appendix I to Section 33-24-06-14 -  
Classification of Permit Modification (Continued)**

Modifications	Class
<b>A. General Permit Provisions</b>	
1. Administrative and informational changes.	1
2. Correction of typographical errors.	1
3. Equipment replacement or upgrading with functionally equivalent components (for example, pipes, valves, pumps, conveyors, controls).	1
4. Changes in the frequency of or procedures for monitoring, reporting, sampling, or maintenance activities by the permittee:	
a. To provide for more frequent monitoring, reporting, sampling, or maintenance.	1
b. Other changes.	2
5. Schedule of compliance:	
a. Changes in interim compliance dates, with prior approval of the department.	11
b. Extension of final compliance date.	3
6. Changes in expiration date of permit to allow earlier permit termination, with prior approval of the department.	11
7. Changes in ownership or operational control of a facility, provided the procedures of subsection 2 of section 33-24-06-11 are followed.	11
8. <u>Changes to remove permit conditions that are no longer applicable (for example, because the standards upon which they are based are no longer applicable to the facility).</u>	<u>11</u>
<b>B. General Facility Standards</b>	
1. Changes to waste sampling or analysis methods:	
a. To conform with department guidance or regulations.	1
b. To incorporate changes associated with F039 (multisource leachate) sampling or analysis methods.	1
c. To incorporate changes associated with underlying hazardous constituents in ignitable or corrosive wastes.	11
d. Other changes.	
2. Changes to analytical quality assurance/control plan:	
a. To conform with department guidance or regulations.	1
b. Other changes.	2
3. Changes in procedures for maintaining the operating record.	1

Modifications	Class
4. Changes in frequency or content of inspection schedules.	2
5. Changes in the training plan:	
a. That affect the type or decrease the amount of training given to employees.	2
b. Other changes.	1
6. Contingency plan:	
a. Changes in emergency procedures (for example, spill or release response procedures).	2
b. Replacement with functionally equivalent equipment, upgrade, or relocate emergency equipment listed.	1
c. Removal of equipment from emergency equipment list.	2
d. Changes in name, address, or telephone number of coordinators or other persons or agencies identified in the plan.	1
7. Construction quality assurance plan:	
a. Changes that the CQA officer certifies in the operating record will provide equivalent or better certainty that the unit components meet the design specifications.	1
b. Other changes.	2
<p>Note: When a permit modification (such as introduction of a new unit) requires a change in facility plans or other general facility standards, that change shall be reviewed under the same procedures as the permit modification.</p>	
<p>C. Ground Water Protection</p>	
1. Changes to wells:	
a. Changes in the number, location, depth, or design of upgradient or downgradient wells of permitted ground water monitoring system.	2
b. Replacement of an existing well that has been damaged or rendered inoperable, without change to location, design, or depth of the well.	1
2. Changes in ground water sampling or analysis procedures or monitoring schedule, with prior approval of the department.	11
3. Changes in statistical procedure for determining whether a statistically significant change in ground water quality between upgradient and downgradient wells has occurred, with prior approval of the department.	11
4. Changes in point of compliance.	12

Modifications	Class
5. Changes in indicator parameters, hazardous constituents, or concentration limits (including ACLs):	
a. As specified in the ground water protection standard.	3
b. As specified in the detection monitoring program.	2
6. Changes to a detection monitoring program as required by subsection 8 of section 33-24-05-55, unless specified in this appendix.	2
7. Compliance monitoring program:	
a. Addition of compliance monitoring program as required by subdivision d of subsection 7 of section 33-24-05-55 and section 33-24-05-56.	3
b. Changes to a compliance monitoring program as required by subsection 10 of section 33-24-05-56, unless otherwise specified in this appendix.	2
8. Corrective action program:	
a. Addition of a corrective action program as required by subdivision b of subsection 8 of section 33-24-05-56 and section 33-24-05-57.	3
b. Changes to a corrective action program as required by subsection 8 of section 33-24-05-57, unless otherwise specified in this appendix.	2
D. Closure	
1. Changes to the closure plan:	
a. Changes in estimate of maximum extent of operations or maximum inventory of waste onsite at any time during the active life of the facility, with prior approval of the department.	11
b. Changes in the closure schedule for any unit, changes in the final closure schedule for the facility, or extension of the closure period, with prior approval of the department.	11
c. Changes in the expected year of final closure, where other permit conditions are not changed, with prior approval of the department.	11
d. Changes in procedures for decontamination of facility equipment or structures, with prior approval of the department.	11
e. Changes in approved closure plan resulting from unexpected events occurring during partial or final closure, unless otherwise specified in this appendix.	2
2. Creation of a new landfill unit as part of closure.	3

Modifications	Class
3. Addition of the following new units to be used temporarily for closure activities:	
a. Surface impoundments.	3
b. Incinerators.	3
c. Waste piles that do not comply with subsection 3 of section 33-24-05-130.	3
d. Waste piles that comply with subsection 3 of section 33-24-05-130.	2
e. Tanks or containers (other than specified below).	2
f. Tanks used for neutralization, dewatering, phase separation, or component separation, with prior approval of the department.	11
g. <u>Staging piles.</u>	2
E. Postclosure	
1. Changes in name, address, or telephone number of contact in postclosure plan.	1
2. Extension of postclosure care period.	2
3. Reduction in the postclosure care period.	3
4. Changes to the expected year of final closure, where other permit conditions are not changed.	1
5. Changes in postclosure plan necessitated by events occurring during the active life of the facility, including partial and final closure.	2
F. Containers	
1. Modification or addition of container units:	
a. Resulting in greater than 25% increase in the facility's container storage capacity, except as provided in F(1)(c) and F(4)(a) below.	3
b. Resulting in up to 25% increase in the facility's container storage capacity, except as provided in F(1)(c) and F(4)(a) below.	2

Modifications	Class
<ul style="list-style-type: none"> <li>c. Or treatment processes necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards or to treat wastes to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" with prior approval of the department. This modification may also involve addition of new waste codes or narrative descriptions of wastes. It is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</li> </ul>	11
2.	
<ul style="list-style-type: none"> <li>a. Modification of a container unit without increasing the capacity of the unit.</li> </ul>	2
<ul style="list-style-type: none"> <li>b. Addition of a roof to a container unit without alteration of the containment system.</li> </ul>	1
3. Storage of different wastes in containers, except as provided in F(4) below:	
<ul style="list-style-type: none"> <li>a. That require additional or different management practices from those authorized in the permit.</li> </ul>	3
<ul style="list-style-type: none"> <li>b. That do not require additional or different management practices from those authorized in the permit.</li> </ul>	2
<p>Note: See subsection 7 of section 33-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.</p>	
4. Storage or treatment of different wastes in containers:	
<ul style="list-style-type: none"> <li>a. That require addition of units or change in treatment process or management standards, provided that the wastes are restricted from land disposal and are to be treated to meet some or all of the applicable treatment standards, or that are to be treated to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii) <u>as contained in the most recent revised edition (July 1, 2003)</u>. This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</li> </ul>	1
<ul style="list-style-type: none"> <li>b. That do not require the addition of units or a change in the treatment process or management standards, and provided that the units have previously received wastes of the same type (for example, incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</li> </ul>	11
G. Tanks	

Modifications	Class
<ol style="list-style-type: none"> <li>1.               <ol style="list-style-type: none"> <li>a. Modification or addition of tank units resulting in greater than 25% increase in the facility's tank capacity, except as provided in G(1)(c), G(1)(d), and G(1)(e) below.</li> <li>b. Modification or addition of tank units resulting in up to 25% increase in the facility's tank capacity, except as provided in G(1)(d) and G(1)(e) below.</li> <li>c. Addition of a new tank that will operate for more than 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation, or component separation.</li> <li>d. After prior approval of the department, addition of a new tank that will operate for up to 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation, or component separation.</li> <li>e. Modification or addition of tank units or treatment processes necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards or to treat wastes to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii) <u>as contained in the most recent revised edition (July 1, 2003)</u>, with prior approval of the department. This modification may also involve addition of new waste codes. It is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</li> </ol> </li> <li>2. Modification of a tank unit or secondary containment system without increasing the capacity of the unit.</li> <li>3. Replacement of a tank with a tank that meets the same design standards and has a capacity within +/- 10% of the replaced tank provided:               <ol style="list-style-type: none"> <li>a. The capacity difference is no more than 1,500 gallons;</li> <li>b. The facility's permitted tank capacity is not increased; and</li> <li>c. The replacement tank meets the same conditions in the permit.</li> </ol> </li> <li>4. Modification of a tank management practice.</li> <li>5. Management of different wastes in tanks:</li> </ol>	<ol style="list-style-type: none"> <li>3</li> <li>2</li> <li>2</li> <li>11</li> <li>11</li> <li>2</li> <li>1</li> <li>2</li> <li>2</li> </ol>

Modifications	Class
a. That require additional or different management practices, tank design, different fire protection specifications, or significantly different tank treatment process from that authorized in the permit, except as provided in G(5)(c) below.	3
b. That do not require additional or different management practices, tank design, different fire protection specifications, or significantly different tank treatment process than authorized in the permit, except as provided in G(5)(d).	2
c. That require addition of units or change in treatment processes or management standards, provided that the wastes are restricted from land disposal and are to be treated to meet some or all of the applicable treatment standards or that are to be treated to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii) <u>as contained in the most recent revised edition (July 1, 2003)</u> . The modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).	11
d. That do not require the addition of units or a change in the treatment process or management standards, and provided that the units have previously received wastes of the same type (for example, incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).	1
<p>Note: See subsection 7 of section 33-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.</p>	
<p>H. Surface Impoundments</p>	
1. Modification or addition of surface impoundment units that result in increasing the facility's surface impoundment storage or treatment capacity.	3
2. Replacement of a surface impoundment unit.	3
3. Modification of a surface impoundment unit without increasing the facility's surface impoundment storage or treatment capacity and without modifying the unit's liner, leak detection system, or leachate collection system.	2
4. Modification of a surface impoundment management practice.	2
5. Treatment, storage, or disposal of different wastes in surface impoundments:	

Modifications	Class
a. That require additional or different management practices or different design of the liner or leak detection system than authorized in the permit.	3
b. That do not require additional or different management practices or different design of the liner or leak detection system than authorized in the permit.	2
c. That are wastes restricted from land disposal that meet the applicable treatment standards or that are treated to satisfy the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii) <u>as contained in the most recent revised edition (July 1, 2003)</u> , and provided that the unit meets the minimum technological requirements stated in subdivision b of subsection 8 of section 33-24-05-254. This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).	1
d. That are residues from wastewater treatment or incineration, provided that disposal occurs in a unit that meets the minimum technological requirements stated in subdivision b of subsection 8 of section 33-24-05-254, and provided further that the surface impoundment has previously received wastes of the same type (for example, incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).	1
6. Modifications of unconstructed units to comply with subsection 3 of section 33-24-05-116, section 33-24-05-123, section 33-24-05-124, and subsection 4 of section 33-24-05-117.	11
7. Changes in response action plan:	
a. Increase in action leakage rate.	3
b. Change in a specific response reducing its frequency or effectiveness.	3
c. Other changes.	2
<p>Note: See subsection 7 of section 33-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.</p>	
<p>I. Enclosed Waste Piles. For all waste piles except those complying with subsection 3 of section 33-24-05-130, modifications are treated the same as for a landfill. The following modifications are applicable only to waste piles complying with subsection 3 of section 33-24-05-130.</p>	

Modifications	Class
1. Modification or addition of waste pile units:	
a. Resulting in greater than 25% increase in the facility's waste pile storage or treatment capacity.	3
b. Resulting in up to 25% increase in the facility's waste pile storage or treatment capacity.	2
2. Modification of waste pile unit without increasing the capacity of the unit.	2
3. Replacement of a waste pile unit with another waste pile unit of the same design and capacity and meeting all waste pile conditions in the permit.	1
4. Modification of a waste pile management practice.	2
5. Storage or treatment of different wastes in waste piles:	
a. That require additional or different management practices or different design of the unit.	3
b. That do not require additional or different management practices or different design of the unit.	2
Note: See subsection 7 of section 33-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.	
6. Conversion of an enclosed waste pile to a containment building unit.	2
J. Landfills and Unenclosed Waste Piles	
1. Modification or addition of landfill units that result in increasing the facility's disposal capacity.	3
2. Replacement of a landfill.	3
3. Addition or modification of a liner, leachate collection system, leachate detection system, runoff control, or final cover system.	3
4. Modification of a landfill unit without changing a liner, leachate collection system, leachate detection system, runoff control, or final cover system.	2
5. Modification of a landfill management practice.	2
6. Landfill different wastes:	
a. That require additional or different management practices; <u>or</u> different design of the liner, leachate collection system, or leachate detection system.	3
b. That do not require additional or different management practices; <u>or</u> different design of the liner, leachate collection system, or leachate detection system.	2

Modifications	Class
<p>c. That are wastes restricted from land disposal that meet the applicable treatment standards or that are treated to satisfy the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii) <u>as contained in the most recent revised edition (July 1, 2003)</u>, and provided that the landfill unit meets the minimum technological requirements stated in subdivision b of subsection 8 of section 33-24-05-254. This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</p>	1
<p>d. That are residues from wastewater treatment or incineration, provided that disposal occurs in a landfill unit that meets the minimum technological requirements stated in subdivision b of subsection 8 of section 33-24-05-254, and provided further that the landfill has previously received wastes of the same type (for example, incinerator ash). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</p>	1
<p>7. Modifications of unconstructed units to comply with subsection 3 of section 33-24-05-131, section 33-24-05-137, section 33-24-05-138, subsection 3 of section 33-24-05-132, subsection 3 of section 33-24-05-177, section 33-24-05-187, subsection 3 of section 33-24-05-178, and section 33-24-05-188.</p>	11
<p>8. Changes in response action plan:</p>	
<p>a. Increase in action leakage rate.</p>	3
<p>b. Change in a specific response reducing its frequency or effectiveness.</p>	3
<p>c. Other changes.</p>	2
<p>Note: See subsection 7 of section 33-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.</p>	
<p>K. Land Treatment</p>	
<p>1. Lateral expansion of or other modification of a land treatment unit to increase areal extent.</p>	3
<p>2. Modification of run-on control system.</p>	2
<p>3. Modify runoff control system.</p>	3
<p>4. Other modifications of land treatment unit component specifications or standards required in permit.</p>	2
<p>5. Management of different wastes in land treatment units:</p>	

Modifications	Class
a. That require a change in permit operating conditions or unit design specifications.	3
b. That do not require a change in permit operating conditions or unit design specifications.	2
Note: See subsection 7 of section 33-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.	
6. Modification of a land treatment unit management practice to:	
a. Increase rate or change method of waste application.	3
b. Decrease rate of waste application.	1
7. Modification of a land treatment unit management practice to change measures of pH or moisture content, or to enhance microbial or chemical reactions.	2
8. Modification of a land treatment unit management practice to grow food chain crops, to add to or replace existing permitted crops with different food chain crops, or to modify operating plans for distribution of animal feeds resulting from such crops.	3
9. Modification of operating practice due to detection of releases from the land treatment unit pursuant to subdivision b of subsection 7 of section 33-24-05-165.	3
10. Changes in the unsaturated zone monitoring system, resulting in a change to the location, depth, number of sampling points, or <u>which</u> replace unsaturated zone monitoring devices or components of devices with devices or components that have specifications different from permit requirements.	3
11. Changes in the unsaturated zone monitoring system that do not result in a change to the location, depth, number of sampling points, or <del>that</del> <u>which</u> replace unsaturated zone monitoring devices or components of devices with devices or components having specifications different from permit requirements.	2
12. Changes in background values for hazardous constituents in soil and soil-pore liquid.	2
13. Changes in sampling, analysis, or statistical procedure.	2
14. Changes in land treatment demonstration program prior to or during the demonstration.	2
15. Changes in any condition specified in the permit for a land treatment unit to reflect results of the land treatment demonstration, provided performance standards are met, and the department's prior approval has been received.	11

Modifications	Class
16. Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, provided the conditions for the second demonstration are substantially the same as the conditions for the first demonstration and have received the prior approval of the department.	11
17. Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, where the conditions for the second demonstration are not substantially the same as the conditions for the first demonstration.	3
18. Changes in vegetative cover requirements for closure.	2
L. Incinerators, Boilers, and Industrial Furnaces:	
1. Changes to increase by more than 25% any of the following limits authorized in the permit: A thermal feed rate limit, a feedstream feed rate limit, a chlorine/chloride feed rate limit, a metal feed rate limit, or an ash feed rate limit. The department will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.	3
2. Changes to increase by up to 25% any of the following limits authorized in the permit: A thermal feed rate limit, a feedstream feed rate limit, a chlorine/chloride feed rate limit, a metal feed rate limit, or an ash feed rate limit. The department will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.	2
3. Modification of an incinerator, boiler, or industrial furnace unit by changing the internal size or geometry of the primary or secondary combustion units, by adding a primary or secondary combustion unit, by substantially changing the design of any component used to remove hydrogen chloride and chlorine metals, or particulate from the combustion gases, or by changing other features of the incinerator, boiler, or industrial furnace that could affect its capability to meet the regulatory performance standards. The department will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.	3

Modifications	Class
<p>4. Modification of an incinerator, boiler, or industrial furnace unit in a manner that would not likely affect the capability of the unit to meet the regulatory performance standards but which would change the operating conditions or monitoring requirements specified in the permit. The department may require a new trial burn to demonstrate compliance with the regulatory performance standards.</p>	2
<p>5. Operating requirements:</p> <p>a. Modification of the limits specified in the permit for minimum or maximum combustion gas temperature, minimum combustion gas residence time, oxygen concentration in the secondary combustion chamber, flue gas carbon monoxide and hydrocarbon concentration, maximum temperature at the inlet to the particulate matter emission control system, or operating parameters for the air pollution control system. The department will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.</p> <p>b. Modification of any stack gas emission limits specified in the permit, or modification of any conditions in the permit concerning emergency shutdown or automatic waste feed cutoff procedures or controls.</p> <p>c. Modification of any other operating condition or any inspection or recordkeeping requirement specified in the permit.</p>	3
<p>6. Burning different wastes:</p> <p>a. If the waste contains a POHC that is more difficult to burn than authorized by the permit or if burning of the waste requires compliance with different regulatory performance standards than specified in the permit. The department will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.</p> <p>b. If the waste does not contain a POHC that is more difficult to burn than authorized by the permit and if burning of the waste does not require compliance with different regulatory performance standards than specified in the permit.</p>	3
<p>Note: See subsection 7 of section 33-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.</p> <p>7. Shakedown and trial burn:</p>	2

Modifications	Class
a. Modification of the trial burn plan or any of the permit conditions applicable during the shakedown period for determining operational readiness after construction, the trial burn period, or the period immediately following the trial burn.	2
b. Authorization of up to an additional 720 hours of waste burning during the shakedown period for determining operational readiness after construction, with the prior approval of the department.	11
c. Changes in the operating requirements set in the permit for conducting a trial burn, provided the change is minor and has received the prior approval of the department.	11
d. Changes in the ranges of the operating requirements set in the permit to reflect the results of the trial burn, provided the change is minor and has received the prior approval of the department.	11
8. Substitution of an alternative type of nonhazardous waste fuel that is not specified in the permit.	1
9. <u>Technology changes needed to meet standards under 40 CFR part 63 (subpart EEE--national emission standards for hazardous air pollutants from hazardous waste combustors), provide the procedures of subsection 10 of section 33-24-06-14 are followed.</u>	11
M. Containment Buildings	
1. Modification or addition of containment building units:	
a. Resulting in greater than 25% increase in the facility's containment building storage or treatment capacity.	3
b. Resulting in up to 25% increase in the facility's containment building storage or treatment capacity.	2
2. Modification of a containment building unit or secondary containment system without increasing the capacity of the unit.	2
3. Replacement of a containment building with a containment building that meets the same design standards provided:	
a. The unit capacity is not increased.	1
b. The replacement containment building meets the same conditions in the permit.	1
4. Modification of a containment building management practice.	2
5. Storage or treatment of different wastes in containment buildings:	
a. That require additional or different management practices.	3

Modifications	Class
b. That do not require additional or different management practices.	2
N. Corrective Action	
1. Approval of a corrective action management unit pursuant to section 33-24-05-552.	3
2. Approval of a temporary unit or time extension for a temporary unit pursuant to section 33-24-05-553.	2
3. <u>Approval of a staging pile or staging pile operating term extension pursuant to section 33-24-05-554.</u>	2

FOOTNOTE: <sup>1</sup>Class 1 modifications requiring prior department approval.

## CHAPTER 33-24-07

### 33-24-07-03. Modification, revocation and reissuance, or termination of permits.

1. Permits may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the department's initiative. However, permits may only be modified, revoked and reissued, or terminated by the department for the reasons specified in section 33-24-06-12 or 33-24-06-13. All requests shall be in writing and shall contain facts or reasons supporting the request.
2. If the department decides the request is not justified, the department shall send the requester a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comments, or hearings. Denials by the department may be informally appealed to the department by letter briefly setting forth the relevant facts. The department may then begin modification, revocation and reissuance, or termination proceedings under subsection 3. The appeal shall be considered denied if the department takes no action on the letter within sixty days after receiving it.
3. Requirements to modify or revoke.
  - a. If the department tentatively decides to modify, ~~terminate~~, or revoke and reissue a permit under section 33-24-06-12 and subsection 3 of section 33-24-06-14, the department shall prepare a draft permit under section 33-24-07-04 incorporating the proposed changes. The department may request additional information and, in the case of a modified permit, may require the submission of an updated permit application. In the case of revoked and reissued permits, the department shall require the submission of a new application.
  - b. In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit. When a permit is revoked and reissued under this section, the entire permit is reopened just as if the permit had expired and was being reissued. During any revocation and reissuance proceeding, the permittee shall comply with all conditions of the existing permit until a new final permit is reissued.
  - c. "Class 1 and 2 modifications" as defined in section 33-24-06-14 are not subject to the requirements of this section.

4. If the department tentatively decides to terminate a permit under section 33-24-06-13, the department shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under section 33-24-07-04.

**History:** Effective January 1, 1984; amended effective December 1, 1988; January 1, 1994; December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

**33-24-07-06. Public notice of permit actions and public comment period.**

**1. Scope.**

- a. The department shall give public notice that the following actions have occurred:
  - (1) A permit application has been tentatively denied under subsection 2 of section 33-24-07-04.
  - (2) A draft permit has been prepared under subsection 3 of section 33-24-07-04.
  - (3) A hearing has been scheduled under section 33-24-07-08.
  - (4) An appeal has been granted under subsection 3 of section 33-24-07-14.
- b. No public notice is required when a request for permit modification, revocation and reissuance, or termination is denied under subsection 2 of section 33-24-07-03. Written notice of that denial must be given to the requester and to the permittee.
- c. Public notices may describe more than one permit or permit action.

**2. Timing.**

- a. Public notice of the preparation of a draft permit (including a notice of intent to deny a permit application) required under subsection 1 must allow at least forty-five days for public comment.
- b. Public notice of a public hearing must be given at least thirty days before the hearing. (Public notice of the hearing may be given at the same time as public notice of the draft permit and the two notices may be combined.)

3. **Methods.** Public notice of activities described in subdivision a of subsection 1 must be given by the following methods:
- a. By mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under this subsection may waive that person's rights to receive notice for any classes and categories of permits):
    - (1) The applicant.
    - (2) Any other agency which the department knows has issued or is required to issue permits for the same facility or activity, including the environmental protection agency.
    - (3) Federal and state agencies with jurisdiction over fish, shellfish, and wildlife resources, the advisory council on historic preservation, state historic preservation officers, and other appropriate government authorities, including other affected states.
    - (4) Persons on a mailing list developed by:
      - (a) Including those who request in writing to be on the list;
      - (b) Soliciting persons for "area lists" from participants in past permit proceedings in that area; and
      - (c) Notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as regional and ~~state-funded~~ state-funded newsletters, environmental bulletins, or state law journals. (The department may update the mailing list from time to time by requesting written indication of continued interest from those listed. The department may delete from the list the name of any person who fails to respond to such a request.)
    - (5) To any unit of local government having jurisdiction over the area where the facility is proposed to be located.
    - (6) To each state agency having any authority under state law with respect to construction or operation of such facility.
  - b. This notice must comply with subsection 8 of North Dakota Century Code section 23-20.3-05 and must be in a manner constituting legal notice to the public under state law.
  - c. Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it,

including press releases or any other form or medium to elicit public participation.

**4. Contents.**

- a. All public notices. All public notices issued under this chapter must contain the following minimum information:
    - (1) Name and address of the office processing the permit action for which notice is being given.
    - (2) Name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit.
    - (3) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit.
    - (4) Name, address, and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit, fact sheet, and the application.
    - (5) A brief description of the comment procedures required by sections 33-24-07-07 and 33-24-07-08 and the time and place of any hearing that will be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision.
    - (6) Any additional information considered necessary or proper.
  - b. Public notices for hearings. In addition to the general public notice described in subdivision a, the public notice of a hearing under section 33-24-07-08 must contain the following information:
    - (1) Reference to the date of previous public notices relating to the permit.
    - (2) Date, time, and place of the hearing.
    - (3) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.
- 5. Distribution of copies.** In addition to the general public notice described in subdivision a of subsection 4, all persons identified in paragraphs 1, 2, and 3 of subdivision a of subsection 3 must be mailed

a copy of the fact sheet, the permit application (if any), and the draft permit (if any).

**History:** Effective January 1, 1984; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

**33-24-07-25. Preapplication public meeting and notice.**

1. **Applicability.** The requirements of this section apply to all hazardous waste part B applications seeking initial permits for hazardous waste management units. The requirements of this section also apply to hazardous waste part B applications seeking renewal of permits for such units, where the renewal application is proposing a significant change in facility operations. For the purposes of this section, a "significant change" is any change that would qualify as a class 3 permit modification under section 33-24-06-14. The requirements of this section do not apply to permit modifications under section 33-24-06-14 or to applications that are submitted for the sole purpose of conducting postclosure activities or postclosure activities and corrective action at a facility.
2. Prior to the submission of a part B hazardous waste permit application for a facility, the applicant must hold at least one meeting with the public in order to solicit questions from the community and inform the community of proposed hazardous waste management activities. The applicant shall post a sign-in sheet or otherwise provide a voluntary opportunity for attendees to provide their names and addresses.
3. The applicant shall submit a summary of the meeting, along with the list of attendees and their addresses developed under subsection 2, and copies of any written comments or materials submitted at the meeting, to the department as a part of the part B application, in accordance with subsection 2 of section ~~33-24-06-14~~ 33-24-06-17.
4. The applicant shall provide public notice of the preapplication meeting at least thirty days prior to the meeting. The applicant shall maintain, and provide to the department upon request, documentation of the notice.
  - a. The applicant shall provide public notice in all of the following forms:
    - (1) A newspaper advertisement. The applicant shall publish a notice, fulfilling the requirements in subdivision b, in a newspaper of general circulation in the county or equivalent jurisdiction that hosts the proposed location of the facility. In addition, the department shall instruct the applicant to publish the notice in newspapers of general circulation in adjacent counties or equivalent jurisdictions, where the department determines that such publication is necessary to inform the

affected public. The notice must be published as a display advertisement.

- (2) A visible and accessible sign. The applicant shall post a notice on a clearly marked sign at or near the facility, fulfilling the requirements in subdivision b. If the applicant places the sign on the facility property, then the sign must be large enough to be readable from the nearest point where the public would pass by the site.
- (3) A broadcast media announcement. The applicant shall broadcast a notice, fulfilling the requirements in subdivision b, at least once on at least one local radio station or television station. The applicant may employ another medium with prior approval of the department.
- (4) A notice to the department. The applicant shall send a copy of the newspaper notice to the department and to the appropriate units of state and local government, in accordance with subdivision b of subsection 3 of section 33-24-07-06.

b. The notices required under subdivision a must include:

- (1) The date, time, and location of the meeting;
- (2) A brief description of the purpose of the meeting;
- (3) A brief description of the facility and proposed operations, including the address or a map (for example, a sketched or copied street map) of the facility location;
- (4) A statement encouraging people to contact the facility at least seventy-two hours before the meeting if they need special access to participate in the meeting; and
- (5) The name, address, and telephone number of a contact person for the applicant.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

**33-24-07-26. Public notice requirements at the application stage.**

1. **Applicability.** The requirements of this section apply to all hazardous waste part B applications seeking initial permits for hazardous waste management units. The requirements of this section also apply to hazardous waste part B applications seeking renewal of permits

for such units under section 33-24-06-02. The requirements of this section do not apply to permit modifications under section 33-24-06-14 or permit applications submitted for the sole purpose of conducting postclosure activities or postclosure activities and corrective action at a facility.

2. Notification at application submittal.
  - a. The department shall provide public notice as set forth in paragraph 4 of subdivision a of subsection 3 of section 33-24-07-06, and notice to appropriate units of state and local government as set forth in subdivision b of subsection 3 of section 33-24-07-06, that a part B permit application has been submitted to the department and is available for review.
  - b. The notice must be published within a reasonable period of time after the application is received by the department. The notice must include:
    - (1) The name and telephone number of the applicant's contact person;
    - (2) The name and telephone number of the department's contact office, and a mailing address to which information, opinions, and inquiries may be directed throughout the permit review process;
    - (3) An address to which people can write in order to be put on the facility mailing list;
    - (4) The location where copies of the permit application and any supporting documents can be viewed and copied;
    - (5) A brief description of the facility and proposed operations, including the address or a map (for example, a sketched or copied street map) of the facility location on the front page of the notice; and
    - (6) The date that the application was submitted.
3. Concurrent with the notice required under subsection 2, the department must place the permit application and any supporting documents in a location accessible to the public in the vicinity of the facility or at the department's office.

**History:** Effective July 1, 1997; amended effective December 1, 2003.

**General Authority:** NDCC 23-20.3-03

**Law Implemented:** NDCC 23-20.3-03, 23-20.3-04, 23-20.3-05

**JANUARY 2004**

**CHAPTER 33-06-05**

**33-06-05-01. Requirements.**

**1. Definitions. As used in this section:**

- a. "Age-appropriate immunizations" refers to the vaccines a child should receive based on age and previous immunization history as recommended by the advisory committee on immunization practices of the United States department of health and human services and outlined by the North Dakota immunization schedule.
- b. "Beliefs" as used in subsection 3 of North Dakota Century Code section 23-07-17.1 means sincerely held religious, philosophical, or moral beliefs which are not a pretense for avoiding legal requirements.
- c. "Institution" includes all early childhood facilities, head start programs, preschool educational facilities, public and private kindergartens, and elementary and high schools operating in North Dakota.
- d. "Institutional authority" means anyone designated by the governing body of an institution.

**2. Minimum requirements.**

- a. Minimum requirements for children attending early childhood facilities, head start programs, and preschool educational facilities shall be age-appropriate immunizations against diphtheria, pertussis, tetanus, poliomyelitis, measles, mumps, and rubella. Each child must also be adequately immunized for haemophilus influenzae type B disease at the age-appropriate schedule recommended by the state department of health. Effective January 1, 2004, each child must be adequately immunized against varicella (chickenpox) disease according to the advisory

committee on immunization practices (ACIP), unless there is a reliable history of varicella (chickenpox) disease, medical, or "beliefs" exemption. In the case of a child with a history of chickenpox disease or other exemption, an exemption form should be signed by the child's physician or parent or guardian.

- b. Minimum requirements for children attending kindergartens and elementary and high schools shall be age-appropriate immunizations against diphtheria, pertussis, tetanus, poliomyelitis, measles, mumps, and rubella. A second dose of measles, mumps, and rubella (MMR) vaccine is required for children who entered kindergarten or first grade in the 1992-93 school year. Each subsequent year, the next higher grade will be included in the second dose immunization requirement so those students transferring into North Dakota schools are added to the MMR immunization cohort.
  - c. Effective with the 2000-01 school year, in addition to the immunizations previously mentioned, a student must complete the hepatitis B vaccine series prior to entry into kindergarten or first grade if the student's school does not have a kindergarten. Each subsequent year, the next higher grade will be included in the hepatitis B immunization requirement so those students transferring into North Dakota schools are added to the hepatitis B immunization cohort.
  - d. Effective with the 2004-05 school year, in addition to the immunizations previously mentioned, a student must receive the varicella (chickenpox) vaccine before being admitted into any kindergarten or first grade if the student's school does not have a kindergarten. Each subsequent year, the next higher grade will be included in the varicella immunization requirement so those students transferring into North Dakota schools are added to the varicella immunization cohort. A child with a reliable history of chickenpox disease or who has a medical or "beliefs" exemption is exempt from the above requirement. A physician or parent or guardian must sign an exemption form stating that the child has had chickenpox disease or has a medical or "beliefs" exemption. The exemption form must be kept on file with the immunization records at the child's school.
3. **Recordkeeping and reporting.** Records and reports requested by the state department of health shall be completed and submitted to the state department of health.
- a. Certificates of immunization or other official proof of immunization must be presented to the designated institutional authority before any child is admitted to an institution. The parent or guardian of a child claiming a medical or belief exemption shall present an

appropriately signed statement of exemption to the designated institutional authority. Proof of immunization or the statement of exemption must be maintained by the child's school or early childhood facility.

- b. The school or early childhood facility immunization summary report must be submitted to the state department of health by November first of each year or such other annual date as the department may designate.

**4. Appointment of an institutional authority.**

- a. An institutional authority shall be appointed for each institution by its governing board or authorized personnel. The authority must be an employee of such institution.
- b. The name of the designated institutional authority, the institution, address, and telephone number shall be submitted to the appropriate governing state department by July first of each year.

- 5. Provisional admission - Exclusion.** Any child admitted to school or early childhood facility under the provision that such child is in the process of receiving the required immunizations shall be required to receive the immunizations according to the recommended schedule set forth by the state department of health. Any child not adhering to the recommended schedule shall provide proof of immunization or a certificate of immunization within thirty days of enrollment or be excluded from school or early childhood facility.

**History:** Amended effective November 1, 1979; September 1, 1991; January 1, 1998; February 1, 2000; January 1, 2004.

**General Authority:** NDCC 23-01-03

**Law Implemented:** NDCC 23-07-17.1



**TITLE 45**  
**INSURANCE COMMISSIONER**



## MARCH 2004

### CHAPTER 45-03-15

**45-03-15-01. Accounting practices and procedures.** Every insurance company doing business in this state shall file with the commissioner, pursuant to North Dakota Century Code section 26.1-03-07, the appropriate national association of insurance commissioners annual statement blank, prepared in accordance with the national association of insurance commissioners instructions handbook and following the accounting procedures and practices prescribed by the as of March ~~2004~~ 2003 version of the national association of insurance commissioners accounting practices and procedures manual for property and casualty and life and health insurance.

**History:** Effective January 1, 1992; amended effective January 1, 2000; December 1, 2001; March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-03-07, 26.1-03-11.1

**45-03-15-02. Reporting of financial information.** Every insurance company licensed to do business in this state shall transmit to the commissioner and to the national association of insurance commissioners its most recent financial statements compiled on a quarterly basis, within forty-five days following the calendar quarters ending March thirty-first, June thirtieth, and September thirtieth. The financial statements must be prepared and filed in the form prescribed by the commissioner and in accordance with the national association of insurance commissioners instructions handbook and following the accounting procedures and practices prescribed by the as of March ~~2004~~ 2003 version of the national association of insurance commissioners accounting practices and procedures manual for property and casualty and life and health insurance. The commissioner may exempt any company or category or class of companies from the filing requirement.

**History:** Effective January 1, 1992; amended effective January 1, 2000; December 1, 2001; March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-02-03, 26.1-03-07, 26.1-03-11.1

## CHAPTER 45-03-19

**45-03-19-01. Scope.** This chapter applies to all life insurance companies and fraternal benefit societies doing business in this state and to all life insurance companies and fraternal benefit societies that are authorized to reinsure life insurance, annuities, or accident and health insurance business in this state. This chapter shall be applied in a manner that allows the appointed actuary to utilize the actuary's professional judgment in performing the asset analysis and developing the actuarial opinion and supporting memoranda, consistent with relevant actuarial standards of practice. However, the commissioner shall have the authority to specify specific methods of actuarial analysis and actuarial assumptions when, in the commissioner's judgment, these specifications are necessary for an acceptable opinion to be rendered relative to the adequacy of reserves and related items. This chapter is applicable to all annual statements filed with the office of the commissioner on or after October 1, 1995. ~~Except with respect to companies that are exempted under section 45-03-19-04, a~~ A statement of opinion on the adequacy of the reserves and related actuarial items based on an asset adequacy analysis in accordance with section 45-03-19-06, and a supporting memorandum in accordance with section 45-03-19-07, are required each year. ~~Any company so exempted shall file a statement of actuarial opinion under section 45-03-19-05. Notwithstanding any other provision of this section, the commissioner may require any company otherwise exempt under this chapter to submit a statement of actuarial opinion and to prepare a supporting memorandum in accordance with sections 45-03-19-06 and 45-03-19-07 if, in the opinion of the commissioner, an asset adequacy analysis is necessary with respect to the company.~~

**History:** Effective October 1, 1995; amended effective March 1, 2004.

**General Authority:** NDCC 26.1-35-01.1

**Law Implemented:** NDCC 26.1-35-01.1

### **45-03-19-02. Definitions.**

1. "Actuarial standards board" means the board established by the American academy of actuaries to develop and promulgate standards of actuarial practice.
2. "Annual statement" means the statement required by North Dakota Century Code section 26.1-03-07 to be filed annually by the company with the office of the commissioner.
3. "Appointed actuary" means ~~any~~ an individual who is appointed or retained in accordance with subsection 3 of section 45-03-19-03 to provide the actuarial opinion and supporting memorandum as required by North Dakota Century Code section 26.1-35-01.1.
4. "Asset adequacy analysis" means an analysis that meets the standards and other requirements referred to in subsection 4 of section 45-03-19-03. ~~It may take many forms, including cash flow testing, sensitivity testing, or applications of risk theory.~~

5. "Company" means a life insurance company, fraternal benefit society, or reinsurer subject to the provisions of this chapter.
6. ~~"Noninvestment grade bonds" means bonds designated as classes 3, 4, 5, or 6 by the national association of insurance commissioners securities valuation office.~~
7. "Qualified actuary" means ~~any~~ an individual who meets the requirements in subsection 2 of section 45-03-19-03.

**History:** Effective October 1, 1995; amended effective March 1, 2004.

**General Authority:** NDCC 26.1-35-01.1

**Law Implemented:** NDCC 26.1-35-01.1

#### **45-03-19-03. General requirements.**

1. Submission of statement of actuarial opinion.
  - a. There must be included on or attached to page one of the annual statement for each year beginning 1995 the statement of an appointed actuary, entitled "statement of actuarial opinion", setting forth an opinion relating to reserves and related actuarial items held in support of policies and contracts, in accordance with section 45-03-19-06. ~~However, any company exempted under section 45-03-19-04 from submitting a statement of actuarial opinion in accordance with section 45-03-19-06 shall include on or attach to page one of the annual statement a statement of actuarial opinion rendered by an appointed actuary in accordance with section 45-03-19-05.~~
  - b. ~~If in the previous year a company provided a statement of actuarial opinion in accordance with section 45-03-19-05, and in the current year fails the exemption criteria of subdivisions a, b, or c of subsection 3 of section 45-03-19-04 to again provide an actuarial opinion in accordance with section 45-03-19-05, the statement of actuarial opinion in accordance with section 45-03-19-06 is not required until August first following the date of the annual statement. In this instance, the company shall provide a statement of actuarial opinion in accordance with section 45-03-19-05 with appropriate qualification noting the intent to subsequently provide a statement of actuarial opinion in accordance with section 45-03-19-06.~~
  - c. ~~In the case of a statement of actuarial opinion required to be submitted by a foreign or alien company, the commissioner may accept the statement of actuarial opinion filed by the company with the insurance supervisory regulator of another state if the commissioner determines that the opinion reasonably meets the requirements applicable to a company domiciled in this state.~~

- d. Upon written request by the company, the commissioner may grant an extension of the date for submission of the statement of actuarial opinion.
2. A "qualified actuary" is an individual who:
- a. Is a member in good standing of the American academy of actuaries;
  - b. Is qualified to sign statements of actuarial opinion for life and health insurance company annual statements in accordance with the American academy of actuaries qualification standards for actuaries signing the statements;
  - c. Is familiar with the valuation requirements applicable to life and health insurance companies;
  - d. Has not been found by the commissioner, or if so found, has subsequently been reinstated as a qualified actuary, following appropriate notice and hearing to have:
    - (1) Violated any provision of, or any obligation imposed by, the insurance law or other law in the course of the actuary's dealings as a qualified actuary;
    - (2) Been found guilty of fraudulent or dishonest practices;
    - (3) Demonstrated incompetency, lack of cooperation, or untrustworthiness to act as a qualified actuary;
    - (4) Submitted to the commissioner during the past five years, pursuant to this chapter, an actuarial opinion or memorandum that the commissioner rejected because it did not meet the provisions of this chapter, including standards set by the actuarial standards board; or
    - (5) Resigned or been removed as an actuary within the past five years as a result of acts or omissions indicated in any adverse report on examination or as a result of failure to adhere to generally acceptable actuarial standards; and
  - e. Has not failed to notify the commissioner of any action taken by any commissioner of any other state similar to that under subdivision d.
3. An "appointed actuary" is a qualified actuary who is appointed or retained to prepare the statement of actuarial opinion required by this chapter, either directly by or by the authority of the board of directors through an executive officer of the company other than the qualified actuary. The company shall give the commissioner timely written

notice of the name and title and, in the case of a consulting actuary, the name of the firm and manner of appointment or retention of each person appointed or retained by the company as an appointed actuary and shall state in the notice that the person meets the requirements set forth in subsection 2. Once notice is furnished, no further notice is required with respect to that person, provided that the company gives the commissioner timely written notice in the event the actuary ceases to be appointed or retained as an appointed actuary or to meet the requirements set forth in subsection 2. If any person appointed or retained as an appointed actuary replaces a previously appointed actuary, the notice shall so state and give the reasons for replacement.

4. The asset adequacy analysis required by this chapter:
  - a. Must conform to the standards of practice as promulgated from time to time by the actuarial standards board and on any additional standards under this chapter, which standards are to form the basis of the statement of actuarial opinion in accordance with ~~section 45-03-19-06.~~ this chapter; and
  - b. Must be based on methods of analysis as are deemed appropriate for the purposes by the actuarial standards board.
  
5. Liabilities to be covered.
  - a. Under authority of North Dakota Century Code section 26.1-35-01.1, the statement of actuarial opinion shall apply to all in-force business on the statement date, whether directly issued or assumed, regardless of when or where issued, for example, reserves of exhibits 8, 9, and 10, and claim liabilities in exhibit 11, part 1 and equivalent items in the separate account statement or statements.
  - b. If the appointed actuary determines as the result of asset adequacy analysis that a reserve should be held in addition to the aggregate reserve held by the company and calculated in accordance with methods set forth in North Dakota Century Code sections 26.1-35-02, 26.1-35-05, 26.1-35-06, 26.1-35-09, and 26.1-35-10, the company shall establish the additional reserve.
  - c. ~~For years ending prior to December 31, 1997, the company may, in lieu of establishing the full amount of the additional reserve in the annual statement for that year, set up an additional reserve in an amount not less than the following:~~
    - (1) ~~December 31, 1995 - The additional reserve divided by three.~~
    - (2) ~~December 31, 1996 - Two times the additional reserve divided by three.~~

- d. Additional reserves established under subdivision b or e and deemed not necessary in subsequent years may be released. Any amounts released must be disclosed in the actuarial opinion for the applicable year. The release of the reserves would not be deemed an adoption of a lower standard of valuation.

**History:** Effective October 1, 1995; amended effective March 1, 2004.

**General Authority:** NDCC 26.1-35-01.1

**Law Implemented:** NDCC 26.1-35-01.1

**45-03-19-04. Required opinions. Repealed effective March 1, 2004.**

- 1. ~~In accordance with North Dakota Century Code section 26.1-35-01.1, every company doing business in this state shall annually submit the opinion of an appointed actuary as provided for by this chapter. The type of opinion submitted must be determined by the provisions set forth in this section and must be in accordance with the applicable provisions in this chapter.~~
- 2. ~~For purposes of this chapter, companies must be classified as follows based on the admitted assets as of the end of the calendar year for which the actuarial opinion is applicable:~~
  - a. ~~Category A consists of those companies whose admitted assets do not exceed twenty million dollars.~~
  - b. ~~Category B consists of those companies whose admitted assets meet or exceed twenty million dollars but do not exceed one hundred million dollars.~~
  - c. ~~Category C consists of those companies whose admitted assets meet or exceed one hundred million dollars but do not exceed five hundred million dollars.~~
  - d. ~~Category D consists of those companies whose admitted assets meet or exceed five hundred million dollars.~~
- 3. ~~Exemption eligibility tests.~~
  - a. ~~Beginning in 1995, any category A company that meets all of the following criteria is eligible for exemption from submission of a statement of actuarial opinion in accordance with section 45-03-19-06 for the year in which these criteria are met. The ratios in paragraphs 1, 2, and 3 must be calculated based on amounts as of the end of the calendar year for which the actuarial opinion is applicable.~~
    - (1) ~~The ratio of the sum of capital and surplus to the sum of cash and invested assets is at least equal to .10.~~

- (2) The ratio of the sum of the reserves and liabilities for annuities and deposits to the total admitted assets is less than .30.
  - (3) The ratio of the book value of the noninvestment grade bonds to the sum of capital and surplus is less than .50.
  - (4) The examiner team for the national association of insurance commissioners has not designated the company as a first priority company in any of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or a second priority company in each of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or the company has resolved the first or second priority status to the satisfaction of the commissioner of the state of domicile and the commissioner has so notified the chair of the national association of insurance commissioners life and health actuarial task force and the national association of insurance commissioners staff and support office.
- b. Beginning in 1995, any category B company that meets all of the following criteria is eligible for exemption from submission of a statement of actuarial opinion in accordance with section 45-03-19-06 for the year in which the criteria are met. The ratios in paragraphs 1, 2, and 3 must be calculated based on amounts as of the end of the calendar year for which the actuarial opinion is applicable.
- (1) The ratio of the sum of capital and surplus to the sum of cash and invested assets is at least equal to .07.
  - (2) The ratio of the sum of the reserves and liabilities for annuities and deposits to the total admitted assets is less than .40.
  - (3) The ratio of the book value of the noninvestment grade bonds to the sum of capital and surplus is less than .50.
  - (4) The examiner team for the national association of insurance commissioners has not designated the company as a first priority company in any of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or a second priority company in each of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or the company has resolved the first or second priority status to the satisfaction of the commissioner of the state of domicile and the commissioner has so notified the chair of the national association of insurance commissioners life and health actuarial task force and the

~~national association of insurance commissioners staff and support office.~~

- ~~c. Any category A or category B company that meets all of the criteria set forth in subdivisions a or b, whichever is applicable, is exempted from submission of a statement of actuarial opinion in accordance with section 45-03-19-06 unless the commissioner specifically indicates to the company that the exemption is not to be taken.~~
- ~~d. Beginning in 1995, any category A or category B company that is not exempted under subdivision c must be required to submit a statement of actuarial opinion in accordance with section 45-03-19-06 for the year for which it is not exempt.~~
- ~~e. Any category C company that, after submitting an opinion in accordance with section 45-03-19-06 meets all of the following criteria is not required, unless required in accordance with subdivision f, to submit a statement of actuarial opinion in accordance with section 45-03-19-06 more frequently than every third year. Any category C company that fails to meet all of the following criteria for any year shall submit a statement of actuarial opinion in accordance with section 45-03-19-06 for that year. The ratios in paragraphs 1, 2, and 3 must be calculated based on amounts as of the end of the calendar year for which the actuarial opinion is applicable.~~
  - ~~(1) The ratio of the sum of capital and surplus to the sum of cash and invested assets is at least equal to .05.~~
  - ~~(2) The ratio of the sum of the reserves and liabilities for annuities and deposits to the total admitted assets is less than .50.~~
  - ~~(3) The ratio of the book value of the noninvestment grade bonds to the sum of the capital and surplus is less than .50.~~
  - ~~(4) The examiner team for the national association of insurance commissioners has not designated the company as a first priority company in any of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or a second priority company in each of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or the company has resolved the first or second priority status to the satisfaction of the commissioner of the state of domicile and the commissioner has so notified the chair of the national association of insurance commissioners life and health actuarial task force and the national association of insurance commissioners staff and support office.~~

- f. ~~Any company that is not required by this section to submit a statement of actuarial opinion in accordance with section 45-03-19-06 for any year shall submit a statement of actuarial opinion in accordance with section 45-03-19-05 for that year unless as provided for by section 45-03-19-01 the commissioner requires a statement of actuarial opinion in accordance with section 45-03-19-06.~~
4. ~~Every category D company shall submit a statement of actuarial opinion in accordance with section 45-03-19-06 for each year beginning in 1995.~~

~~History: Effective October 1, 1995.~~

~~General Authority: NDCC 26.1-35-01.1~~

~~Law Implemented: NDCC 26.1-35-01.1~~

**45-03-19-05. Statement of actuarial opinion not including an asset adequacy analysis. Repealed effective March 1, 2004.**

1. ~~The statement of actuarial opinion required by this section must consist of a paragraph identifying the appointed actuary and the appointed actuary's qualifications; a regulatory authority paragraph stating that the company is exempt pursuant to this chapter from submitting a statement of actuarial opinion based on an asset adequacy analysis and that the opinion, which is not based on an asset adequacy analysis, is rendered in accordance with section 45-03-19-05; a scope paragraph identifying the subjects on which the opinion is to be expressed and describing the scope of the appointed actuary's work; and an opinion paragraph expressing the appointed actuary's opinion as required by North Dakota Century Code section 26.1-35-01.1.~~
2. ~~The following language provided is that which in typical circumstances would be included in a statement of actuarial opinion in accordance with this section. The language may be modified as needed to meet the circumstances of a particular case, but the appointed actuary should use language that clearly expresses a professional judgment. However, in any event the opinion must retain all pertinent aspects of the language provided in section 45-03-19-05:~~
- a. ~~The opening paragraph should indicate the appointed actuary's relationship to the company. For a company actuary, the opening paragraph of the actuarial opinion should read as follows:~~

~~"I, [name of actuary], am [title] of [name of company] and a member of the American Academy of Actuaries. I was appointed by, or by the authority of, the Board of Directors of said insurer to render this opinion as stated in the letter to the commissioner dated [insert date]. I meet the Academy qualification standards for rendering the opinion and am~~

familiar with the valuation requirements applicable to life and health companies."

For a consulting actuary, the opening paragraph of the actuarial opinion should contain a sentence such as:

"I, [name and title of actuary], a member of the American Academy of Actuaries, am associated with the firm of [insert name of consulting firm]. I have been appointed by, or by the authority of, the Board of Directors of [name of company] to render this opinion as stated in the letter to the commissioner dated [insert date]. I meet the Academy qualification standards for rendering the opinion and am familiar with the valuation requirements applicable to life and health insurance companies."

- b. ~~The regulatory authority paragraph should include a statement such as the following: "Said company is exempt pursuant to Chapter [insert designation] of the [name of state] Insurance Department from submitting a statement of actuarial opinion based on an asset adequacy analysis. This opinion, which is not based on an asset adequacy analysis, is rendered in accordance with Section 45-03-19-05."~~
- c. ~~The scope paragraph should contain a sentence such as the following: "I have examined the actuarial assumptions and actuarial methods used in determining reserves and related actuarial items listed below, as shown in the annual statement of the company, as prepared for filing with state regulatory officials, as of December 31, [ ]."~~

~~The paragraph should list items and amounts with respect to which the appointed actuary is expressing an opinion. The list should include:~~

- ~~(1) Aggregate reserve and deposit funds for policies and contracts included in exhibit 8;~~
- ~~(2) Aggregate reserve and deposit funds for policies and contracts included in exhibit 9;~~
- ~~(3) Deposit funds, premiums, dividend, and coupon accumulations and supplementary contracts not involving life contingencies included in exhibit 10; and~~
- ~~(4) Policy and contract claims liability end of current year included in exhibit 11, part I.~~

- d. If the appointed actuary has examined the underlying records, the scope paragraph should also include the following:

~~"My examination included such review of the actuarial assumptions and actuarial methods and of the underlying basic records and such tests of the actuarial calculations as I considered necessary."~~

- e. If the appointed actuary has not examined the underlying records, but has relied upon listings and summaries of policies in force prepared by the company or a third party, the scope paragraph should include a sentence such as one of the following:

~~"I have relied upon listings and summaries of policies and contracts and other liabilities in force prepared by [name and title of company officer certifying in-force records] as certified in the attached statement. (See accompanying affidavit by a company officer.) In other respects my examination included review of the actuarial assumptions and actuarial methods and such tests of the actuarial calculations as I considered necessary."~~

~~or~~

~~"I have relied upon [name of accounting firm] for the substantial accuracy of the in-force records inventory and information concerning other liabilities, as certified in the attached statement. In other respects my examination included review of the actuarial assumptions and actuarial methods and such tests of the actuarial calculations as I considered necessary."~~

~~The statement of the person certifying shall follow the form indicated by subdivision j of subsection 2.~~

- f. The opinion paragraph should include the following:

~~"In my opinion the amounts carried in the balance sheet on account of the actuarial items identified above:~~

- ~~1. Are computed in accordance with presently accepted actuarial standards that specifically relate to the opinion required under this section;~~
- ~~2. Are based on actuarial assumptions that produce reserves at least as great as those called for in any contract provision as to reserve basis and method, and are in accordance with all other contract provisions;~~

- ~~3. Meet the requirements of the Insurance Law and chapters of the state of [state of domicile] and are at least as great as the minimum aggregate amounts required by the state in which this statement is filed.~~
- ~~4. Are computed on the basis of assumptions consistent with those used in computing the corresponding items in the annual statement of the preceding yearend with any exceptions as noted below; and~~
- ~~5. Include provision for all actuarial reserves and related statement items that ought to be established.~~

~~The actuarial methods, considerations, and analyses used in forming my opinion conform to the appropriate compliance guidelines as promulgated by the Actuarial Standards Board, which standards form the basis of this statement of opinion."~~

- ~~9. The concluding paragraph should document the eligibility for the company to provide an opinion as provided by this section. It must include the following:~~

~~"This opinion is provided in accordance with North Dakota Administrative Code Section 45-03-19-05. As such it does not include an opinion regarding the adequacy of reserves and related actuarial items when considered in light of the assets which support them.~~

~~Eligibility for North Dakota Administrative Code Section 45-03-19-05 is confirmed as follows:~~

- ~~1. The ratio of the sum of capital and surplus to the sum of cash and invested assets is [insert amount], which equals or exceeds the applicable criterion based on the admitted assets of the company (subsection 3 of section 45-03-19-04).~~
- ~~2. The ratio of the sum of the reserves and liabilities for annuities and deposits to the total admitted assets is [insert amount], which is less than the applicable criteria based on the admitted assets of the company (subsection 3 of section 45-03-19-04).~~
- ~~3. The ratio of the book value of the noninvestment grade bonds to the sum of capital and surplus is [insert amount], which is less than the applicable criteria of .50.~~

4. ~~To my knowledge, the NAIG Examiner Team has not designated the company as a first priority company in any of the two calendar years preceding the calendar year for which the actuarial opinion is applicable, or a second priority company in each of the two calendar years preceding the calendar year for which the actuarial opinion is applicable or the company has resolved the first or second priority status to the satisfaction of the commissioner of the state of domicile.~~
5. ~~To my knowledge there is not a specific request from any commissioner requiring an asset adequacy analysis opinion.~~

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Signature of Appointed Actuary

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Address of Appointed Actuary

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Telephone Number of Appointed Actuary"

- h. ~~If there has been any change in the actuarial assumptions from those previously employed, that change should be described in the annual statement or in a paragraph of the statement of actuarial opinion, and the reference in paragraph 4 of subdivision f to consistency should read as follows:~~

~~"... with the exception of the change described on Page [ ] of the annual statement (or in the preceding paragraph)."~~

~~The adoption for new issues or new claims or other new liabilities of an actuarial assumption which differs from a corresponding assumption used for prior new issues or new claims or other new liabilities is not a change in actuarial assumptions within the meaning of this paragraph.~~

- i. ~~If the appointed actuary is unable to form an opinion, the appointed actuary shall refuse to issue a statement of actuarial opinion. If the appointed actuary's opinion is adverse or qualified, the appointed actuary shall issue an adverse or qualified actuarial opinion explicitly stating the reasons for the opinion. This statement should follow the scope paragraph and precede the opinion paragraph.~~
- j. ~~If the appointed actuary does not express an opinion as to the accuracy and completeness of the listings and summaries of~~

~~policies in force, there should be attached to the opinion the statement of a company officer or accounting firm who prepared the underlying data similar to the following:~~

~~"I [name of officer], [title] of [name and address of company or accounting firm], hereby affirm that the listings and summaries of policies and contracts in force as of December 31, [ ], prepared for and submitted to [name of appointed actuary], were prepared under my direction and, to the best of my knowledge and belief, are substantially accurate and complete.~~

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~~Signature of the Officer of the Company  
or Accounting Firm~~

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~~Address of the Officer of the Company  
or Accounting Firm~~

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~~Telephone Number of the Officer of the  
Company or Accounting Firm"~~

~~History: Effective October 1, 1995.~~

~~General Authority: NDGG 26.1-35-01.4~~

~~Law Implemented: NDGG 26.1-35-01.4~~

**45-03-19-06. Statement of actuarial opinion based on an asset adequacy analysis.**

1. The statement of actuarial opinion submitted in accordance with this section must consist of:
  - a. A paragraph identifying the appointed actuary and the appointed actuary's qualifications (see subdivision a of subsection 2).
  - b. A scope paragraph identifying the subjects on which an opinion is to be expressed and describing the scope of the appointed actuary's work, including a tabulation delineating the reserves and related actuarial items which that have been analyzed for asset adequacy and the method of analysis (see subdivision b of subsection 2), and identifying the reserves and related actuarial items covered by the opinion which that have not been so analyzed.
  - c. A reliance paragraph describing those areas, if any, where the appointed actuary has deferred to other experts in developing data, procedures or assumptions, for example, anticipated cash flows from currently owned assets, including variation in cash

flows according to economic scenarios (see subdivision c of subsection 2), supported by a statement of each expert in the form prescribed by subsection 5.

- d. An opinion paragraph expressing the appointed actuary's opinion with respect to the adequacy of the supporting assets to mature the liabilities (see subdivision f of subsection 2).
  - e. One or more additional paragraphs will be needed in individual company cases as follows:
    - (1) If the appointed actuary considers it necessary to state a qualification of the appointed actuary's opinion.
    - (2) ~~If the appointed actuary must disclose the method of aggregation for reserves of different products or lines of business for asset adequacy analysis.~~
    - (3) ~~If the appointed actuary must disclose reliance upon any portion of the assets supporting the asset valuation reserve (AVR), interest maintenance reserve (IMR), or other mandatory or voluntary statement reserves for asset adequacy analysis.~~
    - (4) If the appointed actuary must disclose an inconsistency in the method of analysis or basis of asset allocation used at the prior opinion date with that used for this opinion.
    - (5) (3) If the appointed actuary must disclose whether additional reserves of the prior opinion date are released as of this opinion date, and the extent of the release.
    - (6) (4) If the appointed actuary chooses to add a paragraph briefly describing the assumptions which that form the basis for the actuarial opinion.
2. The following paragraphs are to be included in the statement of actuarial opinion in accordance with this section. Language is that which in typical circumstances should be included in a statement of actuarial opinion. The language may be modified as needed to meet the circumstances of a particular case, but the appointed actuary should use language that clearly expresses the appointed actuary's professional judgment. However, in any event the opinion must retain all pertinent aspects of the language provided in this section.
- a. The opening paragraph should generally indicate the appointed actuary's relationship to the company and the qualifications to sign the opinion. For a company actuary, the opening paragraph of the actuarial opinion should read include a statement such as follows:

"I, [name], am [title] of [insurance company name] and a member of the American Academy of Actuaries. I was appointed by, or by the authority of, the Board of Directors of said insurer to render this opinion as stated in the letter to the commissioner dated [insert date]. I meet the Academy qualification standards for rendering the opinion and am familiar with the valuation requirements applicable to life and health insurance companies."

For a consulting actuary, the opening paragraph should contain include a sentence statement such as:

"I, [name], a member of the American Academy of actuaries, am associated with the firm of [name of consulting firm]. I have been appointed by, or by the authority of, the Board of Directors of [name of company] to render this opinion as stated in the letter to the commissioner dated [insert date]. I meet the Academy qualification standards for rendering the opinion and am familiar with the valuation requirements applicable to life and health insurance companies."

- b. The scope paragraph should include a statement such as the following:

"I have examined the actuarial assumptions and actuarial methods used in determining reserves and related actuarial items listed below, as shown in the annual statement of the company, as prepared for filing with state regulatory officials, as of December 31, 49 20[ ]. Tabulated below are those reserves and related actuarial items which have been subjected to asset adequacy analysis.

<b>Asset Adequacy Tested Amounts - Reserves and Liabilities</b>					
<b>Statement Item</b>	<b>Formula Reserves (1)</b>	<b>Additional Actuarial Reserves (a) (2)</b>	<b>Analysis Method (b)</b>	<b>Other Amount (3)</b>	<b>Total Amount (1)+(2)+(3) (4)</b>
Exhibit 8					
A Life Insurance					
B Annuities					
C Supplementary Contracts Involving Life Contingencies					
D Accidental Death Benefit					
E Disability - Active					
F Disability - Disabled					
G Miscellaneous					
Total (Exhibit 8, Item 1, Page 3)					
Exhibit 9					
A Active Life Reserve					
B Claim Reserve					
Total (Exhibit 9, Item 2, Page 3)					
Exhibit 10					
1 Premiums Premium and Other Deposit Funds (Column 5, Line 14)					
1.1 Policyholder Premiums (Page 3, Line 10.1)					
1.2 Guaranteed Interest Contracts (Page 3, Line 10.2) (Column 2, Line 14)					
1.3 Other Contract Deposit Funds (Page 3, Line 10.3) (Column 6, Line 14)					
2 Supplementary Supplemental Contracts Not Involving Life Contingencies (Page 3, Line 3) and Annuities Certain (Column 3, Line 14)					

3	Dividend and Coupon Accumulations (Page 3, Line 5) or Refunds (Column 4, Line 14)					
	Total Exhibit 10 (Column 1, Line 14)					
	Exhibit 11, Part 1					
1	Life (Page 3, Line 4.1)					
2	Health (Page 3, Line 4.2)					
	Total Exhibit 11, Part 1					
	Separate Accounts (Page 3 Line 27 of the Annual Statement of the Separate Accounts, Lines 1, 2, 3.1, 3.2, 3.3)					
	TOTAL RESERVES					

IMR (General Account, Page _____, Line _____)	
(Separate Accounts, Page _____, Line _____)	
AVR (Page _____, Line _____)	(c)
Net Deferred and Uncollected Premium	

Notes:

- (a) The additional actuarial reserves are the reserves established under subdivisions subdivision b and e of subsection 5 of section 45-03-19-03.
  - (b) The appointed actuary should indicate the method of analysis, determined in accordance with the standards for asset adequacy analysis referred to in subsection 4 of section 45-03-19-03, by means of symbols which that should be defined in footnotes to the table.
  - (c) Allocated amount of asset valuation reserve (AVR).
- c. If the appointed actuary has relied on other experts to develop certain portions of the analysis, the reliance paragraph should include a statement such as the following:

"I have relied on [name], [title] for [e.g., "anticipated cash flows from currently owned assets, including variations in cash flows according to economic scenarios" or "certain critical aspects of the analysis performed in conjunction with forming my opinion"] and, as certified in the attached statement, ..... I have reviewed the information relied upon for reasonableness."

or

~~"I have relied on personnel as cited in the supporting memorandum for certain critical aspects of the analysis in reference to the accompanying statement."~~

Such a statement of reliance on other experts should be accompanied by a statement by each of the experts of the form prescribed by subsection 5.

- d. If the appointed actuary has examined the underlying asset and liability records, the reliance paragraph should also include the following a statement such as:

"My examination included such review of the actuarial assumptions and actuarial methods and of the underlying basic asset and liability records and such tests of the actuarial calculations as I considered necessary. I also reconciled the underlying basic asset and liability records to [exhibits and schedules listed as applicable] of the company's current annual statement."

- e. If the appointed actuary has not examined the underlying records, but has relied upon data [e.g., listings and summaries of policies in force or asset records] prepared by the company ~~or a third party~~, the reliance paragraph should include a sentence statement such as:

~~"I have relied upon listings and summaries [of policies and contracts, of asset records] prepared by [name and title of company officer certifying in-force records] as certified in the attached statement. In other respects my examination included such review of the actuarial assumptions and actuarial methods and such tests of the actuarial calculations as I considered necessary."~~

or

~~"I have relied upon [name of accounting firm] for the substantial accuracy of the in-force records inventory and information concerning other liabilities, as certified in the attached statement. In other respects my examination included review of the actuarial assumptions and actuarial methods and tests of the actuarial calculations as I considered necessary."~~

"In forming my opinion on [specify types of reserves] I relied upon data prepared by [name and title of company officer certifying in-force records or other data] as certified

in the attached statements. I evaluated that data for reasonableness and consistency. I also reconciled that data to [exhibits and schedules to be listed as applicable] of the company's current annual statement. In other respects, my examination included review of the actuarial assumptions and actuarial methods used and tests of the calculations I considered necessary."

~~Such a~~ The section must be accompanied by a statement by each person relied upon of the form prescribed by subsection 5.

- f. The opinion paragraph should include ~~the following~~ a statement such as:

"In my opinion the reserves and related actuarial values concerning the statement items identified above:

1. Are computed in accordance with presently accepted actuarial standards consistently applied and are fairly stated, in accordance with sound actuarial principles-;
2. Are based on actuarial assumptions ~~which~~ that produce reserves at least as great as those called for in any contract provision as to reserve basis and method, and are in accordance with all other contract provisions-;
3. Meet the requirements of the Insurance Law and chapter of the State of [state of domicile] and are at least as great as the minimum aggregate amounts required by the state in which this statement is filed-;
4. Are computed on the basis of assumptions consistent with those used in computing the corresponding items in the annual statement of the preceding yearend (with any exceptions noted below)-; and
5. Include provision for all actuarial reserves and related statement items which ought to be established.

The reserves and related items, when considered in light of the assets held by the company with respect to the reserves and related actuarial items including, but not limited to, the investment earnings on the assets, and the considerations anticipated to be received and retained under the policies and contracts, make adequate provision, according to presently accepted actuarial standards of practice, for the anticipated cash flows required by the contractual obligations and related expenses of the company. (At the discretion of the commissioner, this language may be omitted for an

opinion filed on behalf of a company doing business only in this state and in no other state.)

The actuarial methods, considerations, and analyses used in forming my opinion conform to the appropriate Standards of Practice as promulgated by the Actuarial Standards Board, which standards form the basis of this statement of opinion.

This opinion is updated annually as required by statute. To the best of my knowledge, there have been no material changes from the applicable date of the annual statement to the date of the rendering of this opinion which should be considered in reviewing this opinion.

or

The following material changes which occurred between the date of the statement for which this opinion is applicable and the date of this opinion should be considered in reviewing this opinion: (Describe the change or changes.)

The impact of unanticipated events subsequent to the date of this opinion is beyond the scope of this opinion. The analysis of asset adequacy portion of this opinion should be viewed recognizing that the company's future experience may not follow all the assumptions used in the analysis.

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Signature of Appointed Actuary

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Address of Appointed Actuary

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Telephone Number of Appointed Actuary

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Date"

3. The adoption for new issues or new claims or other new liabilities of an actuarial assumption ~~which~~ that differs from a corresponding assumption used for prior new issues or new claims or other new liabilities is not a change in actuarial assumptions within the meaning of this section.
4. If the appointed actuary is unable to form an opinion, then the appointed actuary shall refuse to issue a statement of actuarial opinion. If the appointed actuary's opinion is adverse or qualified, then the appointed actuary shall issue an adverse or qualified actuarial opinion explicitly

stating the reasons for the opinion. This statement should follow the scope paragraph and precede the opinion paragraph.

5. ~~If the appointed actuary does not express an opinion as to the accuracy and completeness of the listings and summaries of policies in force or asset oriented information, there must be attached to the opinion the statement of a company officer or accounting firm who prepared the underlying data similar to the following:~~

~~"I, [name of officer], [title], of [name of company or accounting firm], hereby affirm that the listings and summaries of policies and contracts in force as of December 31, 19[ ], and other liabilities prepared for and submitted to [name of appointed actuary] were prepared under my direction and, to the best of my knowledge and belief, are substantially accurate and complete.~~

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~~Signature of the Officer of the Company or Accounting Firm~~

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~~Address of the Officer of the Company or Accounting Firm~~

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~~Telephone Number of the Officer of the Company or Accounting Firm"~~

or

~~"I, [name of officer], [title] of [name of company, accounting firm, or security analyst], hereby affirm that the listings, summaries, and analyses relating to data prepared for and submitted to [name of appointed actuary] in support of the asset-oriented aspects of the opinion were prepared under my direction and, to the best of my knowledge and belief, are substantially accurate and complete.~~

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~~Signature of the Officer of the Company, Accounting Firm, or the Security Analyst~~

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~~Address of the Officer of the Company, Accounting Firm, or the Security Analyst~~

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~~Telephone Number of the Officer of the Company, Accounting Firm, or the Security Analyst"~~

5. If the appointed actuary relies on the certification of others on matters concerning the accuracy or completeness of any data underlying the

actuarial opinion, or the appropriateness of any other information used by the appointed actuary in forming the actuarial opinion, the actuarial opinion should so indicate the persons the actuary is relying upon and a precise identification of the items subject to reliance. In addition, the persons on whom the appointed actuary relies shall provide a certification that precisely identifies the items on which the person is providing information and a statement as to the accuracy, completeness, or reasonableness, as applicable, of the items. This certification shall include the signature, title, company, address, and telephone number of the person rendering the certification, as well as the date on which it is signed.

6. Alternate option.

a. North Dakota Century Code section 26.1-35-01.1 gives the commissioner broad authority to accept the valuation of a foreign insurer when that valuation meets the requirements applicable to a company domiciled in this state in the aggregate. As an alternative to the requirements of paragraph 3 of subdivision f of subsection 2, the commissioner may make one or more of the following additional approaches available to the opining actuary:

(1) A statement that the reserves "meet the requirements of the insurance laws and regulations of the State of [state of domicile] and the formal written standards and conditions of this state for filing an opinion based on the law of the state of domicile." If the commissioner chooses to allow this alternative, a formal written list of standards and conditions shall be made available. If a company chooses to use this alternative, the standards and conditions in effect on July first of a calendar year shall apply to statements for that calendar year, and they shall remain in effect until they are revised or revoked. If no list is available, this alternative is not available.

(2) A statement that the reserves "meet the requirements of the insurance laws and regulations of the State of [state of domicile] and I have verified that the company's request to file an opinion based on the law of the state of domicile has been approved and that any conditions required by the commissioner for approval of that request have been met." If the commissioner chooses to allow this alternative, a formal written statement of such allowance shall be issued no later than March thirty-first of the year it is first effective. It shall remain valid until rescinded or modified by the commissioner. The rescission or modifications shall be issued no later than March thirty-first of the year they are first effective. Subsequent to that statement being issued, if a company chooses to use this alternative, the company shall file a request to do so, along with justification for its use, no

later than April thirtieth of the year of the opinion to be filed. The request shall be deemed approved on October first of that year if the commissioner has not denied the request by that date.

(3) A statement that the reserves "meet the requirements of the insurance laws and regulations of the State of [state of domicile] and I have submitted the required comparison as specified by this state."

(a) If the commissioner chooses to allow this alternative, a formal written list of products (to be added to the table in paragraph b) for which the required comparison shall be provided will be published. If a company chooses to use this alternative, the list in effect on July first of a calendar year shall apply to statements for that calendar year, and it shall remain in effect until it is revised or revoked. If no list is available, this alternative is not available.

(b) If a company desires to use this alternative, the appointed actuary shall provide a comparison of the gross nationwide reserves held to the gross nationwide reserves that would be held under national association of insurance commissioners codification standards. Gross nationwide reserves are the total reserves calculated for the total company in-force business directly sold and assumed, indifferent to the state in which the risk resides, without reduction for reinsurance ceded. The information provided shall be at least:

(1) Product Type	(2) Death Benefit or Account Value	(3) Reserves Held	(4) Codification Reserves	(5) Codification Standard

(c) The information listed shall include all products identified by either the state of filing or any other states subscribing to this alternative.

(d) If there is no codification standard for the type of product or risk in force or if the codification standard does not directly address the type of product or risk in force, the appointed actuary shall provide detailed disclosure of the specific method and assumptions used in determining the reserves held.

(e) The comparison provided by the company is to be kept confidential to the same extent and under the same conditions as the actuarial memorandum.

b. Notwithstanding the above, the commissioner may reject an opinion based on the laws and regulations of the state of domicile and require an opinion based on the laws of this state. If a company is unable to provide the opinion within sixty days of the request or such other period of time determined by the commissioner after consultation with the company, the commissioner may contract an independent actuary at the company's expense to prepare and file the opinion.

**History:** Effective October 1, 1995; amended effective March 1, 2004.

**General Authority:** NDCC 26.1-35-01.1

**Law Implemented:** NDCC 26.1-35-01.1

**45-03-19-07. Description of actuarial memorandum including an asset adequacy analysis and regulatory asset adequacy issues summary.**

1. General.

- a. In accordance with North Dakota Century Code section 26.1-35-01.1, the appointed actuary shall prepare a memorandum to the company describing the analysis done in support of the opinion regarding the reserves ~~under a section 45-03-19-06 opinion.~~ The memorandum must be made available for examination by the commissioner upon the commissioner's request but must be returned to the company after the examination and may not be considered a record of the insurance department or subject to automatic filing with the commissioner.
- b. In preparing the memorandum, the appointed actuary may rely on, and include as a part of the appointed actuary's own memorandum, memoranda prepared and signed by other actuaries who are qualified within the meaning of subsection 2 of section 45-03-19-03, with respect to the areas covered in the memoranda, and so state in their memoranda.
- c. If the commissioner requests a memorandum and no memorandum exists or if the commissioner finds that the analysis described in the memorandum fails to meet the standards of the actuarial standards board or the standards and requirements of this chapter, the commissioner may designate a qualified actuary to review the opinion and prepare the supporting memorandum as is required for review. The reasonable and necessary expense of the independent review must be paid by the company but must be directed and controlled by the commissioner.

- d. The reviewing actuary shall have the same status as an examiner for purposes of obtaining data from the company and the workpapers and documentation of the reviewing actuary shall be retained by the commissioner, provided, however, that any information provided by the company to the reviewing actuary and included in the workpapers must be considered as material provided by the company to the commissioner and must be kept confidential to the same extent as is prescribed by law with respect to other material provided by the company to the commissioner pursuant to the statute governing this chapter. The reviewing actuary may not be an employee of a consulting firm, or have been personally involved, with the preparation of any prior memorandum or opinion for the insurer pursuant to this chapter for any one of the current year or the preceding three years.
  - e. In accordance with North Dakota Century Code section 26.1-35-01.1, the appointed actuary shall prepare a regulatory asset adequacy issues summary, the contents of which are specified in subsection 3. The regulatory asset adequacy issues summary will be submitted no later than March fifteenth of the year following the year for which a statement of actuarial opinion based on asset adequacy is required. The regulatory asset adequacy issues summary is to be kept confidential to the same extent and under the same conditions as the actuarial memorandum.
2. When an actuarial opinion ~~under section 45-03-19-06~~ is provided, the memorandum must demonstrate that the analysis has been done in accordance with the standards for asset adequacy referred to in subsection 4 of section 45-03-19-03 and any additional standards under this chapter. It must specify:
    - a. For reserves:
      - (1) Product descriptions, including market description, underwriting, and other aspects of a risk profile and the specific risks the appointed actuary deems significant;
      - (2) Source of liability in force;
      - (3) Reserve method and basis;
      - (4) Investment reserves;
      - (5) Reinsurance arrangements;
      - (6) Identification of any explicit or implied guarantees made by the general account in support of benefits provided through a separate account or under a separate account policy or contract and the methods used by the appointed actuary to

provide for the guarantees in the asset adequacy analysis;  
and

- (7) Documentation of assumptions to test reserves for the following:
- (a) Lapse rates (both base and excess);
  - (b) Interest crediting rate strategy;
  - (c) Mortality;
  - (d) Policyholder dividend strategy;
  - (e) Competitor or market interest rate;
  - (f) Annuitization rates;
  - (g) Commissions and expenses; and
  - (h) Morbidity.

The documentation of the assumptions shall be such that an actuary reviewing the actuarial memorandum could form a conclusion as to the reasonableness of the assumptions.

b. For assets:

- (1) Portfolio descriptions, including a risk profile disclosing the quality, distribution, and types of assets;:
- (2) Investment and disinvestment assumptions;:
- (3) Source of asset data;:
- (4) Asset valuation bases; and
- (5) Documentation of assumptions made for:
  - (a) Default costs;
  - (b) Bond call function;
  - (c) Mortgage prepayment function;
  - (d) Determining market value for assets sold due to disinvestment strategy; and

- (e) Determining yield on assets acquired through the investment strategy.

The documentation of the assumptions shall be such that an actuary reviewing the actuarial memorandum could form a conclusion as to the reasonableness of the assumptions.

c. Analysis For the analysis basis:

- (1) Methodology-;
- (2) Rationale for inclusion or exclusion of different blocks of business and how pertinent risks were analyzed-;
- (3) Rationale for degree of rigor in analyzing different blocks of business- (include in the rationale the level of "materiality" that was used in determining how rigorously to analyze different blocks of business);
- (4) Criteria for determining asset adequacy- (include in the criteria the precise basis for determining if assets are adequate to cover reserves under "moderately adverse conditions" or other conditions as specified in relevant actuarial standards of practice); and
- (5) Effect Whether the impact of federal income taxes, reinsurance, and other relevant factors: was considered and the method of treating reinsurance in the asset adequacy analysis;

d. Summary of material changes in methods, procedures, or assumptions from prior year's asset adequacy analysis;

e. Summary of results-; and

e. f. Conclusions.

3. Details of the regulatory asset adequacy issues summary.

a. The regulatory asset adequacy issues summary shall include:

- (1) Descriptions of the scenarios tested, including whether those scenarios are stochastic or deterministic, and the sensitivity testing done relative to those scenarios. If negative ending surplus results under certain tests in the aggregate, the actuary should describe those tests and the amount of additional reserve as of the valuation date which, if held, would eliminate the negative aggregate surplus values. Ending surplus values shall be determined

by either extending the projection period until the in-force and associated assets and liabilities at the end of the projection period are immaterial or by adjusting the surplus amount at the end of the projection period by an amount that appropriately estimates the value that can reasonably be expected to arise from the assets and liabilities remaining in force;

- (2) The extent to which the appointed actuary uses assumptions in the asset adequacy analysis that are materially different than the assumptions used in the previous asset adequacy analysis;
- (3) The amount of reserves and the identity of the product lines that had been subjected to asset adequacy analysis in the prior opinion but were not subject to analysis for the current opinion;
- (4) Comments on any interim results that may be of significant concern to the appointed actuary;
- (5) The methods used by the actuary to recognize the impact of reinsurance on the company's cash flows, including both assets and liabilities, under each of the scenarios tested; and
- (6) Whether the actuary has been satisfied that all options, whether explicit or embedded, in any asset or liability (including those affecting cash flows embedded in fixed income securities) and equity-like features in any investments have been appropriately considered in the asset adequacy analysis.

b. The regulatory asset adequacy issues summary shall contain the name of the company for which the regulatory asset adequacy issues summary is being supplied and shall be signed and dated by the appointed actuary rendering the actuarial opinion.

4. The memorandum must include a statement:

"Actuarial methods, considerations, and analyses used in the preparation of this memorandum conform to the appropriate Standards of Practice as promulgated by the Actuarial Standards Board, which standards form the basis for this memorandum."

5. An appropriate allocation of assets in the amount of the interest maintenance reserve, whether positive or negative, must be used in any asset adequacy analysis. Analysis of risks regarding asset default may include an appropriate allocation of assets supporting the asset valuation reserve; these asset valuation reserve assets may

not be applied for any other risks with respect to reserve adequacy. Analysis of these and other risks may include assets supporting other mandatory or voluntary reserves available to the extent not used for risk analysis and reserve support. The amount of the assets used for the asset valuation reserve must be disclosed in the table of reserves and liabilities of the opinion and in the memorandum. The method used for selecting particular assets or allocated portions of assets must be disclosed in the memorandum.

6. The appointed actuary shall retain on file, for at least seven years, sufficient documentation so that it will be possible to determine the procedures followed, the analyses performed, the bases for assumptions, and the results obtained.

**History:** Effective October 1, 1995; amended effective March 1, 2004.

**General Authority:** NDCC 26.1-35-01.1

**Law Implemented:** NDCC 26.1-35-01.1

**45-03-19-08. Additional considerations for analysis. Repealed effective March 1, 2004.**

1. ~~For the asset adequacy analysis for the statement of actuarial opinion provided in accordance with section 45-03-19-06, reserves and assets may be aggregated by either of the following methods:~~
  - a. ~~Aggregate the reserves and related actuarial items, and the supporting assets, for different products or lines of business, before analyzing the adequacy of the combined assets to mature the combined liabilities. The appointed actuary must be satisfied that the assets held in support of the reserves and related actuarial items so aggregated are managed in such a manner that the cash flows from the aggregated assets are available to help mature the liabilities from the blocks of business that have been aggregated.~~
  - b. ~~Aggregate the results of asset adequacy analysis of one or more products or lines of business, the reserves for which prove through analysis to be redundant, with the results of one or more products or lines of business, the reserves for which prove through analysis to be deficient. The appointed actuary must be satisfied that the asset adequacy results for the various products or lines of business for which the results are so aggregated:~~
    - (1) ~~Are developed using consistent economic scenarios; or~~
    - (2) ~~Are subject to mutually independent risks, that is, the likelihood of events impacting the adequacy of the assets supporting the redundant reserves is completely unrelated to the likelihood of events impacting the adequacy of the assets supporting the deficient reserves.~~

~~In the event of any aggregation, the actuary shall disclose in the actuary's opinion that the reserves were aggregated on the basis of subdivision a, paragraph 1 of subdivision b, or paragraph 2 of subdivision b, whichever is applicable, and describe the aggregation in the supporting memorandum.~~

- ~~2. The appointed actuary shall analyze only those assets held in support of the reserves which are the subject for specific analysis, hereafter called "specified reserves". A particular asset or portion thereof supporting a group of specified reserves cannot support any other group of specified reserves. An asset may be allocated over several groups of specified reserves. The annual statement value of the assets held in support of the reserves shall not exceed the annual statement value of the specified reserves, except as provided in subsection 3. If the method of asset allocation is not consistent from year to year, the extent of its inconsistency should be described in the supporting memorandum.~~
- ~~3. An appropriate allocation of assets in the amount of the interest maintenance reserve (IMR), whether positive or negative, must be used in any asset adequacy analysis. Analysis of risks regarding asset default may include an appropriate allocation of assets supporting the asset valuation reserve (AVR); these asset valuation reserve assets may not be applied for any other risks with respect to reserve adequacy. Analysis of these and other risks may include assets supporting other mandatory or voluntary reserves available to the extent not used for risk analysis and reserve support. The amount of the assets used for the asset valuation reserve must be disclosed in the table of reserves and liabilities of the opinion and in the memorandum. The method used for selecting particular assets or allocated portions of assets must be disclosed in the memorandum.~~
- ~~4. For the purpose of performing the asset adequacy analysis required by this chapter, the qualified actuary is expected to follow standards adopted by the actuarial standards board, nevertheless, the appointed actuary must consider in the analysis the effect of at least the following interest rate scenarios:
  - ~~a. Level with no deviation.~~
  - ~~b. Uniformly increasing over ten years at a half percent per year and then level.~~
  - ~~c. Uniformly increasing at one percent per year over five years and then uniformly decreasing at one percent per year to the original level at the end of ten years and then level.~~
  - ~~d. An immediate increase of three percent and then level.~~~~

- e. ~~Uniformly decreasing over ten years at a half percent per year and then level.~~
- f. ~~Uniformly decreasing at one percent per year over five years and then uniformly increasing at one percent per year to the original level at the end of ten years and then level.~~
- g. ~~An immediate decrease of three percent and then level.~~

~~For these and other scenarios which may be used, projected interest rates for a five-year treasury note need not be reduced beyond the point where the five-year treasury note yield would be at fifty percent of its initial level. The beginning interest rates may be based on interest rates for new investments as of the valuation date similar to recent investments allocated to support the product being tested or be based on an outside index, such as treasury yields, of assets of the appropriate length on a date close to the valuation date. Whatever method is used to determine the beginning yield curve and associated interest rates should be specifically defined. The beginning yield curve and associated interest rates should be consistent for all interest rate scenarios.~~

- 5. ~~The appointed actuary shall retain on file, for at least seven years, sufficient documentation so that it will be possible to determine the procedures followed, the analyses performed, the bases for assumptions and the results obtained.~~

**History:** ~~Effective October 1, 1995.~~

**General Authority:** ~~NDCC 26.1-35-01.1~~

**Law Implemented:** ~~NDCC 26.1-35-01.1~~

**CHAPTER 45-03-23**  
**REGULATION ON THE USE OF CLEARING CORPORATIONS AND FEDERAL**  
**RESERVE BOOK-ENTRY SYSTEM BY INSURANCE COMPANIES**

Section

45-03-23-01

Definitions

45-03-23-02

Custody of Agreement - Requirements

45-03-23-03

Deposit With Affiliates - Requirements

45-03-23-01. Definitions. As used in this chapter, unless the context requires otherwise, the term:

1. "Agent" means a national bank, state bank, or trust company which maintains an account in its name in a clearing corporation or which is a member of the federal reserve system and through which a custodian participates in a clearing corporation or the federal reserve book-entry system; except that with respect to securities issued by institutions organized or existing under the laws of any foreign country or securities used to meet the deposit requirements pursuant to the laws of a foreign country as a condition of doing business therein, "agent" may include a corporation which is organized or existing under the laws of any foreign country and which is legally qualified under such laws to accept custody of securities.
2. "Clearing corporation" means a corporation as defined in subsection 1 of North Dakota Century Code section 41-08-02 which is organized for the purpose of effecting transactions in securities by computerized book-entry; except that with respect to securities issued by institutions organized or existing under the laws of any foreign country or securities used to meet the deposit requirements pursuant to the laws of a foreign country as a condition of doing business therein, "clearing corporation" may include a corporation which is organized or existing under the laws of any foreign country and which is legally qualified under such laws to effect transactions in securities by computerized book-entry.
3. "Custodian" means a national bank, state bank, or trust company which has at all times aggregate capital, surplus, and undivided profits of not less than one million dollars and which is regulated by either state banking laws or is a member of the federal reserve system and which is legally qualified to accept custody of securities in accordance with the standards set forth below; except that with respect to securities issued by institutions organized or existing under the laws of any foreign country, or securities used to meet the deposit requirements pursuant to the laws of a foreign country as a condition of doing business therein, "custodian" may include a bank, trust company, or similar institution which has at all times aggregate capital, surplus, and undivided profits or not less than the equivalent of one million dollars and which is legally qualified to accept custody of securities.

4. "Federal reserve book-entry system" means the computerized systems sponsored by the United States department of the treasury and certain agencies and instrumentalities of the United States for holding and transferring securities of the United States government and such agencies and instrumentalities, respectively, in federal reserve banks through banks which are members of the federal reserve system or which otherwise have access to such computerized systems.
5. "Securities" means certificated securities and uncertificated securities as defined in subdivisions d and r of subsection 1 of North Dakota Century Code section 41-08-02.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-05-35

**45-03-23-02. Custody of agreement - Requirements.**

1. An insurance company may provide, by written agreement with a custodian, for the custody of its securities with a custodian, which securities may be held by the custodian or its agent or in a clearing corporation or in the federal reserve book-entry system. Securities so held, whether held by the custodian or its agent or in a clearing corporation or in the federal reserve book-entry system, are referred to herein as "custodied securities".
2. Any such agreement must be in writing and must be authorized by the resolution of the board of directors of the insurance company or of an authorized committee thereof. The terms of the agreement must comply with the following:
  - a. Certified securities held by the custodian must be held either separate from the securities of the custodian and of all of its other customers or in a fungible bulk of securities as part of a filing of securities by issue arrangement.
  - b. Securities held in a fungible bulk by the custodian and securities in a clearing corporation or in the federal reserve book-entry system must be separately identified on the custodian's official records as being owned by the insurance company. Said records must identify which custodied securities are held by the custodian or by its agent and which securities are in a clearing corporation or in the federal reserve book-entry system. If the securities are in a clearing corporation or in the federal reserve book-entry system, said records must also identify where the securities are and, if in a clearing corporation, the name of the clearing corporation and, if through an agent, the name of the agent.

- c. All custodied securities that are registered must be registered in the name of the company or in the name of a nominee of the company or in the name of the custodian or its nominee or, if in a clearing corporation, in the name of the clearing corporation or its nominee.
- d. Custodied securities shall be held subject to the instructions of the insurance company and shall be withdrawable upon the demand of the insurance company, except that custodied securities used to meet the deposit requirements set forth in North Dakota Century Code section 26.1-05-23 must, to the extent required by that section, be under the control of the insurance commissioner and must not be withdrawn by the insurance company without the commissioner's approval.
- e. The custodian shall be required to send or cause to be sent to the insurance company a confirmation of all transfers of custodied securities to or from the account of the insurance company. In addition, the custodian shall be required to furnish the insurance company with reports of holdings of custodied securities at such times and containing such information as may be reasonably requested by the insurance company.
- f. During the course of the custodian's regular business hours, any officer or employee of the insurance company, any independent accountant selected by the insurance company, and any representative of an appropriate regulatory body shall be entitled to examine, on the premises of the custodian, the custodian's records relating to custodied securities.
- g. The custodian and its agents shall be required to send to the insurance company:
  - (1) All reports which they receive from a clearing corporation or the federal reserve book-entry system on their respective systems of internal accounting control; and
  - (2) Any reports prepared by outside auditors on the custodians or its agent's internal accounting control of custodied securities that the insurance company may reasonably request.
- h. The custodian shall maintain records sufficient to determine and verify information relating to custodied securities that may be reported in the insurance company's annual statement and supporting schedules and information required in any audit of the financial statements of the insurance company.
- i. The custodian shall provide, upon written request from an appropriate officer of the insurance company, the appropriate

affidavits, substantially in the form attached hereto, with respect to custodied securities.

- j. The custodian shall be obligated to indemnify the insurance company for any loss of custodied securities occasioned by the negligence or dishonesty of the custodian's officers or employees, or burglary, robbery, holdup, theft, or mysterious disappearance, including loss by damage or destruction.
- k. In the event that there is a loss of custodied securities for which the custodian shall be obligated to indemnify the insurance company, the custodian shall promptly replace the securities or the value thereof and the value of any loss of rights or privileges resulting from said loss of securities.
- l. The agreement may provide that the custodian will not be liable for any failure to take any action required to be taken under the agreement in the event and to the extent that the taking of such action is prevented or delayed by war (whether declared or not and including existing wars), revolution, insurrection, riot, civil commotion, act of God, accident, fire, explosion, laws, regulations, orders, or other acts of any governmental authority, or any other cause whatever beyond its reasonable control.
- m. In the event that the custodian gains entry in a clearing corporation or in the federal reserve book-entry system through an agent, there shall be an agreement between the custodian and the agent under which the agent shall be subject to the same liability for loss of custodied securities as the custodian; provided, however, that if the agent shall be subject to regulation under the laws of a jurisdiction which is different from the jurisdiction the laws of which regulate the custodian, the insurance commissioner of the state of domicile of the insurance company may accept a standard of liability applicable to the agent which is different from the standard of liability applicable to the custodian.
- n. The custodian shall provide written notification to the insurer's domiciliary commissioner if the custodial agreement with the insurer has been terminated or if one hundred percent of the account assets in any one custody account have been withdrawn. This notification shall be remitted to the insurance commissioner within three business days of the receipt by the custodian of the insurer's written notice of termination or within three business days of the withdrawal of one hundred percent of the account assets.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-05-35

**45-03-23-03. Deposit with affiliates - Requirements.**

1. Nothing prevents an insurance company from depositing securities with another insurance company with which the depositing insurance company is affiliated, provided that the securities are deposited pursuant to a written agreement authorized by the board of directors of the depositing insurance company or an authorized committee thereof and that the receiving insurance company is organized under the laws of one of the states of the United States or of the District of Columbia. If the respective states of domicile of the depositing and receiving insurance companies are not the same, the depositing insurance company shall have given notice of such deposit to the insurance commissioner in the state of its domicile and the commissioner shall not have objected thereto within thirty days of the receipt of said notice.
  
2. The terms of such an agreement must comply with the following:
  - a. The insurance company receiving the deposit shall maintain records adequate to identify and verify the securities belonging to the depositing insurance company.
  
  - b. The receiving insurance company shall allow representatives of any appropriate regulatory body to examine records relating to securities held subject to the agreement.
  
  - c. The depositing insurance company may authorize the receiving insurance company:
    - (1) To hold the securities of the depositing insurance company in bulk, in certificates issued in the name of the receiving insurance company or its nominee, and to commingle them with securities owned by other affiliates of the receiving insurance company; and
  
    - (2) To provide for such securities to be held by a custodian, including the custodian of securities of the receiving insurance company or in a clearing corporation or the federal reserve book-entry system.

**History:** Effective March 1, 2004.  
**General Authority:** NDCC 28-32-02  
**Law Implemented:** NDCC 26.1-05-35



Subscribed and sworn to before me this

       day of       , 20  .

(L.S.)

\_\_\_\_\_  
Vice President (or other  
authorized officer)



Subscribed and sworn to before me this

       day of       , 20  .

(L.S.)

\_\_\_\_\_  
Vice President (or other  
authorized officer)





**CHAPTER 45-04-07.1**  
**2001 CSO MORTALITY TABLE**

Section

<u>45-04-07.1-01</u>	<u>Definitions</u>
<u>45-04-07.1-02</u>	<u>2001 CSO Mortality Table</u>
<u>45-04-07.1-03</u>	<u>Conditions</u>
<u>45-04-07.1-04</u>	<u>Application of the 2001 CSO Mortality Table to Chapter 45-04-12</u>
<u>45-04-07.1-05</u>	<u>Gender-Blended Tables</u>
<u>45-04-07.1-06</u>	<u>Separability</u>

**45-04-07.1-01. Definitions.**

1. "2001 CSO mortality table" means that mortality table, consisting of separate rates of mortality for male and female lives, developed by the American academy of actuaries CSO task force from the valuation basic mortality table developed by the society of actuaries individual life insurance valuation mortality task force, and adopted by the national association of insurance commissioners in December 2002. The 2001 CSO mortality table is included in the proceedings of the national association of insurance commissioners (second quarter 2002). Unless the context indicates otherwise, the "2001 CSO mortality table" includes both the ultimate form of that table and the select and ultimate form of that table and includes both the smoker and nonsmoker mortality tables and the composite mortality tables. It also includes both the age-nearest-birthday and age-last-birthday bases of the mortality tables.
2. "2001 CSO mortality table (F)" means that mortality table consisting of the rates of mortality for female lives from the 2001 CSO mortality table.
3. "2001 CSO mortality table (M)" means that mortality table consisting of the rates of mortality for male lives from the 2001 CSO mortality table.
4. "Composite mortality tables" means mortality tables with rates of mortality that do not distinguish between smokers and nonsmokers.
5. "Smoker and nonsmoker mortality tables" means mortality tables with separate rates of mortality for smokers and nonsmokers.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-35-02

**45-04-07.1-02. 2001 CSO mortality table.**

1. At the election of the company for any one or more specified plans of insurance and subject to the conditions stated in this regulation.

the 2001 CSO mortality table may be used as the minimum standard for policies issued on or after January 1, 2005, and before the date specified in subsection 2 to which subdivision c of subsection 1 of North Dakota Century Code section 26.1-35-02, subdivision f of subsection 8 of North Dakota Century Code section 26.1-33-24, and subsections 1 and 2 of section 45-04-12-03 are applicable. If the company elects to use the 2001 CSO mortality table, it shall do so for both valuation and nonforfeiture purposes.

2. Subject to the conditions stated in this chapter, the 2001 CSO mortality table shall be used in determining minimum standards for policies issued on and after January 1, 2009, to which subdivision c of subsection 1 of North Dakota Century Code section 26.1-35-02, subdivision f of subsection 8 of North Dakota Century Code section 26.1-33-24, and subsections 1 and 2 of section 45-04-12-03 are applicable.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-35-02

#### **45-04-07.1-03. Conditions.**

1. For each plan of insurance with separate rates for smokers and nonsmokers an insurer may use:
  - a. Composite mortality tables to determine minimum reserve liabilities and minimum cash surrender values and amounts of paid-up nonforfeiture benefits;
  - b. Smoker and nonsmoker mortality tables to determine the valuation net premiums and additional minimum reserves, if any, required by North Dakota Century Code section 26.1-35-09 and use composite mortality tables to determine the basic minimum reserves, minimum cash surrender values and amounts of paid-up nonforfeiture benefits; or
  - c. Smoker and nonsmoker mortality to determine minimum reserve liabilities and minimum cash surrender values and amounts of paid-up nonforfeiture benefits.
2. For plans of insurance without separate rates for smokers and nonsmokers, the composite mortality tables shall be used.
3. For the purpose of determining minimum reserve liabilities and minimum cash surrender values and amounts of paid-up nonforfeiture benefits, the 2001 CSO mortality table may, at the option of the company for each plan of insurance, be used in its ultimate or select and ultimate

form, subject to the restrictions of section 45-04-07.1-04 and chapter 45-04-12 relative to use of the select and ultimate form.

4. When the 2001 CSO mortality table is the minimum reserve standard for any plan for a company, the actuarial opinion in the annual statement filed with the commissioner shall be based on an asset adequacy analysis as specified in section 45-03-19-03. A commissioner may exempt a company from this requirement if it only does business in this state and in no other state.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-35-02

**45-04-07.1-04. Application of the 2001 CSO mortality table to chapter 45-04-12.**

1. The 2001 CSO mortality table may be used in applying chapter 45-04-12 in the following manner, subject to the transition dates for use of the 2001 CSO mortality table in section 45-04-07.1-02 (unless otherwise noted, the references in this section are to chapter 45-04-12):
  - a. Paragraph 2 of subdivision b of subsection 1 of section 45-04-12-01: The net level reserve premium is based on the ultimate mortality rates in the 2001 CSO mortality table.
  - b. Subsection 2 of section 45-04-12-02: All calculations are made using the 2001 CSO mortality rate, and, if elected, the optional minimum mortality standard for deficiency reserves stipulated in subdivision d. The value of " $qx+k+t-1$ " is the valuation mortality rate for deficiency reserves in policy year  $k+t$ , but using the unmodified select mortality rates if modified select mortality rates are used in the computation of deficiency reserves.
  - c. Subsection 1 of section 45-04-12-03: The 2001 CSO mortality table is the minimum standard for basic reserves.
  - d. Subsection 2 of section 45-04-12-03: The 2001 CSO mortality table is the minimum standard for deficiency reserves. If select mortality rates are used, they may be multiplied by x percent for durations in the first segment, subject to the conditions specified in subdivision c of subsection 2 of section 45-04-12-03. In demonstrating compliance with those conditions, the demonstrations may not combine the results of tests that utilize the 1980 CSO mortality table with those tests that utilize the 2001 CSO mortality table, unless the combination is explicitly required by regulation or necessary to be in compliance with relevant actuarial standards of practice.

- e. Subsection 3 of section 45-04-12-04: The valuation mortality table used in determining the tabular cost of insurance shall be the ultimate mortality rates in the 2001 CSO mortality table.
  - f. Subdivision d of subsection 5 of section 45-04-12-04: The calculations specified in subsection 5 of section 45-04-12-04 shall use the ultimate mortality rates in the 2001 CSO mortality table.
  - g. Subdivision d of subsection 6 of section 45-04-12-04: The calculations specified in subsection 6 of section 45-04-12-04 shall use the ultimate mortality rates in the 2001 CSO mortality table.
  - h. Subdivision b of subsection 7 of section 45-04-12-04: The calculations specified in subsection 7 of section 45-04-12-04 shall use the ultimate mortality rates in the 2001 CSO mortality table.
  - i. Paragraph 2 of subdivision a of subsection 1 of section 45-04-12-05: The one-year valuation premium shall be calculated using the ultimate mortality rates in the 2001 CSO mortality table.
2. Nothing in this section shall be construed to expand the applicability of chapter 45-04-12 to include life insurance policies exempted under subsection 1 of section 45-04-12-01.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-35-02

**45-04-07.1-05. Gender-blended tables.**

- 1. For any ordinary life insurance policy delivered or issued for delivery in this state on and after January 1, 2005, that utilizes the same premium rates and charges for male and female lives or is issued in circumstances where applicable law does not permit distinctions on the basis of gender, a mortality table that is a blend of the 2001 CSO mortality table (M) and the 2001 CSO mortality table (F) may, at the option of the company for each plan of insurance, be substituted for the 2001 CSO mortality table for use in determining minimum cash surrender values and amounts of paid-up nonforfeiture benefits. No change in minimum valuation standards is implied by this subsection.
- 2. The company may choose from among the blended tables developed by the American academy of actuaries CSO task force and adopted by the national association of insurance commissioners in December 2002.

3. It shall not, in and of itself, be a violation of North Dakota Century Code section 26.1-04-03 for an insurer to issue the same kind of policy of life insurance on both a sex-distinct and sex-neutral basis.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-35-02

**45-04-07.1-06. Separability.** If any provision of this chapter or its application to any person or circumstance is for any reason held to be invalid, the remainder of the chapter and the application of the provision to other persons or circumstances shall not be affected.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-35-02

**CHAPTER 45-04-09**  
**REGULATION ON THE USE OF CLEARING CORPORATIONS AND FEDERAL**  
**RESERVE BOOK-ENTRY SYSTEM BY INSURANCE COMPANIES**

[Superseded by Chapter 45-03-23, effective March 1, 2004]

## CHAPTER 45-06-05

**45-06-05-01. Applicability and scope.** Except as otherwise specifically provided, this section applies to all long-term care insurance policies delivered or issued for delivery in this state ~~on or after~~ between July 1, 1988, and February 29, 2004, by insurers, fraternal benefit societies, nonprofit health, hospital and medical service corporations, prepaid health maintenance organizations, and all similar organizations. Policies delivered or issued for delivery in this state on or after March 1, 2004, are governed by chapter 45-06-05.1.

**History:** Effective July 1, 1988; amended effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**CHAPTER 45-06-05.1**  
**LONG-TERM CARE INSURANCE MODEL REGULATION**

<u>Section</u>	
<u>45-06-05.1-01</u>	<u>Applicability and Scope</u>
<u>45-06-05.1-02</u>	<u>Definitions</u>
<u>45-06-05.1-03</u>	<u>Policy Definitions</u>
<u>45-06-05.1-04</u>	<u>Policy Practices and Provisions</u>
<u>45-06-05.1-05</u>	<u>Unintentional Lapse</u>
<u>45-06-05.1-06</u>	<u>Required Disclosure Provisions</u>
<u>45-06-05.1-07</u>	<u>Required Disclosure of Rating Practices to Consumers</u>
<u>45-06-05.1-08</u>	<u>Initial Filing Requirements</u>
<u>45-06-05.1-09</u>	<u>Prohibition Against Post-Claims Underwriting</u>
<u>45-06-05.1-10</u>	<u>Minimum Standards for Home Health and Community Care Benefits in Long-Term Care Insurance Policies</u>
<u>45-06-05.1-11</u>	<u>Requirement to Offer Inflation Protection</u>
<u>45-06-05.1-12</u>	<u>Requirements for Application Forms and Replacement Coverage</u>
<u>45-06-05.1-13</u>	<u>Reporting Requirements</u>
<u>45-06-05.1-14</u>	<u>Licensing</u>
<u>45-06-05.1-15</u>	<u>Discretionary Powers of Commissioner</u>
<u>45-06-05.1-16</u>	<u>Reserve Standards</u>
<u>45-06-05.1-17</u>	<u>Loss Ratio</u>
<u>45-06-05.1-18</u>	<u>Premium Rate Schedule Increases</u>
<u>45-06-05.1-19</u>	<u>Filing Requirement</u>
<u>45-06-05.1-20</u>	<u>Filing Requirements for Advertising</u>
<u>45-06-05.1-21</u>	<u>Standards for Marketing</u>
<u>45-06-05.1-22</u>	<u>Suitability</u>
<u>45-06-05.1-23</u>	<u>Prohibition Against Preexisting Conditions and Probationary Periods in Replacement Policies or Certificates</u>
<u>45-06-05.1-24</u>	<u>Nonforfeiture Benefit Requirement</u>
<u>45-06-05.1-25</u>	<u>Standards for Benefit Triggers</u>
<u>45-06-05.1-26</u>	<u>Additional Standards for Benefit Triggers for Qualified Long-Term Care Insurance Contracts</u>
<u>45-06-05.1-27</u>	<u>Standard Format Outline of Coverage</u>
<u>45-06-05.1-28</u>	<u>Requirement to Deliver Shopper's Guide</u>
<u>45-06-05.1-29</u>	<u>Penalties</u>

**45-06-05.1-01. Applicability and scope.** Except as otherwise specifically provided, this chapter applies to all long-term care insurance policies, including qualified long-term care contracts and life insurance policies that accelerate benefits for long-term care delivered or issued for delivery in this state on or after March 1, 2004, fraternal benefit societies, nonprofit health, hospital and medical service corporations, prepaid health plans, health maintenance organizations, and all similar organizations. Certain provisions of this chapter apply only to qualified

long-term care insurance contracts as noted. Policies delivered or issued for delivery in this state before March 1, 2004, are governed by chapter 45-06-05.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-02. Definitions.** For the purpose of this chapter, the terms "long-term care insurance", "qualified long-term care insurance", "group long-term care insurance", "commissioner", "applicant", "policy", and "certificate" shall have the meanings set forth in North Dakota Century Code section 26.1-45-01. In addition, the following definitions apply:

1. a. "Exceptional increase" means only those increases filed by an insurer as exceptional for which the commissioner determines the need for the premium rate increase is justified:
  - (1) Due to changes in laws or regulations applicable to long-term care coverage in this state; or
  - (2) Due to increased and unexpected utilization that affects the majority of insurers of similar products.
- b. Except as provided in section 45-06-05.1-18, exceptional increases are subject to the same requirements as other premium rate schedule increases.
- c. The commissioner may request a review by an independent actuary or a professional actuarial body of the basis for a request that an increase be considered an exceptional increase.
- d. The commissioner, in determining that the necessary basis for an exceptional increase exists, shall also determine any potential offsets to higher claims costs.
2. "Incidental", as used in subsection 10 of section 45-06-05.1-18, means that the value of the long-term care benefits provided is less than ten percent of the total value of the benefits provided over the life of the policy. These values shall be measured as of the date of issue.
3. "Qualified actuary" means a member in good standing of the American academy of actuaries.
4. "Similar policy forms" means all of the long-term care insurance policies and certificates issued by an insurer in the same long-term care benefit classification as the policy form being considered. Certificates of groups that meet the definition in subdivision a of subsection 3 of North Dakota Century Code section 26.1-45-01 are not considered similar to certificates or policies otherwise issued as long-term care insurance.

but are similar to other comparable certificates with the same long-term care benefit classifications. For purposes of determining similar policy forms, long-term care benefit classifications are defined as follows: institutional long-term care benefits only, noninstitutional long-term care benefits only, or comprehensive long-term care benefits.

**History:** Effective March 1, 2004.  
**General Authority:** NDCC 28-32-02  
**Law Implemented:** NDCC 26.1-45

**45-06-05.1-03. Policy definitions.** No long-term care insurance policy delivered or issued for delivery in this state shall use the terms set forth below, unless the terms are defined in the policy and the definitions satisfy the following requirements:

1. "Activities of daily living" means at least bathing, continence, dressing, eating, toileting, and transferring.
2. "Acute condition" means that the individual is medically unstable. Such an individual requires frequent monitoring by medical professionals, such as physicians and registered nurses, in order to maintain the individual's health status.
3. "Adult day care" means a program for six or more individuals of social and health-related services provided during the day in a community group setting for the purpose of supporting frail, impaired elderly or other disabled adults who can benefit from care in a group setting outside the home.
4. "Bathing" means washing oneself by sponge bath, or in either a tub or shower, including the task of getting into or out of the tub or shower.
5. "Cognitive impairment" means a deficiency in a person's short-term or long-term memory; orientation as to person, place, and time; deductive or abstract reasoning; or judgment as it relates to safety awareness.
6. "Continence" means the ability to maintain control of bowel and bladder function, or, when unable to maintain control of bowel or bladder function, the ability to perform associated personal hygiene, including caring for catheter or colostomy bag.
7. "Dressing" means putting on and taking off all items of clothing and any necessary braces, fasteners, or artificial limbs.
8. "Eating" means feeding oneself by getting food into the body from a receptacle such as a plate, cup, or table or by a feeding tube or intravenously.

9. "Hands-on assistance" means physical assistance (minimal, moderate, or maximal) without which the individual would not be able to perform the activity of daily living.
10. "Home health care services" means medical and nonmedical services provided to ill, disabled, or infirm persons in their residences. Such services may include homemaker services, assistance with activities of daily living, and respite care services.
11. "Medicare" means "The Health Insurance for the Aged Act, Title XVIII of the Social Security Amendments of 1965 as Then Constituted or Later Amended" or "Title I, Part I of Public Law 89-97, as Enacted by the Eighty-Ninth Congress of the United States of America and popularly known as The Health Insurance for the Aged Act, as then constituted and any later amendments or substitutes thereof", or words of similar import.
12. "Mental or nervous disorder" shall not be defined to include more than neurosis, psychoneurosis, psychopathy, psychosis, or mental or emotional disease or disorder.
13. "Personal care" means the provision of hands-on services to assist an individual with activities of daily living.
14. "Skilled nursing care", "intermediate care", "personal care", "home care", and other services shall be defined in relation to the level of skill required, the nature of the care, and the setting in which care must be delivered.
15. "Toileting" means getting to and from the toilet, getting on and off the toilet, and performing associated personal hygiene.
16. "Transferring" means moving into or out of a bed, chair, or wheelchair.
17. All providers of services, including "skilled nursing facility", "extended care facility", "intermediate care facility", "convalescent nursing home", "personal care facility", and "home care agency", shall be defined in relation to the services and facilities required to be available and the licensure or degree status of those providing or supervising the services. The definition may require that the provider be appropriately licensed or certified.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-04. Policy practices and provisions.**

1. **Renewability.** The terms "guaranteed renewable" and "noncancelable" shall not be used in any individual long-term care insurance policy without further explanatory language in accordance with the disclosure requirements of section 45-06-05.1-06.
  - a. A policy issued to an individual shall not contain renewal provisions other than "guaranteed renewable" or "noncancelable".
  - b. The term "guaranteed renewable" may be used only when the insured has the right to continue the long-term care insurance in force by the timely payment of premiums and when the insurer has no unilateral right to make any change in any provision of the policy or rider while the insurance is in force, and cannot decline to renew, except that rates may be revised by the insurer on a class basis.
  - c. The term "noncancelable" may be used only when the insured has the right to continue the long-term care insurance in force by the timely payment of premiums during which period the insurer has no right to unilaterally make any change in any provision of the insurance or in the premium rate.
  - d. The term "level premium" may only be used when the insurer does not have the right to change the premium.
  - e. In addition to the other requirements of this subsection, a qualified long-term care insurance contract shall be guaranteed renewable, within the meaning of section 7702B(b)(1)(C) of the Internal Revenue Code of 1986, as amended.
2. **Limitations and exclusions.** A policy may not be delivered or issued for delivery in this state as long-term care insurance if the policy limits or excludes coverage by type of illness, treatment, medical condition, or accident, except as follows:
  - a. Preexisting conditions or diseases:
  - b. Mental or nervous disorders; however, this shall not permit exclusion or limitation of benefits on the basis of alzheimer's disease;
  - c. Alcoholism and drug addiction;
  - d. Illness, treatment, or medical condition arising out of:
    - (1) War or act of war (whether declared or undeclared):

- (2) Participation in a felony, riot, or insurrection;
  - (3) Service in the armed forces or units auxiliary thereto;
  - (4) Suicide (sane or insane), attempted suicide, or intentionally self-inflicted injury; or
  - (5) Aviation (this exclusion applies only to non-fare-paying passengers).
- e. Treatment provided in a government facility, unless otherwise required by law, services for which benefits are available under medicare or other governmental program, except medicaid, any state or federal workers' compensation, employer's liability or occupational disease law, or any motor vehicle no-fault law, services provided by a member of the covered person's immediate family, and services for which no charge is normally made in the absence of insurance;
  - f. Expenses for services or items available or paid under another long-term care insurance or health insurance policy;
  - g. In the case of a qualified long-term care insurance contract, expenses for services or items to the extent that the expenses are reimbursable under title XVIII of the Social Security Act or would be so reimbursable but for the application of a deductible or coinsurance amount; and
  - h. This subsection is not intended to prohibit exclusions and limitations by type of provider or territorial limitations.
3. **Extension of benefits.** Termination of long-term care insurance shall be without prejudice to any benefits payable for institutionalization if the institutionalization began while the long-term care insurance was in force and continues without interruption after termination. The extension of benefits beyond the period the long-term care insurance was in force may be limited to the duration of the benefit period, if any, or to payment of the maximum benefits and may be subject to any policy waiting period, and all other applicable provisions of the policy.
4. **Continuation or conversion.**
- a. Group long-term care insurance issued in this state on or after the effective date of this section shall provide covered individuals with a basis for continuation or conversion of coverage.
  - b. For the purposes of this section, "a basis for continuation of coverage" means a policy provision that maintains coverage under the existing group policy when the coverage would otherwise

terminate and which is subject only to the continued timely payment of premium when due. Group policies that restrict provision of benefits and services to, or contain incentives to use certain providers or facilities, may provide continuation benefits that are substantially equivalent to the benefits of the existing group policy. The commissioner shall make a determination as to the substantial equivalency of benefits, and in doing so, shall take into consideration the differences between managed care and non-managed care plans, including, but not limited to, provider system arrangements, service availability, benefit levels, and administrative complexity.

- c. For the purposes of this section, "a basis for conversion of coverage" means a policy provision that an individual whose coverage under the group policy would otherwise terminate or has been terminated for any reason, including discontinuance of the group policy in its entirety or with respect to an insured class, and who has been continuously insured under the group policy, and any group policy which it replaced, for at least six months immediately prior to termination, shall be entitled to the issuance of a converted policy by the insurer under whose group policy the individual is covered, without evidence of insurability.
- d. For the purposes of this section, "converted policy" means an individual policy of long-term care insurance providing benefits identical to or benefits determined by the commissioner to be substantially equivalent to or in excess of those provided under the group policy from which conversion is made. When the group policy from which conversion is made restricts provision of benefits and services to, or contains incentives to use certain providers or facilities, the commissioner, in making a determination as to the substantial equivalency of benefits, shall take into consideration the differences between managed care and non-managed care plans, including provider system arrangements, service availability, benefit levels, and administrative complexity.
- e. Written application for the converted policy shall be made and the first premium due, if any, shall be paid as directed by the insurer not later than thirty-one days after termination of coverage under the group policy. The converted policy shall be issued effective on the day following the termination of coverage under the group policy, and shall be renewable annually.
- f. Unless the group policy from which conversion is made replaced previous group coverage, the premium for the converted policy shall be calculated on the basis of the insured's age at inception of coverage under the group policy from which conversion is made. When the group policy from which conversion is made replaced previous group coverage, the premium for the converted policy

shall be calculated on the basis of the insured's age at inception of coverage under the group policy replaced.

- g. Continuation of coverage or issuance of a converted policy shall be mandatory, except when:
- (1) Termination of group coverage resulted from an individual's failure to make any required payment of premium or contribution when due; or
  - (2) The terminating coverage is replaced not later than thirty-one days after termination, by group coverage effective on the day following the termination of coverage:
    - (a) Providing benefits identical to or benefits determined by the commissioner to be substantially equivalent to or in excess of those provided by the terminating coverage; and
    - (b) The premium for which is calculated in a manner consistent with the requirements of subdivision f.
- h. Notwithstanding any other provision of this section, a converted policy issued to an individual who at the time of conversion is covered by another long-term care insurance policy that provides benefits on the basis of incurred expenses may contain a provision that results in a reduction of benefits payable if the benefits provided under the additional coverage, together with the full benefits provided by the converted policy, would result in payment of more than one hundred percent of incurred expenses. The provision shall only be included in the converted policy if the converted policy also provides for a premium decrease or refund which reflects the reduction in benefits payable.
- i. The converted policy may provide that the benefits payable under the converted policy, together with the benefits payable under the group policy from which conversion is made, shall not exceed those that would have been payable had the individual's coverage under the group policy remained in force and effect.
- j. Notwithstanding any other provision of this section, an insured individual whose eligibility for group long-term care coverage is based upon the insured individual's relationship to another person shall be entitled to continuation of coverage under the group policy upon termination of the qualifying relationship by death or dissolution of marriage.
- k. For the purposes of this section, a "managed care plan" is a health care or assisted living arrangement designed to coordinate patient

care or control costs through utilization review, case management, or use of specific provider networks.

**5. Discontinuance and replacement.** If a group long-term care policy is replaced by another group long-term care policy issued to the same policyholder, the succeeding insurer shall offer coverage to all persons covered under the previous group policy on its date of termination. Coverage provided or offered to individuals by the insurer and premiums charged to persons under the new group policy:

**a.** Shall not result in an exclusion for preexisting conditions that would have been covered under the group policy being replaced; and

**b.** Shall not vary or otherwise depend on the individual's health or disability status, claim experience, or use of long-term care services.

**6. a.** The premium charged to an insured shall not increase due to either:

**(1)** The increasing age of the insured at ages beyond sixty-five; or

**(2)** The duration the insured has been covered under the policy.

**b.** The purchase of additional coverage shall not be considered a premium rate increase, but for purposes of the calculation required under section 45-06-05.1-24, the portion of the premium attributable to the additional coverage shall be added to and considered part of the initial annual premium.

**c.** A reduction in benefits shall not be considered a premium change, but for purpose of the calculation required under section 45-06-05.1-24, the initial annual premium shall be based on the reduced benefits.

**7. Electronic enrollment for group policies.**

**a.** In the case of a group defined in subdivision a of subsection 3 of North Dakota Century Code section 26.1-45-01, any requirement that a signature of an insured be obtained by an agent or insurer shall be deemed satisfied if:

**(1)** The consent is obtained by telephonic or electronic enrollment by the group policyholder or insurer. A verification of enrollment information shall be provided to the enrollee;

**(2)** The telephonic or electronic enrollment provides necessary and reasonable safeguards to assure the accuracy, retention, and prompt retrieval of records; and

- (3) The telephonic or electronic enrollment provides necessary and reasonable safeguards to assure that the confidentiality of nonpublic personal financial information and nonpublic personal health information as defined by article 45-14 is maintained.
- b. The insurer shall make available, upon request of the commissioner, records that will demonstrate the insurer's ability to confirm enrollment and coverage amounts.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-05. Unintentional lapse.** Each insurer offering long-term care insurance shall, as a protection against unintentional lapse, comply with the following:

1. a. Notice before lapse or termination. No individual long-term care policy or certificate shall be issued until the insurer has received from the applicant either a written designation of at least one person, in addition to the applicant, who is to receive notice of lapse or termination of the policy or certificate for nonpayment of premium, or a written waiver dated and signed by the applicant electing not to designate additional persons to receive notice. The applicant has the right to designate at least one person who is to receive the notice of termination, in addition to the insured. Designation shall not constitute acceptance of any liability on the third party for services provided to the insured. The form used for the written designation must provide space clearly designated for listing at least one person. The designation shall include each person's full name and home address. In the case of an applicant who elects not to designate an additional person, the waiver shall state: "Protection against unintended lapse. I understand that I have the right to designate at least one person other than myself to receive notice of lapse or termination of this long-term care insurance policy for nonpayment of premium. I understand that notice will not be given until thirty (30) days after a premium is due and unpaid. I elect NOT to designate a person to receive this notice."

The insurer shall notify the insured of the right to change this written designation, no less often than once every two years.

- b. When the policyholder or certificate holder pays premium for a long-term care insurance policy or certificate through a payroll or pension deduction plan, the requirements contained in subdivision a need not be met until sixty days after the policyholder or certificate holder is no longer on such a payment plan. The

application or enrollment form for such policies or certificates shall clearly indicate the payment plan selected by the applicant.

- C. Lapse or termination for nonpayment of premium. No individual long-term care policy or certificate shall lapse or be terminated for nonpayment of premium unless the insurer, at least thirty days before the effective date of the lapse or termination, has given notice to the insured and to those persons designated pursuant to subdivision a, at the address provided by the insured for purposes of receiving notice of lapse or termination. Notice shall be given by first-class United States mail, postage prepaid, and notice may not be given until thirty days after a premium is due and unpaid. Notice shall be deemed to have been given as of five days after the date of mailing.
2. Reinstatement. In addition to the requirement in subsection 1, a long-term care insurance policy or certificate shall include a provision that provides for reinstatement of coverage, in the event of lapse if the insurer is provided proof that the policyholder or certificate holder was cognitively impaired or had a loss of functional capacity before the grace period contained in the policy expired. This option shall be available to the insured if requested within five months after termination and shall allow for the collection of past-due premium, when appropriate. The standard of proof of cognitive impairment or loss of functional capacity shall not be more stringent than the benefit eligibility criteria on cognitive impairment or the loss of functional capacity contained in the policy and certificate.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-06. Required disclosure provisions.**

1. Renewability. Individual long-term care insurance policies shall contain a renewability provision.

  - a. The provision shall be appropriately captioned, shall appear on the first page of the policy, and shall clearly state that the coverage is guaranteed renewable or noncancelable. This provision shall not apply to policies that do not contain a renewability provision and under which the right to nonrenew is reserved solely to the policyholder.
  - b. A long-term care insurance policy or certificate, other than one in which the insurer does not have the right to change the premium, shall include a statement that premium rates may change.

2. **Riders and endorsements.** Except for riders or endorsements by which the insurer effectuates a request made in writing by the insured under an individual long-term care insurance policy, all riders or endorsements added to an individual long-term care insurance policy after date of issue or at reinstatement or renewal that reduce or eliminate benefits or coverage in the policy shall require signed acceptance by the individual insured. After the date of policy issue, any rider or endorsement which increases benefits or coverage with a concomitant increase in premium during the policy term must be agreed to in writing signed by the insured, except if the increased benefits or coverage are required by law. If a separate additional premium is charged for benefits provided in connection with riders or endorsements, the premium charge shall be set forth in the policy, rider, or endorsement.
3. **Payment of benefits.** A long-term care insurance policy that provides for the payment of benefits based on standards described as "usual and customary", "reasonable and customary", or words of similar import shall include a definition of these terms and an explanation of the terms in its accompanying outline of coverage.
4. **Limitations.** If a long-term care insurance policy or certificate contains any limitations with respect to preexisting conditions, the limitations shall appear as a separate paragraph of the policy or certificate and shall be labeled as "Preexisting Condition Limitations".
5. **Other limitations or conditions on eligibility for benefits.** A long-term care insurance policy or certificate containing any limitations or conditions for eligibility other than those prohibited in subsection 2 of North Dakota Century Code section 26.1-45-07 shall set forth a description of the limitations or conditions, including any required number of days of confinement, in a separate paragraph of the policy or certificate and shall label such paragraph "Limitations or Conditions on Eligibility for Benefits".
6. **Disclosure of tax consequences.** With regard to life insurance policies that provide an accelerated benefit for long-term care, a disclosure statement is required at the time of application for the policy or rider and at the time the accelerated benefit payment request is submitted that receipt of these accelerated benefits may be taxable, and that assistance should be sought from a personal tax advisor. The disclosure statement shall be prominently displayed on the first page of the policy or rider and any other related documents. This subsection shall not apply to qualified long-term care insurance contracts.
7. **Benefit triggers.** Activities of daily living and cognitive impairment shall be used to measure an insured's need for long-term care and shall be described in the policy or certificate in a separate paragraph and shall be labeled "Eligibility for the Payment of Benefits". Any additional

benefit triggers shall also be explained in this section. If these triggers differ for different benefits, explanation of the trigger shall accompany each benefit description. If an attending physician or other specified person must certify a certain level of functional dependency in order to be eligible for benefits, this too shall be specified.

8. A qualified long-term care insurance contract shall include a disclosure statement in the policy and in the outline of coverage as contained in subsection 5 of section 45-06-05.1-27, federal tax consequences, that the policy is intended to be a qualified long-term care insurance contract under section 7702B(b) of the Internal Revenue Code of 1986, as amended.
9. A nonqualified long-term care insurance contract shall include a disclosure statement in the policy and in the outline of coverage as contained in subsection 5 of section 45-06-05.1-27, federal tax consequences, that the policy is not intended to be a qualified long-term care insurance contract.

**History:** Effective March 1, 2004.  
**General Authority:** NDCC 28-32-02  
**Law Implemented:** NDCC 26.1-45

**45-06-05.1-07. Required disclosure of rating practices to consumers.**

1. This section shall apply as follows:
  - a. Except as provided in subdivision b, this section applies to any long-term care policy or certificate issued in this state on or after September 1, 2004.
  - b. For certificates issued on or after the effective date of this amended regulation under a group long-term care insurance policy as defined in subdivision a of subsection 3 of North Dakota Century Code section 26.1-45-01, which policy was in force at the time this amended regulation became effective, the provisions of this section shall apply on the policy anniversary following March 1, 2005.
2. Other than policies for which no applicable premium rate or rate schedule increases can be made, insurers shall provide all of the information listed in this subsection to the applicant at the time of application or enrollment, unless the method of application does not allow for delivery at that time. In such a case, an insurer shall provide all of the information listed in this section to the applicant no later than at the time of delivery of the policy or certificate.
  - a. A statement that the policy may be subject to rate increases in the future:

- b. An explanation of potential future premium rate revisions, and the policyholder's or certificate holder's option in the event of a premium rate revision;
- c. The premium rate or rate schedules applicable to the applicant that will be in effect until a request is made for an increase;
- d. A general explanation for applying premium rate or rate schedule adjustments that shall include:
  - (1) A description of when premium rate or rate schedule adjustments will be effective, e.g., next anniversary date, next billing date, etc.; and
  - (2) The right to a revised premium rate or rate schedule as provided in subdivision c if the premium rate or rate schedule is changed; and
- e. (1) Information regarding each premium rate increase on this policy form or similar policy forms over the past ten years for this state or any other state that, at a minimum, identifies:
  - (a) The policy forms for which premium rates have been increased;
  - (b) The calendar years when the form was available for purchase; and
  - (c) The amount or percent of each increase. The percentage may be expressed as a percentage of the premium rate prior to the increase, and may also be expressed as minimum and maximum percentages if the rate increase is variable by rating characteristics.
- (2) The insurer may, in a fair manner, provide additional explanatory information related to the rate increases.
- (3) An insurer shall have the right to exclude from the disclosure premium rate increases that only apply to blocks of business acquired from other nonaffiliated insurers or the long-term care policies acquired from other nonaffiliated insurers when those increases occurred prior to the acquisition.
- (4) If an acquiring insurer files for a rate increase on a long-term care policy form acquired from nonaffiliated insurers or a block of policy forms acquired from nonaffiliated insurers on or before the later of the effective date of this section or the end of a twenty-four-month period following the acquisition of the block or policies, the acquiring insurer may exclude that

rate increase from the disclosure. However, the nonaffiliated selling company shall include the disclosure of that rate increase in accordance with paragraph 1.

- (5) If the acquiring insurer in paragraph 4 files for a subsequent rate increase, even within the twenty-four-month period, on the same policy form acquired from nonaffiliated insurers or block of policy forms acquired from nonaffiliated insurers referenced in paragraph 4, the acquiring insurer shall make all disclosures required by this subdivision, including disclosure of the earlier rate increase referenced in paragraph 4.
3. An applicant shall sign an acknowledgment at the time of application, unless the method of application does not allow for signature at that time, that the insurer made the disclosure required under subdivisions a through e of subsection 2. If due to the method of application the applicant cannot sign an acknowledgment at the time of application, the applicant shall sign no later than at the time of delivery of the policy or certificate.
4. An insurer shall use the forms in appendices B and F to comply with the requirements of subsections 2 and 3.
5. An insurer shall provide notice of an upcoming premium rate schedule increase to all policyholders or certificate holders, if applicable, at least forty-five days prior to the implementation of the premium rate schedule increase by the insurer. The notice shall include the information required by subsection 2 when the rate increase is implemented.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-08. Initial filing requirements.**

1. This section applies to any long-term care policy issued in this state on or after September 1, 2004.
2. An insurer shall provide the information listed in this subsection to the commissioner thirty days prior to making a long-term care insurance form available for sale.

  - a. A copy of the disclosure documents required in section 45-06-05.1-07; and
  - b. An actuarial certification consisting of at least the following:

    - (1) A statement that the initial premium rate schedule is sufficient to cover anticipated costs under moderately

adverse experience and that the premium rate schedule is reasonably expected to be sustainable over the life of the form with no future premium increases anticipated;

(2) A statement that the policy design and coverage provided have been reviewed and taken into consideration;

(3) A statement that the underwriting and claims adjudication processes have been reviewed and taken into consideration;

(4) A complete description of the basis for contract reserves that are anticipated to be held under the form, to include:

(a) Sufficient detail or sample calculations provided so as to have a complete depiction of the reserve amounts to be held;

(b) A statement that the assumptions used for reserves contain reasonable margins for adverse experience;

(c) A statement that the net valuation premium for renewal years does not increase, except for attained-age rating where permitted; and

(d) A statement that the difference between the gross premium and the net valuation premium for renewal years is sufficient to cover expected renewal expenses; or if such a statement cannot be made, a complete description of the situations in which this does not occur:

[1] An aggregate distribution of anticipated issues may be used as long as the underlying gross premiums maintain a reasonably consistent relationship; and

[2] If the gross premiums for certain age groups appear to be inconsistent with this requirement, the commissioner may request a demonstration under subsection 3 based on a standard age distribution; and

(5) (a) A statement that the premium rate schedule is not less than the premium rate schedule for existing similar policy forms also available from the insurer except for reasonable differences attributable to benefits; or

(b) A comparison of the premium schedules for similar policy forms that are currently available from the insurer with an explanation of the differences.

3. a. The commissioner may request an actuarial demonstration that benefits are reasonable in relation to premiums. The actuarial demonstration shall include either premium and claim experience on similar policy forms, adjusted for any premium or benefit differences, relevant and credible data from other studies, or both.
- b. In the event the commissioner asks for additional information under this provision, the period in subsection 2 does not include the period during which the insurer is preparing the requested information.

**History:** Effective March 1, 2004.  
**General Authority:** NDCC 28-32-02  
**Law Implemented:** NDCC 26.1-45

**45-06-05.1-09. Prohibition against post-claims underwriting.**

1. All applications for long-term care insurance policies or certificates except those that are guaranteed issue shall contain clear and unambiguous questions designed to ascertain the health condition of the applicant.
2. a. If an application for long-term care insurance contains a question that asks whether the applicant has had medication prescribed by a physician, it must also ask the applicant to list the medication that has been prescribed.
- b. If the medications listed in the application were known by the insurer, or should have been known at the time of application, to be directly related to a medical condition for which coverage would otherwise be denied, then the policy or certificate shall not be rescinded for that condition.
3. Except for policies or certificates which are guaranteed issue:
- a. The following language shall be set out conspicuously and in close conjunction with the applicant's signature block on an application for a long-term care insurance policy or certificate:
- Caution: If your answers on this application are incorrect or untrue, [company] has the right to deny benefits or rescind your policy.
- b. The following language, or language substantially similar to the following, shall be set out conspicuously on the long-term care insurance policy or certificate at the time of delivery:

Caution: The issuance of this long-term care insurance [policy] [certificate] is based upon your responses to the questions on your application. A copy of your [application] [enrollment form] [is enclosed] [was retained by you when you applied]. If your answers are incorrect or untrue, the company has the right to deny benefits or rescind your policy. The best time to clear up any questions is now, before a claim arises! If, for any reason, any of your answers are incorrect, contact the company at this address: [insert address]

- c. Prior to issuance of a long-term care policy or certificate to an applicant age eighty or older, the insurer shall obtain one of the following:
- (1) A report of a physical examination;
  - (2) An assessment of functional capacity;
  - (3) An attending physician's statement; or
  - (4) Copies of medical records.
4. A copy of the completed application or enrollment form, whichever is applicable, shall be delivered to the insured no later than at the time of delivery of the policy or certificate unless it was retained by the applicant at the time of application.
5. Every insurer or other entity selling or issuing long-term care insurance benefits shall maintain a record of all policy or certificate rescissions, both state and countrywide, except those that the insured voluntarily effectuated and shall annually furnish this information to the insurance commissioner in the format prescribed by the national association of insurance commissioners in appendix A.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-10. Minimum standards for home health and community care benefits in long-term care insurance policies.**

1. A long-term care insurance policy or certificate shall not, if it provides benefits for home health care or community care services, limit or exclude benefits:
  - a. By requiring that the insured or claimant would need care in a skilled nursing facility if home health care services were not provided;

- b. By requiring that the insured or claimant first or simultaneously receive nursing or therapeutic services, or both, in a home, community, or institutional setting before home health care services are covered;
  - c. By limiting eligible services to services provided by registered nurses or licensed practical nurses;
  - d. By requiring that a nurse or therapist provide services covered by the policy that can be provided by a home health aide, or other licensed or certified home care worker acting within the scope of the worker's licensure or certification;
  - e. By excluding coverage for personal care services provided by a home health aide;
  - f. By requiring that the provision of home health care services be at a level of certification or licensure greater than that required by the eligible service;
  - g. By requiring that the insured or claimant have an acute condition before home health care services are covered;
  - h. By limiting benefits to services provided by medicare-certified agencies or providers; or
  - i. By excluding coverage for adult day care services.
2. A long-term care insurance policy or certificate, if it provides for home health or community care services, shall provide total home health or community care coverage that is a dollar amount equivalent to at least one-half of one year's coverage available for nursing home benefits under the policy or certificate, at the time covered home health or community care services are being received. This requirement shall not apply to policies or certificates issued to residents of continuing care retirement communities.
3. Home health care coverage may be applied to the nonhome health care benefits provided in the policy or certificate when determining maximum coverage under the terms of the policy or certificate.

**History:** Effective March 1, 2004.  
**General Authority:** NDCC 28-32-02  
**Law Implemented:** NDCC 26.1-45

**45-06-05.1-11. Requirement to offer inflation protection.**

1. No insurer may offer a long-term care insurance policy unless the insurer also offers to the policyholder in addition to any other inflation

protection the option to purchase a policy that provides for benefit levels to increase with benefit maximums or reasonable durations which are meaningful to account for reasonably anticipated increases in the costs of long-term care services covered by the policy. Insurers must offer to each policyholder, at the time of purchase, the option to purchase a policy with an inflation protection feature no less favorable than one of the following:

- a. Increases benefit levels annually in a manner so that the increases are compounded annually at a rate not less than five percent;
  - b. Guarantees the insured individual the right to periodically increase benefit levels without providing evidence of insurability or health status so long as the option for the previous period has not been declined. The amount of the additional benefit shall be no less than the difference between the existing policy benefit and that benefit compounded annually at a rate of at least five percent for the period beginning with the purchase of the existing benefit and extending until the year in which the offer is made; or
  - c. Covers a specified percentage of actual or reasonable charges and does not include a maximum specified indemnity amount or limit.
2. Where the policy is issued to a group, the required offer in subsection 1 shall be made to the group policyholder; except, if the policy is issued to a group defined in subdivision d of subsection 3 of North Dakota Century Code section 26.1-45-01 other than to a continuing care retirement community, the offering shall be made to each proposed certificate holder.
3. The offer in subsection 1 shall not be required of life insurance policies or riders containing accelerated long-term care benefits.
4. a. Insurers shall include the following information in or with the outline of coverage:
- (1) A graphic comparison of the benefit levels of a policy that increases benefits over the policy period with a policy that does not increase benefits. The graphic comparison shall show benefit levels over at least a twenty-year period.
  - (2) Any expected premium increases or additional premiums to pay for automatic or optional benefit increases.
- b. An insurer may use a reasonable hypothetical, or a graphic demonstration, for the purposes of this disclosure.
5. Inflation protection benefit increases under a policy which contains these benefits shall continue without regard to an insured's age, claim

status or claim history, or the length of time the person has been insured under the policy.

6. An offer of inflation protection that provides for automatic benefit increases shall include an offer of a premium which the insurer expects to remain constant. The offer shall disclose in a conspicuous manner that the premium may change in the future unless the premium is guaranteed to remain constant.

7. a. Inflation protection as provided in subdivision a of subsection 1 shall be included in a long-term care insurance policy unless an insurer obtains a rejection of inflation protection signed by the policyholder as required in this subsection. The rejection may be either in the application or on a separate form.

b. The rejection shall be considered a part of the application and shall state:

I have reviewed the outline of coverage and the graphs that compare the benefits and premiums of this policy with and without inflation protection. Specifically, I have reviewed Plans \_\_\_\_\_, and I reject inflation protection.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-12. Requirements for application forms and replacement coverage.**

1. Application forms shall include the following questions designed to elicit information as to whether, as of the date of the application, the applicant has another long-term care insurance policy or certificate in force or whether a long-term care policy or certificate is intended to replace any other accident and sickness or long-term care policy or certificate presently in force. A supplementary application or other form to be signed by the applicant and agent, except when the coverage is sold without an agent, containing the questions may be used. With regard to a replacement policy issued to a group defined by subdivision a of subsection 3 of North Dakota Century Code section 26.1-45-01, the following questions may be modified only to the extent necessary to elicit information about health or long-term care insurance policies other than the group policy being replaced, provided that the certificate holder has been notified of the replacement.

a. Do you have another long-term care insurance policy or certificate in force (including health care service contract, health maintenance organization contract)?

- b. Did you have another long-term care insurance policy or certificate in force during the last twelve months?
    - (1) If so, with which company?
    - (2) If that policy lapsed, when did it lapse?
  - c. Are you covered by medicaid?
  - d. Do you intend to replace any of your medical or health insurance coverage with this policy [certificate]?
2. Agents shall list any other health insurance policies they have sold to the applicant.
- a. List policies sold that are still in force.
  - b. List policies sold in the past five years that are no longer in force.
3. Solicitations other than direct response. Upon determining that a sale will involve replacement, an insurer, other than an insurer using direct response solicitation methods, or its agent shall furnish the applicant, prior to issuance or delivery of the individual long-term care insurance policy, a notice regarding replacement of accident and sickness or long-term care coverage. One copy of the notice shall be retained by the applicant and an additional copy signed by the applicant shall be retained by the insurer. The required notice shall be provided in the following manner:

**NOTICE TO APPLICANT REGARDING REPLACEMENT OF INDIVIDUAL ACCIDENT AND SICKNESS OR LONG-TERM CARE INSURANCE**

[Insurance company's name and address]

SAVE THIS NOTICE! IT MAY BE IMPORTANT TO YOU IN THE FUTURE.

According to [your application] [information you have furnished], you intend to lapse or otherwise terminate existing accident and sickness or long-term care insurance and replace it with an individual long-term care insurance policy to be issued by [company name] Insurance Company. Your new policy provides thirty (30) days within which you may decide, without cost, whether you desire to keep the policy. For your own information and protection, you should be aware of and seriously consider certain factors which may affect the insurance protection available to you under the new policy.

You should review this new coverage carefully, comparing it with all accident and sickness or long-term care insurance coverage you now have, and terminate your present policy only if, after due consideration, you find that purchase of this long-term care coverage is a wise decision.

STATEMENT TO APPLICANT BY AGENT [BROKER OR OTHER REPRESENTATIVE]:

(Use additional sheets, as necessary.)

I have reviewed your current medical or health insurance coverage. I believe the replacement of insurance involved in this transaction materially improves your position. My conclusion has taken into account the following considerations, which I call to your attention:

1. Health conditions that you may presently have (preexisting conditions) may not be immediately or fully covered under the new policy. This could result in denial or delay in payment of benefits under the new policy, whereas a similar claim might have been payable under your present policy.
2. State law provides that your replacement policy or certificate may not contain new preexisting conditions or probationary periods. The insurer will waive any time periods applicable to preexisting conditions or probationary periods in the new policy (or coverage) for similar benefits to the extent such time was spent (depleted) under the original policy.
3. If you are replacing existing long-term care insurance coverage, you may wish to secure the advice of your present insurer or its agent regarding the proposed replacement of your present policy. This is not only your right, but it is also in your best interest to make sure you understand all the relevant factors involved in replacing your present coverage.
4. If, after due consideration, you still wish to terminate your present policy and replace it with new coverage, be certain to truthfully and completely answer all questions on the application concerning your medical health history. Failure to include all material medical information on an application may provide a basis for the company to deny any future claims and to refund your premium as though your policy had never been in force. After the application has been completed and before you sign it, reread it carefully to be certain that all information has been properly recorded.

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(Signature of Agent, Broker, or Other Representative)

[Typed Name and Address of Agent or Broker]

The above "Notice to Applicant" was delivered to me on:

---

(Applicant's Signature)

(Date)

4. Direct response solicitations. Insurers using direct response solicitation methods shall deliver a notice regarding replacement of accident and sickness or long-term care coverage to the applicant upon issuance of the policy. The required notice shall be provided in the following manner:

**NOTICE TO APPLICANT REGARDING REPLACEMENT  
OF ACCIDENT AND SICKNESS OR LONG-TERM CARE INSURANCE**

[Insurance company's name and address]

**SAVE THIS NOTICE! IT MAY BE IMPORTANT TO YOU IN THE FUTURE.**

According to [your application] [information you have furnished], you intend to lapse or otherwise terminate existing accident and sickness or long-term care insurance and replace it with the long-term care insurance policy delivered herewith issued by [company name] Insurance Company. Your new policy provides thirty (30) days within which you may decide, without cost, whether you desire to keep the policy. For your own information and protection, you should be aware of and seriously consider certain factors which may affect the insurance protection available to you under the new policy.

You should review this new coverage carefully, comparing it with all accident and sickness or long-term care insurance coverage you now have, and terminate your present policy only if, after due consideration, you find that purchase of this long-term care coverage is a wise decision.

1. Health conditions which you may presently have (preexisting conditions), may not be immediately or fully covered under the new policy. This could result in denial or delay in payment of benefits under the new policy, whereas a similar claim might have been payable under your present policy.
2. State law provides that your replacement policy or certificate may not contain new preexisting conditions or probationary periods. Your insurer will waive any time periods applicable to preexisting conditions or probationary periods in the new policy (or coverage) for similar benefits to the extent such time was spent (depleted) under the original policy.
3. If you are replacing existing long-term care insurance coverage, you may wish to secure the advice of your present insurer or its agent regarding the proposed replacement of your present policy. This is not only your right, but it is also in your best interest to make sure you understand all the relevant factors involved in replacing your present coverage.
4. [To be included only if the application is attached to the policy.] If, after due consideration, you still wish to terminate your present policy and replace it with new coverage, read the copy of the application attached

to your new policy and be sure that all questions are answered fully and correctly. Omissions or misstatements in the application could cause an otherwise valid claim to be denied. Carefully check the application and write to [company name and address] within thirty (30) days if any information is not correct and complete, or if any past medical history has been left out of the application.

[Company Name]

5. If replacement is intended, the replacing insurer shall notify, in writing, the existing insurer of the proposed replacement. The existing policy shall be identified by the insurer, name of the insured and policy number or address, including zip code. Notice shall be made within five working days from the date the application is received by the insurer or the date the policy is issued, whichever is sooner.
6. Life insurance policies that accelerate benefits for long-term care shall comply with this section if the policy being replaced is a long-term care insurance policy. If the policy being replaced is a life insurance policy, the insurer shall comply with the requirements of article 45-04. If a life insurance policy that accelerates benefits for long-term care is replaced by another such policy, the replacing insurer shall comply with both the long-term care and the life insurance replacement requirements.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-13. Reporting requirements.**

1. Every insurer shall maintain records for each agent of that agent's amount of replacement sales as a percentage of the agent's total annual sales and the amount of lapses of long-term care insurance policies sold by the agent as a percentage of the agent's total annual sales.
2. Every insurer shall report annually by June thirtieth the ten percent of its agents with the greatest percentages of lapses and replacements as measured by subsection 1. (Appendix G)
3. Reported replacement and lapse rates do not alone constitute a violation of insurance laws or necessarily imply wrongdoing. The reports are for the purpose of reviewing more closely agent activities regarding the sale of long-term care insurance.
4. Every insurer shall report annually by June thirtieth the number of lapsed policies as a percentage of its total annual sales and as a percentage of its total number of policies in force as of the end of the preceding calendar year. (Appendix G)

5. Every insurer shall report annually by June thirtieth the number of replacement policies sold as a percentage of its total annual sales and as a percentage of its total number of policies in force as of the preceding calendar year. (Appendix G)
6. Every insurer shall report annually by June thirtieth, for qualified long-term care insurance contracts, the number of claims denied for each class of business, expressed as a percentage of claims denied. (Appendix E)
7. For purposes of this section:
  - a. Subject to subdivision c, "claim" means a request for payment of benefits under an in-force policy regardless of whether the benefit claimed is covered under the policy or any terms or conditions of the policy have been met;
  - b. "Denied" means the insurer refuses to pay a claim for any reason other than for claims not paid for failure to meet the waiting period or because of an applicable preexisting condition;
  - c. "Policy" means only long-term care insurance; and
  - d. "Report" means on a statewide basis.
8. Reports required under this section shall be filed with the commissioner.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-14. Licensing.** A producer is not authorized to sell, solicit, or negotiate with respect to long-term care insurance except as authorized by chapter 45-02-02 and North Dakota Century Code chapter 26.1-26.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-15. Discretionary powers of commissioner.** The commissioner may, upon written request and after an administrative hearing, issue an order to modify or suspend a specific provision or provisions of this chapter with respect to a specific long-term care insurance policy or certificate upon a written finding that:

1. The modification or suspension would be in the best interest of the insureds;

2. The purposes to be achieved could not be effectively or efficiently achieved without the modification or suspension; and
3.
  - a. The modification or suspension is necessary to the development of an innovative and reasonable approach for insuring long-term care;
  - b. The policy or certificate is to be issued to residents of a life care or continuing care retirement community or some other residential community for the elderly and the modification or suspension is reasonably related to the special needs or nature of such a community; or
  - c. The modification or suspension is necessary to permit long-term care insurance to be sold as part of, or in conjunction with, another insurance product.

**History:** Effective March 1, 2004.  
**General Authority:** NDCC 28-32-02  
**Law Implemented:** NDCC 26.1-45

**45-06-05.1-16. Reserve standards.**

1. When long-term care benefits are provided through the acceleration of benefits under group or individual life policies or riders to such policies, policy reserves for the benefits shall be determined in accordance with North Dakota Century Code section 26.1-35-02. Claim reserves shall also be established in the case when the policy or rider is in claim status.

Reserves for policies and riders subject to this subsection should be based on the multiple decrement model utilizing all relevant decrements except for voluntary termination rates. Single decrement approximations are acceptable if the calculation produces essentially similar reserves, if the reserve is clearly more conservative, or if the reserve is immaterial. The calculations may take into account the reduction in life insurance benefits due to the payment of long-term care benefits. However, in no event shall the reserves for the long-term care benefit and the life insurance benefit be less than the reserves for the life insurance benefit assuming no long-term care benefit.

In the development and calculation of reserves for policies and riders subject to this subsection, due regard shall be given to the applicable policy provisions, marketing methods, administrative procedures, and all other considerations which have an impact on projected claim costs, including, but not limited to, the following:

- a. Definition of insured events;
- b. Covered long-term care facilities;

- c. Existence of home convalescence care coverage:
- d. Definition of facilities:
- e. Existence or absence of barriers to eligibility:
- f. Premium waiver provision:
- g. Renewability:
- h. Ability to raise premiums:
- i. Marketing method:
- j. Underwriting procedures:
- k. Claims adjustment procedures:
- l. Waiting period:
- m. Maximum benefit:
- n. Availability of eligible facilities:
- o. Margins in claim costs:
- p. Optional nature of benefit:
- q. Delay in eligibility for benefit:
- r. Inflation protection provisions; and
- s. Guaranteed insurability option.

Any applicable valuation morbidity table shall be certified as appropriate as a statutory valuation table by a member of the American academy of actuaries.

2. When long-term care benefits are provided other than as in subsection 1, reserves shall be determined in accordance with section 45-03-15-01.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-17. Loss ratio.**

1. This section shall apply to all long-term care insurance policies or certificates except those covered under sections 45-06-05.1-08 and 45-06-05.1-18.
2. Benefits under long-term care insurance policies shall be deemed reasonable in relation to premiums provided the expected loss ratio is at least sixty percent, calculated in a manner which provides for adequate reserving of the long-term care insurance risk. In evaluating the expected loss ratio, due consideration shall be given to all relevant factors, including:
  - a. Statistical credibility of incurred claims experience and earned premiums;
  - b. The period for which rates are computed to provide coverage;
  - c. Experienced and projected trends;
  - d. Concentration of experience within early policy duration;
  - e. Expected claim fluctuation;
  - f. Experience refunds, adjustments, or dividends;
  - g. Renewability features;
  - h. All appropriate expense factors;
  - i. Interest;
  - j. Experimental nature of the coverage;
  - k. Policy reserves;
  - l. Mix of business by risk classification; and
  - m. Product features such as long elimination periods, high deductibles, and high maximum limits.
3. Subsection 2 shall not apply to life insurance policies that accelerate benefits for long-term care. A life insurance policy that funds long-term care benefits entirely by accelerating the death benefit is considered to provide reasonable benefits in relation to premiums paid, if the policy complies with all of the following provisions:

- a. The interest credited internally to determine cash value accumulations, including long-term care, if any, are guaranteed not to be less than the minimum guaranteed interest rate for cash value accumulations without long-term care set forth in the policy;
- b. The portion of the policy that provides life insurance benefits meets the nonforfeiture requirements of North Dakota Century Code sections 26.1-33-18 through 26.1-33-28;
- c. The policy meets the disclosure requirements of subsections 4, 5, and 6 of North Dakota Century Code section 26.1-45-09;
- d. Any policy illustration that meets the applicable requirements of the national association of insurance commissioners life insurance illustrations model regulation; and
- e. An actuarial memorandum is filed with the insurance department that includes:
  - (1) A description of the basis on which the long-term care rates were determined;
  - (2) A description of the basis for the reserves;
  - (3) A summary of the type of policy, benefits, renewability, general marketing method, and limits on ages of issuance;
  - (4) A description and a table of each actuarial assumption used. For expenses, an insurer must include a percentage of premium dollars per policy and dollars per unit of benefits, if any;
  - (5) A description and a table of the anticipated policy reserves and additional reserves to be held in each future year for active lives;
  - (6) The estimated average annual premium per policy and the average issue age;
  - (7) A statement as to whether underwriting is performed at the time of application. The statement shall indicate whether underwriting is used and, if used, the statement shall include a description of the type or types of underwriting used, such as medical underwriting or functional assessment underwriting. Concerning a group policy, the statement shall indicate whether the enrollee or any dependent will be underwritten and when underwriting occurs; and

- (8) A description of the effect of the long-term care policy provision on the required premiums, nonforfeiture values, and reserves on the underlying life insurance policy, both for active lives and those in long-term care claim status.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-18. Premium rate schedule increases.**

1. This section shall apply as follows:
  - a. Except as provided in subdivision b, this section applies to any long-term care policy or certificate issued in this state on or after September 1, 2004.
  - b. For certificates issued on or after the effective date of this amended regulation under a group long-term care insurance policy as defined in subdivision a of subsection 3 of North Dakota Century Code section 26.1-45-01, which policy was in force at the time this amended regulation became effective, the provisions of this section shall apply on the policy anniversary following March 1, 2005.
2. An insurer shall provide notice of a pending premium rate schedule increase, including an exceptional increase, to the commissioner at least thirty days prior to the notice to the policyholders and shall include:
  - a. Information required by section 45-06-05.1-07;
  - b. Certification by a qualified actuary that:
    - (1) If the requested premium rate schedule increase is implemented and the underlying assumptions, which reflect moderately adverse conditions, are realized, no further premium rate schedule increases are anticipated; and
    - (2) The premium rate filing is in compliance with the provisions of this section;
  - c. An actuarial memorandum justifying the rate schedule change request that includes:
    - (1) Lifetime projections of earned premiums and incurred claims based on the filed premium rate schedule increase; and the method and assumptions used in determining the projected values, including reflection of any assumptions that deviate

from those used for pricing other forms currently available for sale:

(a) Annual values for the five years preceding and the three years following the valuation date shall be provided separately;

(b) The projections shall include the development of the lifetime loss ratio, unless the rate increase is an exceptional increase;

(c) The projections shall demonstrate compliance with subsection 3; and

(d) For exceptional increases:

[1] The projected experience should be limited to the increases in claims expenses attributable to the approved reasons for the exceptional increase; and

[2] In the event the commissioner determines as provided in subdivision d of subsection 1 of section 45-06-05.1-02 that offsets may exist, the insurer shall use appropriate net projected experience;

(2) Disclosure of how reserves have been incorporated in this rate increase whenever the rate increase will trigger contingent benefit upon lapse;

(3) Disclosure of the analysis performed to determine why a rate adjustment is necessary, which pricing assumptions were not realized and why, and what other actions taken by the company have been relied on by the actuary;

(4) A statement that policy design, underwriting, and claims adjudication practices have been taken into consideration; and

(5) In the event that it is necessary to maintain consistent premium rates for new certificates and certificates receiving a rate increase, the insurer will need to file composite rates reflecting projections of new certificates;

d. A statement that renewal premium rate schedules are not greater than new business premium rate schedules except for differences attributable to benefits, unless sufficient justification is provided to the commissioner; and

- e. Sufficient information for review and approval of the premium rate schedule increase by the commissioner.
3. All premium rate schedule increases shall be determined in accordance with the following requirements:
- a. Exceptional increases shall provide that seventy percent of the present value of projected additional premiums from the exceptional increase will be returned to policyholders in benefits;
  - b. Premium rate schedule increases shall be calculated such that the sum of the accumulated value of incurred claims, without the inclusion of active life reserves, and the present value of future projected incurred claims, without the inclusion of active life reserves, will not be less than the sum of the following:
    - (1) The accumulated value of the initial earned premium times fifty-eight percent;
    - (2) Eighty-five percent of the accumulated value of prior premium rate schedule increases on an earned basis;
    - (3) The present value of future projected initial earned premiums times fifty-eight percent; and
    - (4) Eighty-five percent of the present value of future projected premiums not in paragraph 3 on an earned basis;
  - c. In the event that a policy form has both exceptional and other increases, the values in paragraphs 2 and 4 of subdivision b will also include seventy percent for exceptional rate increase amounts; and
  - d. All present and accumulated values used to determine rate increases shall use the maximum valuation interest rate for contract reserves as specified in section 45-03-15-01. The actuary shall disclose as part of the actuarial memorandum the use of any appropriate averages.
4. For each rate increase that is implemented, the insurer shall file for approval by the commissioner updated projections, as defined in paragraph 1 of subdivision c of subsection 2, annually for the next three years and include a comparison of actual results to projected values. The commissioner may extend the period to greater than three years if actual results are not consistent with projected values from prior projections. For group insurance policies that meet the conditions in subsection 11, the projections required by this subsection shall be provided to the policyholder in lieu of filing with the commissioner.

5. If any premium rate in the revised premium rate schedule is greater than two hundred percent of the comparable rate in the initial premium schedule, lifetime projections, as defined in paragraph 1 of subdivision c of subsection 2, shall be filed for approval by the commissioner every five years following the end of the required period in subsection 4. For group insurance policies that meet the conditions in subsection 11, the projections required by this subsection shall be provided to the policyholder in lieu of filing with the commissioner.
6. a. If the commissioner has determined that the actual experience following a rate increase does not adequately match the projected experience and that the current projections under moderately adverse conditions demonstrate that incurred claims will not exceed proportions of premiums specified in subsection 3, the commissioner may require the insurer to implement any of the following:
- (1) Premium rate schedule adjustments; or
  - (2) Other measures to reduce the difference between the projected and actual experience.
- b. In determine whether the actual experience adequately matches the projected experience, consideration should be given to paragraph 5 of subdivision c of subsection 2, if applicable.
7. If the majority of the policies or certificates to which the increase is applicable are eligible for the contingent benefit upon lapse, the insurer shall file:
- a. A plan, subject to commissioner approval, for improved administration or claims processing designed to eliminate the potential for further deterioration of the policy form requiring further premium rate schedule increases, or both, or to demonstrate that appropriate administration and claims processing have been implemented or are in effect; otherwise the commissioner may impose the condition in subsection 8; and
  - b. The original anticipated lifetime loss ratio and the premium rate schedule increase that would have been calculated according to subsection 3 had the greater of the original anticipated lifetime loss ratio or fifty-eight percent been used in the calculations described in paragraphs 1 and 3 of subdivision b of subsection 3.
8. a. For a rate increase filing that meets the following criteria, the commissioner shall review, for all policies included in the filing, the projected lapse rates and past lapse rates during the twelve months following each increase to determine if significant adverse lapsation has occurred or is anticipated:

- (1) The rate increase is not the first rate increase requested for the specific policy form or forms;
  - (2) The rate increase is not an exceptional increase; and
  - (3) The majority of the policies or certificates to which the increase is applicable are eligible for the contingent benefit upon lapse.
- b. In the event significant adverse lapsation has occurred and is anticipated in the filing or is evidenced in the actual results as presented in the updated projections provided by the insurer following the requested rate increase, the commissioner may determine that a rate spiral exists. Following the determination that a rate spiral exists, the commissioner may require the insurer to offer, without underwriting, to all in-force insureds subject to the rate increase the option to replace existing coverage with one or more reasonably comparable products being offered by the insurer or its affiliates.
- (1) The offer shall:
    - (a) Be subject to the approval of the commissioner;
    - (b) Be based on actuarially sound principles, but not be based on attained age; and
    - (c) Provide that maximum benefits under any new policy accepted by an insured shall be reduced by comparable benefits already paid under the existing policy.
  - (2) The insurer shall maintain the experience of all the replacement insureds separate from the experience of insureds originally issued the policy forms. In the event of a request for a rate increase on the policy form, the rate increase shall be limited to the lesser of:
    - (a) The maximum rate increase determined based on the combined experience; and
    - (b) The maximum rate increase determined based only on the experience of the insureds originally issued the form plus ten percent.
9. If the commissioner determines that the insurer has exhibited a persistent practice of filing inadequate initial premium rates for long-term care insurance, the commissioner may, in addition to the provisions of subsection 8, prohibit the insurer from either of the following:

- a. Filing and marketing comparable coverage for a period of up to five years; or
  - b. Offering all other similar coverages and limiting marketing of new applications to the products subject to recent premium rate schedule increases.
10. Subsections 1 through 9 shall not apply to policies for which the long-term care benefits provided by the policy are incidental, as defined in subsection 2 of section 45-06-05.1-02, if the policy complies with all of the following provisions:
- a. The interest credited internally to determine cash value accumulations, including long-term care, if any, are guaranteed not to be less than the minimum guaranteed interest rate for cash value accumulations without long-term care set forth in the policy;
  - b. The portion of the policy that provides insurance benefits other than long-term care coverage meets the nonforfeiture requirements as applicable in any of the following:
    - (1) North Dakota Century Code sections 26.1-33-18 through 26.1-33-28;
    - (2) North Dakota Century Code chapter 26.1-34; and
    - (3) Sections 45-04-02-01 through 45-04-02-08;
  - c. The policy meets the disclosure requirements of subsections 4, 5, and 6 of North Dakota Century Code section 26.1-45-09;
  - d. The portion of the policy that provides insurance benefits other than long-term care coverage meets the requirements as applicable in the following:
    - (1) Policy illustrations as required by sections 45-04-01.1-01 through 45-04-01.1-10 plus bulletins 96-2 and 97-2; and
    - (2) Disclosure requirements in sections 45-04-02-01 through 45-04-02-08; and
  - e. An actuarial memorandum is filed with the insurance department that includes:
    - (1) A description of the basis on which the long-term care rates were determined;
    - (2) A description of the basis for the reserves;

- (3) A summary of the type of policy, benefits, renewability, general marketing method, and limits on ages of issuance;
  - (4) A description and a table of each actuarial assumption used. For expenses, an insurer must include a percentage of premium dollars per policy and dollars per unit of benefits, if any;
  - (5) A description and a table of the anticipated policy reserves and additional reserves to be held in each future year for active lives;
  - (6) The estimated average annual premium per policy and the average issue age;
  - (7) A statement as to whether underwriting is performed at the time of application. The statement shall indicate whether underwriting is used and, if used, the statement shall include a description of the type or types of underwriting used, such as medical underwriting or functional assessment underwriting. Concerning a group policy, the statement shall indicate whether the enrollee or any dependent will be underwritten and when underwriting occurs; and
  - (8) A description of the effect of the long-term care policy provision on the required premiums, nonforfeiture values, and reserves on the underlying insurance policy, both for active lives and those in long-term care claim status.
11. Subsections 6 and 8 shall not apply to group insurance policies as defined in subdivision a of subsection 3 of North Dakota Century Code section 26.1-45-01 when:
- a. The policies insure two hundred fifty or more persons and the policyholder has five thousand or more eligible employees of a single employer; or
  - b. The policyholder, and not the certificate holders, pays a material portion of the premium, which shall not be less than twenty percent of the total premium for the group in the calendar year prior to the year a rate increase is filed.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-19. Filing requirement.** Prior to an insurer or similar organization offering group long-term care insurance to a resident of this state pursuant to North Dakota Century Code section 26.1-45-03, it shall file with the

commissioner evidence that the group policy or certificate thereunder has been approved by a state having statutory or regulatory long-term care insurance requirements substantially similar to those adopted in this state.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-20. Filing requirements for advertising.**

1. Every insurer, health care service plan, or other entity providing long-term care insurance or benefits in this state shall provide a copy of any long-term care insurance advertisement intended for use in this state whether through written, radio, or television medium to the insurance commissioner of this state for review or approval by the commissioner to the extent it may be required under state law. In addition, all advertisements shall be retained by the insurer, health care service plan, or other entity for at least three years from the date the advertisement was first used.
2. The commissioner may exempt from these requirements any advertising form or material when, in the commissioner's opinion, this requirement may not be reasonably applied.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-21. Standards for marketing.**

1. Every insurer, health care service plan, or other entity marketing long-term care insurance coverage in this state, directly or through its producers, shall:
  - a. Establish marketing procedures and agent training requirements to assure that:
    - (1) Any marketing activities, including any comparison of policies, by its agents or other producers will be fair and accurate; and
    - (2) Excessive insurance is not sold or issued.
  - b. Display prominently by type, stamp, or other appropriate means, on the first page of the outline of coverage and policy the following:

"Notice to buyer: This policy may not cover all of the costs associated with long-term care incurred by the buyer during

the period of coverage. The buyer is advised to review carefully all policy limitations."

- c. Provide copies of the disclosure forms required in subsection 3 of section 45-06-05.1-07 (appendices B and F) to the applicant.
  - d. Inquire and otherwise make every reasonable effort to identify whether a prospective applicant or enrollee for long-term care insurance already has accident and sickness or long-term care insurance and the types and amounts of any such insurance, except that in the case of qualified long-term care insurance contracts, an inquiry into whether a prospective applicant or enrollee for long-term care insurance has accident and sickness insurance is not required.
  - e. Every insurer or entity marketing long-term care insurance shall establish auditable procedures for verifying compliance with subsection 1.
  - f. If the state in which the policy or certificate is to be delivered or issued for delivery has a senior insurance counseling program approved by the commissioner, the insurer shall, at solicitation, provide written notice to the prospective policyholder and certificate holder that the program is available and the name, address, and telephone number of the program.
  - g. For long-term care health insurance policies and certificates, use the terms "noncancelable" or "level premium" only when the policy or certificate conforms to subdivision c of subsection 1 of section 45-06-05.1-04.
  - h. Provide an explanation of contingent benefit upon lapse provided for in subdivision c of subsection 4 of section 45-06-05.1-24.
2. In addition to the practices prohibited in North Dakota Century Code section 26.1-04-03, the following acts and practices are prohibited:
- a. Twisting. Knowingly making any misleading representation or incomplete or fraudulent comparison of any insurance policies or insurers for the purpose of inducing, or tending to induce, any person to lapse, forfeit, surrender, terminate, retain, pledge, assign, borrow on, or convert any insurance policy or to take out a policy of insurance with another insurer.
  - b. High pressure tactics. Employing any method of marketing having the effect of or tending to induce the purchase of insurance through force, fright, threat, whether explicit or implied, or undue pressure to purchase or recommend the purchase of insurance.

- c. Cold lead advertising. Making use directly or indirectly of any method of marketing which fails to disclose in a conspicuous manner that a purpose of the method of marketing is solicitation of insurance and that contact will be made by an insurance agent or insurance company.
- d. Misrepresentation. Misrepresenting a material fact in selling or offering to sell a long-term care insurance policy.
- 3. a. With respect to the obligations set forth in this subsection, the primary responsibility of an association, as defined in subdivision b of subsection 3 of North Dakota Century Code section 26.1-45-01, when endorsing or selling long-term care insurance shall be to educate its members concerning long-term care issues in general so that its members can make informed decisions. Associations shall provide objective information regarding long-term care insurance policies or certificates endorsed or sold by such associations to ensure that members of such associations receive a balanced and complete explanation of the features in the policies or certificates that are being endorsed or sold.
- b. The insurer shall file with the insurance department the following material:

  - (1) The policy and certificate;
  - (2) A corresponding outline of coverage; and
  - (3) All advertisements requested by the insurance department.
- c. The association shall disclose in any long-term care insurance solicitation:

  - (1) The specific nature and amount of the compensation arrangements, including all fees, commissions, administrative fees, and other forms of financial support, that the association receives from endorsement or sale of the policy or certificate to its members; and
  - (2) A brief description of the process under which the policies and the insurer issuing the policies were selected.
- d. If the association and the insurer have interlocking directorates or trustee arrangements, the association shall disclose that fact to its members.
- e. The board of directors of associations selling or endorsing long-term care insurance policies or certificates shall review and

approve the insurance policies as well as the compensation arrangements made with the insurer.

f. The association shall also:

(1) At the time of the association's decision to endorse, engage the services of a person with expertise in long-term care insurance not affiliated with the insurer to conduct an examination of the policies, including its benefits, features, and rates and update the examination thereafter in the event of material change;

(2) Actively monitor the marketing efforts of the insurer and its agents; and

(3) Review and approve all marketing materials or other insurance communications used to promote sales or sent to members regarding the policies or certificates.

(4) Paragraphs 1 through 3 shall not apply to qualified long-term care insurance contracts.

g. No group long-term care insurance policy or certificate may be issued to an association unless the insurer files with the state insurance department the information required in this subsection.

h. The insurer shall not issue a long-term care policy or certificate to an association or continue to market such a policy or certificate unless the insurer certifies annually that the association has complied with the requirements set forth in this subsection.

i. Failure to comply with the filing and certification requirements of this section constitutes an unfair trade practice in violation of North Dakota Century Code section 26.1-04-03.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-22. Suitability.**

1. This section shall not apply to life insurance policies that accelerate benefits for long-term care.

2. Every insurer, health care service plan, or other entity marketing long-term care insurance (the "issuer") shall:

- a. Develop and use suitability standards to determine whether the purchase or replacement of long-term care insurance is appropriate for the needs of the applicant.
  - b. Train its agents in the use of its suitability standards; and
  - c. Maintain copies of its suitability standards and make them available for inspection upon request by the commissioner.
3. a. To determine whether the applicant meets the standards developed by the issuer, the agent and issuer shall develop procedures that take the following into consideration:
- (1) The ability to pay for the proposed coverage and other pertinent financial information related to the purchase of the coverage;
  - (2) The applicant's goals or needs with respect to long-term care and the advantages and disadvantages of insurance to meet these goals or needs; and
  - (3) The values, benefits, and costs of the applicant's existing insurance, if any, when compared to the values, benefits, and costs of the recommended purchase or replacement.
- b. The issuer and, when an agent is involved, the agent shall make reasonable efforts to obtain the information set out in subdivision a. The efforts shall include presentation to the applicant, at or prior to application, the "long-term care insurance personal worksheet". The personal worksheet used by the issuer shall contain, at a minimum, the information in the format contained in appendix B, in not less than twelve-point type. The issuer may request the applicant to provide additional information to comply with its suitability standards. A copy of the issuer's personal worksheet shall be filed with the commissioner.
  - c. A completed personal worksheet shall be returned to the issuer prior to the issuer's consideration of the applicant for coverage, except the personal worksheet need not be returned for sales of employer group long-term care insurance to employees and their spouses.
  - d. The sale or dissemination outside the company or agency by the issuer or agent of information obtained through the personal worksheet in appendix B is prohibited.
4. The issuer shall use the suitability standards it has developed pursuant to this section in determining whether issuing long-term care insurance coverage to an applicant is appropriate.

5. Agents shall use the suitability standards developed by the issuer in marketing long-term care insurance.
6. At the same time as the personal worksheet is provided to the applicant, the disclosure form entitled "Things You Should Know Before You Buy Long-Term Care Insurance" shall be provided. The form shall be in the format contained in appendix C, in not less than twelve-point type.
7. If the issuer determines that the applicant does not meet its financial suitability standards, or if the applicant has declined to provide the information, the issuer may reject the application. In the alternative, the issuer shall send the applicant a letter similar to appendix D. However, if the applicant has declined to provide financial information, the issuer may use some other method to verify the applicant's intent. Either the applicant's returned letter or a record of the alternative method of verification shall be made part of the applicant's file.
8. The issuer shall report annually to the commissioner the total number of applications received from residents of this state, the number of those who declined to provide information on the personal worksheet, the number of applicants who did not meet the suitability standards, and the number of those who chose to confirm after receiving a suitability letter.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-23. Prohibition against preexisting conditions and probationary periods in replacement policies or certificates.** If a long-term care insurance policy or certificate replaces another long-term care policy or certificate, the replacing insurer shall waive any time periods applicable to preexisting conditions and probationary periods in the new long-term care policy for similar benefits to the extent that similar exclusions have been satisfied under the original policy.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-24. Nonforfeiture benefit requirement.**

1. This section does not apply to life insurance policies or riders containing accelerated long-term care benefits.
2. To comply with the requirement to offer a nonforfeiture benefit pursuant to the provisions of North Dakota Century Code section 26.1-45-14:

- a. A policy or certificate offered with nonforfeiture benefits shall have coverage elements, eligibility, benefit triggers, and benefit length that are the same as coverage to be issued without nonforfeiture benefits. The nonforfeiture benefit included in the offer shall be the benefit described in subsection 5; and
  - b. The offer shall be in writing if the nonforfeiture benefit is not otherwise described in the outline of coverage or other materials given to the prospective policyholder.
3. If the offer required to be made under North Dakota Century Code section 26.1-45-14 is rejected, the insurer shall provide the contingent benefit upon lapse described in this section.
4. a. After rejection of the offer required under North Dakota Century Code section 26.1-45-14, for individual and group policies without nonforfeiture benefits issued after the effective date of this section, the insurer shall provide a contingent benefit upon lapse.
- b. In the event a group policyholder elects to make the nonforfeiture benefit an option to the certificate holder, a certificate shall provide either the nonforfeiture benefit or the contingent benefit upon lapse.
  - c. The contingent benefit on lapse shall be triggered every time an insurer increases the premium rates to a level which results in a cumulative increase of the annual premium equal to or exceeding the percentage of the insured's initial annual premium set forth below based on the insured's issue age and the policy or certificate lapses within one hundred twenty days of the due date of the premium so increased. Unless otherwise required, policyholders shall be notified at least thirty days prior to the due date of the premium reflecting the rate increase.

Triggers for a Substantial Premium Increase

<u>Issue Age</u>	<u>Percentage Increase Over Initial Premium</u>
<u>29 and under</u>	<u>200%</u>
<u>30-34</u>	<u>190%</u>
<u>35-39</u>	<u>170%</u>
<u>40-44</u>	<u>150%</u>
<u>45-49</u>	<u>130%</u>
<u>50-54</u>	<u>110%</u>
<u>55-59</u>	<u>90%</u>
<u>60</u>	<u>70%</u>

<u>61</u>	<u>66%</u>
<u>62</u>	<u>62%</u>
<u>63</u>	<u>58%</u>
<u>64</u>	<u>54%</u>
<u>65</u>	<u>50%</u>
<u>66</u>	<u>48%</u>
<u>67</u>	<u>46%</u>
<u>68</u>	<u>44%</u>
<u>69</u>	<u>42%</u>
<u>70</u>	<u>40%</u>
<u>71</u>	<u>38%</u>
<u>72</u>	<u>36%</u>
<u>73</u>	<u>34%</u>
<u>74</u>	<u>32%</u>
<u>75</u>	<u>30%</u>
<u>76</u>	<u>28%</u>
<u>77</u>	<u>26%</u>
<u>78</u>	<u>24%</u>
<u>79</u>	<u>22%</u>
<u>80</u>	<u>20%</u>
<u>81</u>	<u>19%</u>
<u>82</u>	<u>18%</u>
<u>83</u>	<u>17%</u>
<u>84</u>	<u>16%</u>
<u>85</u>	<u>15%</u>
<u>86</u>	<u>14%</u>
<u>87</u>	<u>13%</u>
<u>88</u>	<u>12%</u>
<u>89</u>	<u>11%</u>
<u>90 and over</u>	<u>10%</u>

d. On or before the effective date of a substantial premium increase as defined in subdivision c, the insurer shall:

(1) Offer to reduce policy benefits provided by the current coverage without the requirement of additional underwriting so that required premium payments are not increased:

- (2) Offer to convert the coverage to a paid-up status with a shortened benefit period in accordance with the terms of subsection 5. This option may be elected at any time during the one hundred twenty-day period referenced in subdivision c; and
  - (3) Notify the policyholder or certificate holder that a default or lapse at any time during the one hundred twenty-day period referenced in subdivision c shall be deemed to be the election of the offer to convert in paragraph 2.
- 5. Benefits continued as nonforfeiture benefits, including contingent benefits upon lapse, are described in this subsection:
  - a. For purposes of this subsection, attained age rating is defined as a schedule of premiums starting from the issue date which increases age at least one percent per year prior to age fifty, and at least three percent per year beyond age fifty.
  - b. For purposes of this subsection, the nonforfeiture benefit shall be of a shortened benefit period providing paid-up long-term care insurance coverage after lapse. The same benefits (amounts and frequency in effect at the time of lapse but not increased thereafter) will be payable for a qualifying claim, but the lifetime maximum dollars or days of benefits shall be determined as specified in subdivision c.
  - c. The standard nonforfeiture credit will be equal to one hundred percent of the sum of all premiums paid, including the premiums paid prior to any changes in benefits. The insurer may offer additional shortened benefit period options, as long as the benefits for each duration equal or exceed the standard nonforfeiture credit for that duration. However, the minimum nonforfeiture credit shall not be less than thirty times the daily nursing home benefit at the time of lapse. In either event, the calculation of the nonforfeiture credit is subject to the limitation of subsection 6.
  - d. (1) The nonforfeiture benefit shall begin not later than the end of the third year following the policy or certificate issue date. The contingent benefit upon lapse shall be effective during the first three years as well as thereafter.
    - (2) Notwithstanding paragraph 1, for a policy or certificate with attained age rating, the nonforfeiture benefit shall begin on the earlier of:
      - (a) The end of the tenth year following the policy or certificate issue date; or

- (b) The end of the second year following the date the policy or certificate is no longer subject to attained age rating.
- e. Nonforfeiture credits may be used for all care and services qualifying for benefits under the terms of the policy or certificate, up to the limits specified in the policy or certificate.
6. All benefits paid by the insurer while the policy or certificate is in premium paying status and in the paid-up status will not exceed the maximum benefits which would be payable if the policy or certificate had remained in premium paying status.
7. There shall be no difference in the minimum nonforfeiture benefits as required under this section for group and individual policies.
8. The requirements set forth in this section shall become effective twelve months after adoption of this provision and shall apply as follows:
- a. Except as provided in subdivision b, the provisions of this section apply to any long-term care policy issued in this state on or after the effective date of this amended regulation.
- b. For certificates issued on or after the effective date of this section, under a group long-term care insurance policy as defined in subdivision a of subsection 3 of North Dakota Century Code section 26.1-45-01, which policy was in force at the time this amended regulation became effective, the provisions of this section shall not apply.
9. Premiums charged for a policy or certificate containing nonforfeiture benefits or a contingent benefit on lapse shall be subject to the loss ratio requirements of section 45-06-05.1-17 treating the policy as a whole.
10. To determine whether contingent nonforfeiture upon lapse provisions are triggered under subdivision c of subsection 4, a replacing insurer that purchased or otherwise assumed a block or blocks of long-term care insurance policies from another insurer shall calculate the percentage increase based on the initial annual premium paid by the insured when the policy was first purchased from the original insurer.
11. A nonforfeiture benefit for qualified long-term care insurance contracts that are level premium contracts shall be offered that meets the following requirements:
- a. The nonforfeiture provision shall be appropriately captioned:
- b. The nonforfeiture provision shall provide a benefit available in the event of a default in the payment of any premiums and shall state that the amount of the benefit may be adjusted subsequent

to being initially granted only as necessary to reflect changes in claims, persistency, and interest as reflected in changes in rates for premium paying contracts approved by the commissioner for the same contract form; and

c. The nonforfeiture provision shall provide at least one of the following:

- (1) Reduced paid-up insurance;
- (2) Extended term insurance;
- (3) Shortened benefit period; or
- (4) Other similar offerings approved by the commissioner.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-25. Standards for benefit triggers.**

1. A long-term care insurance policy shall condition the payment of benefits on a determination of the insured's ability to perform activities of daily living and on cognitive impairment. Eligibility for the payment of benefits shall not be more restrictive than requiring either a deficiency in the ability to perform not more than three of the activities of daily living or the presence of cognitive impairment.

2. a. Activities of daily living shall include at least the following as defined in section 45-06-05.1-03 and in the policy:

- (1) Bathing;
- (2) Continence;
- (3) Dressing;
- (4) Eating;
- (5) Toileting; and
- (6) Transferring; and

b. Insurers may use activities of daily living to trigger covered benefits in addition to those contained in subdivision a as long as they are defined in the policy.

3. An insurer may use additional provisions for the determination of when benefits are payable under a policy or certificate; however the provisions shall not restrict, and are not in lieu of, the requirements contained in subsections 1 and 2.
4. For purposes of this section, the determination of a deficiency shall not be more restrictive than:
  - a. Requiring the hands-on assistance of another person to perform the prescribed activities of daily living; or
  - b. If the deficiency is due to the presence of a cognitive impairment, supervision or verbal cueing by another person is needed in order to protect the insured or others.
5. Assessments of activities of daily living and cognitive impairment shall be performed by licensed or certified professionals, such as physicians, nurses, or social workers.
6. Long-term care insurance policies shall include a clear description of the process for appealing and resolving benefit determinations.
7. The requirements set forth in this section shall be effective March 1, 2005, and shall apply as follows:
  - a. Except as provided in subdivision b, the provisions of this section apply to a long-term care policy issued in this state on or after the effective date of the amended regulation.
  - b. For certificates issued on or after the effective date of this section, under a group long-term care insurance policy as defined in subdivision a of subsection 3 of North Dakota Century Code section 26.1-45-01 that was in force at the time this amended regulation became effective, the provisions of this section shall not apply.

**History:** Effective March 1, 2004.  
**General Authority:** NDCC 28-32-02  
**Law Implemented:** NDCC 26.1-45

**45-06-05.1-26. Additional standards for benefit triggers for qualified long-term care insurance contracts.**

1. For purposes of this section, the following definitions apply:
  - a. (1) "Chronically ill individual" has the meaning prescribed for this term by section 7702B(c)(2) of the Internal Revenue Code of 1986, as amended. Under this provision, a chronically ill

individual means any individual who has been certified by a licensed health care practitioner as:

- (a) Being unable to perform, without substantial assistance from another individual, at least two activities of daily living for a period of at least ninety days due to a loss of functional capacity; or
- (b) Requiring substantial supervision to protect the individual from threats to health and safety due to severe cognitive impairment.

(2) The term "chronically ill individual" shall not include an individual otherwise meeting these requirements unless within the preceding twelve-month period a licensed health care practitioner has certified that the individual meets these requirements.

b. "Licensed health care practitioner" means a physician, as defined in section 1861(r)(1) of the Social Security Act, a registered professional nurse, licensed social worker, or other individual who meets requirements prescribed by the secretary of the treasury.

c. "Maintenance or personal care services" means any care the primary purpose of which is the provision of needed assistance with any of the disabilities as a result of which the individual is a chronically ill individual, including the protection from threats to health and safety due to severe cognitive impairment.

d. "Qualified long-term care services" means services that meet the requirements of section 7702(c)(1) of the Internal Revenue Code of 1986, as amended, as follows: necessary diagnostic, preventive, therapeutic, curative, treatment, mitigation and rehabilitative services, and maintenance or personal care services which are required by a chronically ill individual, and are provided pursuant to a plan of care prescribed by a licensed health care practitioner.

2. A qualified long-term care insurance contract shall pay only for qualified long-term care services received by a chronically ill individual provided pursuant to a plan of care prescribed by a licensed health care practitioner.

3. A qualified long-term care insurance contract shall condition the payment of benefits on a determination of the insured's inability to perform activities of daily living for an expected period of at least ninety days due to a loss of functional capacity or to severe cognitive impairment.

4. Certifications regarding activities of daily living and cognitive impairment required pursuant to subsection 3 shall be performed by the following licensed or certified professionals: physicians, registered professional nurses, licensed social workers, or other individuals who meet requirements prescribed by the secretary of the treasury.
5. Certifications required pursuant to subsection 3 may be performed by a licensed health care professional at the direction of the carrier as is reasonably necessary with respect to a specific claim, except that when a licensed health care practitioner has certified that an insured is unable to perform activities of daily living for an expected period of at least ninety days due to a loss of functional capacity and the insured is in claim status, the certification may not be rescinded and additional certifications may not be performed until after the expiration of the ninety-day period.
6. Qualified long-term care insurance contracts shall include a clear description of the process for appealing and resolving disputes with respect to benefit determinations.

**History:** Effective March 1, 2004.  
**General Authority:** NDCC 28-32-02  
**Law Implemented:** NDCC 26.1-45

**45-06-05.1-27. Standard format outline of coverage.** This section implements, interprets, and makes specific the provisions of subsection 2 of North Dakota Century Code section 26.1-45-09 in prescribing a standard format and the content of an outline of coverage.

1. The outline of coverage shall be a freestanding document, using no smaller than ten-point type.
2. The outline of coverage shall contain no material of an advertising nature.
3. Text that is capitalized or underscored in the standard format outline of coverage may be emphasized by other means that provide prominence equivalent to the capitalization or underscoring.
4. Use of the text and sequence of text of the standard format outline of coverage is mandatory, unless otherwise specifically indicated.
5. Format for outline of coverage:

**[COMPANY NAME]**

**[ADDRESS - CITY AND STATE]**

**[TELEPHONE NUMBER]**

## LONG-TERM CARE INSURANCE

### OUTLINE OF COVERAGE

[Policy Number or Group Master Policy and Certificate Number]

[Except for policies or certificates which are guaranteed issue, the following caution statement, or language substantially similar, must appear as follows in the outline of coverage.]

Caution: The issuance of this long-term care insurance [policy] [certificate] is based upon your responses to the questions on your application. A copy of your [application] [enrollment form] [is enclosed] [was retained by you when you applied]. If your answers are incorrect or untrue, the company has the right to deny benefits or rescind your policy. The best time to clear up any questions is now, before a claim arises! If, for any reason, any of your answers are incorrect, contact the company at this address: [insert address]

1. This policy is [an individual policy of insurance] ([a group policy] which was issued in the [indicate jurisdiction in which group policy was issued]).
2. PURPOSE OF OUTLINE OF COVERAGE. This outline of coverage provides a very brief description of the important features of the policy. You should compare this outline of coverage to outlines of coverage for other policies available to you. This is not an insurance contract, but only a summary of coverage. Only the individual or group policy contains governing contractual provisions. This means that the policy or group policy sets forth in detail the rights and obligations of both you and the insurance company. Therefore, if you purchase this coverage, or any other coverage, it is important that you READ YOUR POLICY (OR CERTIFICATE) CAREFULLY!
3. FEDERAL TAX CONSEQUENCES.

This [POLICY] [CERTIFICATE] is intended to be a federally tax-qualified, long-term care insurance contract under Section 7702B(b) of the Internal Revenue Code of 1986, as amended.

OR

Federal Tax Implications of this [POLICY] [CERTIFICATE]. This [POLICY] [CERTIFICATE] is not intended to be a federally tax-qualified, long-term care insurance contract under Section 7702B(b) of the Internal Revenue Code of 1986, as amended. Benefits received under the [POLICY] [CERTIFICATE] may be taxable as income.

4. Terms Under Which the Policy OR Certificate May Be Continued in Force or Discontinued.

a. [For long-term care health insurance policies or certificates describe one of the following permissible policy renewability provisions:

(1) Policies and certificates that are guaranteed renewable shall contain the following statement:] RENEWABILITY: THIS POLICY [CERTIFICATE] IS GUARANTEED RENEWABLE. This means you have the right, subject to the terms of your policy [certificate], to continue this policy as long as you pay your premiums on time. [Company Name] cannot change any of the terms of your policy on its own, except that, in the future, IT MAY INCREASE THE PREMIUM YOU PAY.

(2) [Policies and certificates that are noncancelable shall contain the following statement:] RENEWABILITY: THIS POLICY [CERTIFICATE] IS NONCANCELABLE. This means that you have the right, subject to the terms of your policy, to continue this policy as long as you pay your premiums on time. [Company Name] cannot change any of the terms of your policy on its own and cannot change the premium you currently pay. However, if your policy contains an inflation protection feature where you choose to increase your benefits, [Company Name] may increase your premium at that time for those additional benefits.

b. [For group coverage, specifically describe continuation/conversion provisions applicable to the certificate and group policy.]

c. [Describe waiver of premium provisions or state that there are not such provisions.]

5. TERMS UNDER WHICH THE COMPANY MAY CHANGE PREMIUMS.

[In bold type larger than the maximum type required to be used for the other provisions of the outline of coverage, state whether or not the company has a right to change the premium, and if a right exists, describe clearly and concisely each circumstance under which the premium may change.]

6. TERMS UNDER WHICH THE POLICY OR CERTIFICATE MAY BE RETURNED AND PREMIUM REFUNDED.

- a. [Provide a brief description of the right to return - "free look" provision of the policy.]
- b. [Include a statement that the policy either does or does not contain provisions providing for a refund or partial refund of premium upon the death of an insured or surrender of the policy or certificate. If the policy contains such provisions, include a description of them.]

7. THIS IS NOT MEDICARE SUPPLEMENT COVERAGE. If you are eligible for Medicare, review the Medicare Supplement Buyer's Guide available from the insurance company.

- a. [For agents] Neither [insert company name] nor its agents represent Medicare, the federal government, or any state government.
- b. [For direct response] [insert company name] is not representing Medicare, the federal government, or any state government.

8. LONG-TERM CARE COVERAGE. Policies of this category are designed to provide coverage for one or more necessary or medically necessary diagnostic, preventive, therapeutic, rehabilitative, maintenance, or personal care services, provided in a setting other than an acute care unit of a hospital, such as in a nursing home, in the community, or in the home.

This policy provides coverage in the form of a fixed dollar indemnity benefit for covered long-term care expenses, subject to policy [limitations] [waiting periods] and [coinsurance] requirements. [Modify this paragraph if the policy is not an indemnity policy.]

9. BENEFITS PROVIDED BY THIS POLICY.

- a. [Covered services, related deductibles, waiting periods, elimination periods, and benefit maximums.]
- b. [Institutional benefits, by skill level.]
- c. [Noninstitutional benefits, by skill level.]
- d. Eligibility for Payment of Benefits.

[Activities of daily living and cognitive impairment shall be used to measure an insured's need for long-term care and must be defined and described as part of the outline of coverage.]

[Any additional benefit triggers must also be explained. If these triggers differ for different benefits, explanation of the triggers should accompany each benefit description. If an attending physician or other specified person must certify a certain level of functional dependency in order to be eligible for benefits, this too must be specified.]

10. LIMITATIONS AND EXCLUSIONS.

[Describe:

- a. Preexisting conditions;
- b. Noneligible facilities and provider;
- c. Noneligible levels of care (e.g., unlicensed providers, care, or treatment provided by a family member, etc.);
- d. Exclusions and exceptions; and
- e. Limitations.].

[This section should provide a brief specific description of any policy provisions which limit, exclude, restrict, reduce, delay, or in any other manner operate to qualify payment of the benefits described in Number 9 above.]

THIS POLICY MAY NOT COVER ALL THE EXPENSES ASSOCIATED WITH YOUR LONG-TERM CARE NEEDS.

11. RELATIONSHIP OF COST OF CARE AND BENEFITS. Because the costs of long-term care services will likely increase over time, you should consider whether and how the benefits of this plan may be adjusted. [As applicable, indicate the following:

- a. That the benefit level will not increase over time;
- b. Any automatic benefit adjustment provisions;
- c. Whether the insured will be guaranteed the option to buy additional benefits and the basis upon which benefits will be increased over time if not by a specified amount or percentage;
- d. If there is such a guarantee, include whether additional underwriting or health screening will be required, the frequency and amounts of the upgrade options, and any significant restrictions or limitations; and

e. And finally, describe whether there will be any additional premium charge imposed, and how that is to be calculated.]

**12. ALZHEIMER'S DISEASE AND OTHER ORGANIC BRAIN DISORDERS.**

[State that the policy provides coverage for insureds clinically diagnosed as having Alzheimer's disease or related degenerative and dementing illnesses. Specifically describe each benefit screen or other policy provision which provides preconditions to the availability of policy benefits for such an insured.]

**13. PREMIUM.**

a. State the total annual premium for the policy; and

b. If the premium varies with an applicant's choice among benefit options, indicate the portion of annual premium which corresponds to each benefit option.]

**14. ADDITIONAL FEATURES.**

a. Indicate if medical underwriting is used; and

b. Describe other important features.]

**15. CONTACT THE STATE SENIOR HEALTH INSURANCE ASSISTANCE PROGRAM IF YOU HAVE GENERAL QUESTIONS REGARDING LONG-TERM CARE INSURANCE. CONTACT THE INSURANCE COMPANY IF YOU HAVE SPECIFIC QUESTIONS REGARDING YOUR LONG-TERM CARE INSURANCE POLICY OR CERTIFICATE.**

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-45

**45-06-05.1-28. Requirement to deliver shopper's guide.**

1. A long-term care insurance shopper's guide in the format developed by the national association of insurance commissioners, or a guide developed or approved by the commissioner, shall be provided to all prospective applicants of a long-term care insurance policy or certificate.

a. In the case of agent solicitations, an agent must deliver the shopper's guide prior to the presentation of an application or enrollment form.

- b. In the case of direct response solicitations, the shopper's guide must be presented in conjunction with any application or enrollment form.
2. Life insurance policies or riders containing accelerated long-term care benefits are not required to furnish the above-referenced guide, but shall furnish the policy summary required under North Dakota Century Code section 26.1-45-09.

**History:** Effective March 1, 2004.  
**General Authority:** NDCC 28-32-02  
**Law Implemented:** NDCC 26.1-45

**45-06-05.1-29. Penalties.** In addition to any other penalties provided by the laws of this state, any insurer and any agent found to have violated any requirement of this state relating to the regulation of long-term care insurance or the marketing of such insurance shall be subject to a fine of up to three times the amount of any commissions paid for each policy involved in the violation or up to ten thousand dollars, whichever is greater.

**History:** Effective March 1, 2004.  
**General Authority:** NDCC 28-32-02  
**Law Implemented:** NDCC 26.1-45

**Appendix A**  
**Rescission Reporting Form**

**RESCISSION REPORTING FORM FOR  
LONG-TERM CARE POLICIES  
FOR THE STATE OF \_\_\_\_\_  
FOR THE REPORTING YEAR 20[ ]**

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Due: March 1 annually

**Instructions:**

The purpose of this form is to report all rescissions of long-term care insurance policies or certificates. Those rescissions voluntarily effectuated by an insured are not required to be included in this report. Please furnish one form per rescission.

<u>Policy Form #</u>	<u>Policy and Certificate #</u>	<u>Name of Insured</u>	<u>Date of Policy Issuance</u>	<u>Date/s Claim/s Submitted</u>	<u>Date of Rescission</u>

Detailed reason for rescission: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name and title (please type)

\_\_\_\_\_  
Date

**Appendix B**  
**Personal Worksheet**

**Long-Term Care Insurance**  
**Personal Worksheet**

People buy long-term care insurance for many reasons. Some do not want to use their own assets to pay for long-term care. Some buy insurance to make sure they can choose the type of care they get. Others do not want their family to have to pay for care or do not want to go on Medicaid. But long-term care insurance may be expensive, and may not be right for everyone.

By state law, the insurance company must fill out part of the information on this worksheet and ask you to fill out the rest to help you and the company decide if you should buy this policy.

**Premium Information**

Policy Form Numbers \_\_\_\_\_

The premium for the coverage you are considering will be [\$ \_\_\_\_\_ per month, or \$ \_\_\_\_\_ per year.] [a one-time single premium of \$ \_\_\_\_\_.]

**Type of Policy** (noncancelable/guaranteed renewable): \_\_\_\_\_

**The Company's Right to Increase Premiums:** \_\_\_\_\_

[The company cannot raise your rates on this policy.] [The company has a right to increase premiums on this policy form in the future, provided it raises rates for all policies in the same class in this state.] [Insurers shall use appropriate bracketed statement. Rate guarantees shall not be shown on this form.]

**Rate Increase History**

The company has sold long-term care insurance since [year] and has sold this policy since [year]. [The company has never raised its rates for any long-term care policy it has sold in this state or any other state.] [The company has not raised its rates for this policy form or similar policy forms in this state or any other state in the last 10 years.] [The company has raised its premium rates on this policy form or similar policy forms in the last 10 years. Following is a summary of the rate increases.]

**Questions Related to Your Income**

How will you pay each year's premium?

From My Income     From My Savings/Investments     My Family Will Pay

Have you considered whether you could afford to keep this policy if the premiums went up, for example, by 20%?

What is your annual income?  
(check one)

Under \$10,000

[\$10,000-20,000]

[\$20,000-30,000]

[\$30,000-50,000]

Over \$50,000

How do you expect your income to change over the next 10 years? (check one)

No change

Increase

Decrease

If you will be paying premiums with money received only from your own income, a rule of thumb is that you may not be able to afford this policy if the premiums will be more than 7% of your income.

Will you buy inflation protection? (check one)     Yes     No

If not, have you considered how you will pay for the difference between future costs and your daily benefit amount?

From My Income

From My Savings/Investments

My Family Will Pay

*The national average annual cost of care in [insert year] was [insert \$ amount], but this figure varies across the country. In ten years the national average annual cost would be about [insert \$ amount] if costs increase 5% annually.*

What elimination period are you considering? Number of days \_\_\_\_\_  
Approximate cost \$ \_\_\_\_\_ for that period of care.

How are you planning to pay for your care during the elimination period? (check one)

From My Income

From My Savings/Investments

My Family Will Pay

### **Questions Related to Your Savings and Investments**

Not counting your home, about how much are all of your assets (your savings and investments) worth? (check one)

Under \$20,000

[\$20,000-\$30,000]

[\$30,000-\$50,000]

Over \$50,000

How do you expect your assets to change over the next ten years? (check one)

Stay about the same

Increase

Decrease

*If you are buying this policy to protect your assets and your assets are less than \$30,000, you may wish to consider other options for financing your long-term care.*



**Appendix C**  
**Disclosure Form**

**Things You Should Know Before You Buy**  
**Long-Term Care Insurance**

**Long-Term  
Care  
Insurance**

- A long-term care insurance policy may pay most of the costs for your care in a nursing home. Many policies also pay for care at home or other community settings. Since policies can vary in coverage, you should read this policy and make sure you understand what it covers before you buy it.
- [You should not buy this insurance policy unless you can afford to pay the premiums every year.] [Remember that the company can increase premiums in the future.]
- The personal worksheet includes questions designed to help you and the company determine whether this policy is suitable for your needs.

**Medicare**

- Medicare does not pay for most long-term care.

**Medicaid**

- Medicaid will generally pay for long-term care if you have very little income and few assets. You probably should not buy this policy if you are now eligible for Medicaid.
- Many people become eligible for Medicaid after they have used up their own financial resources by paying for long-term care services.
- When Medicaid pays your spouse's nursing home bills, you are allowed to keep your house and furniture, a living allowance, and some of your joint assets.
- Your choice of long-term care services may be limited if you are receiving Medicaid. To learn more about Medicaid, contact your local or state Medicaid agency.

**Shopper's  
Guide**

- Make sure the insurance company or agent gives you a copy of a book called the National Association of Insurance Commissioners' "Shopper's Guide to Long-Term Care Insurance". Read it carefully. If you have decided to apply for long-term care insurance, you have the right to return the policy within 30 days and get back any premium you have paid if you are dissatisfied for any reason or choose not to purchase the policy.

**Counseling**

- Free counseling and additional information about long-term care insurance are available through your state's insurance counseling program. Contact your state insurance department or department on aging for more information about the senior health insurance counseling program in your state.

**Appendix D**  
**Response Letter**

**Long-Term Care Insurance Suitability Letter**

Dear [Applicant]:

Your recent application for long-term care insurance included a "personal worksheet", which asked questions about your finances and your reasons for buying long-term care insurance. For your protection, state law requires us to consider this information when we review your application, to avoid selling a policy to those who may not need coverage.

[Your answers indicate that long-term care insurance may not meet your financial needs. We suggest that you review the information provided along with your application, including the booklet "Shopper's Guide to Long-Term Care Insurance" and the page titled "Things You Should Know Before Buying Long-Term Care Insurance". Your state insurance department also has information about long-term care insurance and may be able to refer you to a counselor free of charge who can help you decide whether to buy this policy.]

[You chose not to provide any financial information for us to review.]

We have suspended our final review of your application. If, after careful consideration, you still believe this policy is what you want, check the appropriate box below and return this letter to us within the next 60 days. We will then continue reviewing your application and issue a policy if you meet our medical standards.

If we do not hear from you within the next 60 days, we will close your file and not issue you a policy. You should understand that you will not have any coverage until we hear back from you, approve your application, and issue you a policy.

*Please check one box and return in the enclosed envelope.*

Yes, [although my worksheet indicates that long-term care insurance may not be a suitable purchase.] I wish to purchase this coverage. Please resume review of my application.

No. I have decided not to buy a policy at this time.

\_\_\_\_\_  
APPLICANT'S SIGNATURE

\_\_\_\_\_  
DATE

Please return to [issuer] at [address] by [date].

**Appendix E**  
**Sample Claims Denial Format**

**Claims Denial Reporting Form**  
**Long-Term Care Insurance**

**For the State of** \_\_\_\_\_

**For the Reporting Year of** \_\_\_\_\_

Company Name: \_\_\_\_\_ Due: June 30 annually

Company Address: \_\_\_\_\_

Company NAIC Number: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Telephone Number: \_\_\_\_\_

Line of Business:    Individual                      Group

**Instructions**

The purpose of this form is to report all long-term care claim denials under in-force long-term care insurance policies. "Denied" means a claim that is not paid for any reason other than for claims not paid for failure to meet the waiting period or because of an applicable preexisting condition.

		<b>State Data</b>	<b>Nationwide Data<sup>1</sup></b>
1	Total Number of Long-Term Care Claims Reported		
2	Total Number of Long-Term Care Claims Denied/Not Paid		
3	Number of Claims Not Paid Due to Preexisting Condition Exclusion		
4	Number of Claims Not Paid Due to Waiting (Elimination) Period Not Met		
5	Net Number of Long-Term Care Claims Denied for Reporting Purposes (line 2 minus line 3 minus line 4)		
6	Percentage of Long-Term Care Claims Denied of Those Reported (line 5 divided by line 1)		
7	Number of Long-Term Care Claims Denied Due to:		
8	Long-Term Care Services Not Covered Under the policy <sup>2</sup>		

<u>9</u>	<u>Provider/Facility Not Qualified Under the Policy<sup>3</sup></u>		
<u>10</u>	<u>Benefit Eligibility Criteria Not Met<sup>4</sup></u>		
<u>11</u>	<u>Other</u>		

1. The nationwide data may be viewed as a more representative and credible indicator where the date for claims reported and denied for your state are small in number.
2. Example - Home health care claim filed under a nursing home only policy.
3. Example - A facility that does not meet the minimum level of care requirements or the licensing requirements as outlined in the policy.
4. Examples - A benefit trigger not met, certification by a licensed health care practitioner not provided, no plan of care.

**Appendix F**  
**Potential Rate Increase Disclosure Form**

Instructions:

This form provides information to the applicant regarding premium rate schedules, rate schedule adjustments, potential rate revisions, and policyholder options in the event of a rate increase.

**Insurers shall provide all of the following information to the applicant:**

**Long-Term Care Insurance**  
**Potential Rate Increase Disclosure Form**

1. [Premium Rate] [Premium Rate Schedules]: [Premium rate] [Premium rate schedules] that [is][are] applicable to you and that will be in effect until a request is made and approved for an increase [is][are] [on the application] [\$ \_\_\_\_\_].
2. The [premium] [premium rate schedule] for this policy [will be shown on the schedule page of] [will be attached to] your policy.
3. Rate Schedule Adjustments:

The company will provide a description of when premium rate or rate schedule adjustments will be effective (e.g., next anniversary date, next billing date, etc.) (fill in the blank): \_\_\_\_\_.

4. Potential Rate Revisions:

**This policy is Guaranteed Renewable.** This means that the rates for this product may be increased in the future. Your rates CANNOT be increased due to your increasing age or declining health, but your rates may go up based on the experience of all policyholders with a policy similar to yours.

**If you receive a premium rate or premium rate schedule increase in the future, you will be notified of the new premium amount and you will be able to exercise at least one of the following options:**

- Pay the increased premium and continue your policy in force as is.
- Reduce your policy benefits to a level such that your premiums will not increase. (Subject to state law minimum standards.)
- Exercise your nonforfeiture option if purchased. (This option is available for purchase for an additional premium.)

- : Exercise your contingent nonforfeiture rights.\* (This option may be available if you do not purchase a separate nonforfeiture option.)

### **Contingent Nonforfeiture**

If the premium rate for your policy goes up in the future and you did not buy a nonforfeiture option, you may be eligible for contingent nonforfeiture. Here is how to tell if you are eligible:

You will keep some long-term care insurance coverage, if:

- : Your premium after the increase exceeds your original premium by the percentage shown (or more) in the following table; and
- : You lapse (not pay more premiums) within 120 days of the increase.

The amount of coverage (i.e., new lifetime maximum benefit amount) you will keep will equal the total amount of premiums you have paid since your policy was first issued. If you have already received benefits under the policy, so that the remaining maximum benefit amount is less than the total amount of premiums you've paid, the amount of coverage will be that remaining amount.

Except for this reduced lifetime maximum benefit amount, all other policy benefits will remain at the levels attained at the time of the lapse and will not increase thereafter.

Should you choose this Contingent Nonforfeiture option, your policy, with this reduced maximum benefit amount, will be considered "paid-up" with no further premiums due.

### **Example:**

- : You bought the policy at age 65 and paid the \$1,000 annual premium for 10 years, so you have paid a total of \$10,000 in premium.
- : In the eleventh year, you receive a rate increase of 50%, or \$500 for a new annual premium of \$1,500, and you decide to lapse the policy (not pay any more premiums).
- : Your "paid-up" policy benefits are \$10,000 (provided you have at least \$10,000 of benefits remaining under your policy.)

**Contingent Nonforfeiture  
Cumulative Premium Increase Over Initial Premium  
That Qualifies for Contingent Nonforfeiture**

(Percentage increase is cumulative from date of original issue. It does NOT represent a one-time increase.)

<b>Issue Age</b>	<b>Percentage Increase Over Initial Premium</b>
<u>29 and under</u>	<u>200%</u>
<u>30-34</u>	<u>190%</u>
<u>35-39</u>	<u>170%</u>
<u>40-44</u>	<u>150%</u>
<u>45-49</u>	<u>130%</u>
<u>50-54</u>	<u>110%</u>
<u>55-59</u>	<u>90%</u>
<u>60</u>	<u>70%</u>
<u>61</u>	<u>66%</u>
<u>62</u>	<u>62%</u>
<u>63</u>	<u>58%</u>
<u>64</u>	<u>54%</u>
<u>65</u>	<u>50%</u>
<u>66</u>	<u>48%</u>
<u>67</u>	<u>46%</u>
<u>68</u>	<u>44%</u>
<u>69</u>	<u>42%</u>
<u>70</u>	<u>40%</u>
<u>71</u>	<u>38%</u>
<u>72</u>	<u>36%</u>
<u>73</u>	<u>34%</u>
<u>74</u>	<u>32%</u>
<u>75</u>	<u>30%</u>
<u>76</u>	<u>28%</u>
<u>77</u>	<u>26%</u>
<u>78</u>	<u>24%</u>
<u>79</u>	<u>22%</u>
<u>80</u>	<u>20%</u>
<u>81</u>	<u>19%</u>

<u>82</u>	<u>18%</u>
<u>83</u>	<u>17%</u>
<u>84</u>	<u>16%</u>
<u>85</u>	<u>15%</u>
<u>86</u>	<u>14%</u>
<u>87</u>	<u>13%</u>
<u>88</u>	<u>12%</u>
<u>89</u>	<u>11%</u>
<u>90 and over</u>	<u>10%</u>

**Appendix G**  
**Replacement and Lapse Reporting Form**

**Long-Term Care Insurance**  
**Replacement and Lapse Reporting Form**

For the State of \_\_\_\_\_ For the Reporting Year of \_\_\_\_\_

Company Name: \_\_\_\_\_ Due: June 30 annually  
 Company Address: \_\_\_\_\_ Company NAIC Number: \_\_\_\_\_  
 Contact Person: \_\_\_\_\_ Telephone Number: ( ) \_\_\_\_\_

**Instructions**

The purpose of this form is to report on a statewide basis information regarding long-term care insurance policy replacements and lapses. Specifically, every insurer shall maintain records for each agent on that agent's amount of long-term care insurance replacement sales as a percentage of the agent's total annual sales and the amount of lapses of long-term care insurance policies sold by the agent as a percentage of the agent's total annual sales. The tables below should be used to report the ten percent (10%) of the insurer's agents with the greatest percentages of replacements and lapses.

**Listing of the 10% of Agents With the Greatest Percentage of Replacements**

<b>Agent's Name</b>	<b>Number of Policies Sold by This Agent</b>	<b>Number of Policies Replaced by This Agent</b>	<b>Number of Replacements as Percentage of Number Sold by This Agent</b>

**Listing of the 10% of Agents With the Greatest Percentage of Lapses**

<b>Agent's Name</b>	<b>Number of Policies Sold by This Agent</b>	<b>Number of Policies Replaced by This Agent</b>	<b>Number of Replacements as Percentage of Number Sold by This Agent</b>

**Company Totals**

Percentage of Replacement Policies Sold to Total Annual Sales \_\_\_\_\_ %

Percentage of Replacement Policies Sold to Policies in Force (as of the end of the preceding calendar year) \_\_\_\_\_ %

Percentage of Lapsed Policies to Total Annual Sales \_\_\_\_\_%

Percentage of Lapsed Policies to Policies in Force (as of the end of the preceding calendar year) \_\_\_\_\_%

## CHAPTER 45-06-08

**45-06-08-01. Scope.** These rules apply to all policies providing hospital, surgical, medical, or major medical benefits, including major medical, ~~short-term major medical~~, hospital/surgical, medical expense, and surgical expense policies. This rule does not apply to any contract or plan of insurance that provides exclusively for accident, disability income insurance, specified disease, hospital confinement indemnity, or other limited benefit health insurance.

**History:** Effective July 1, 1994; amended effective March 1, 2004.

**General Authority:** NDCC 26.1-36-37.2

**Law Implemented:** NDCC 26.1-36-37.2

**45-06-08-02. Mandated loss ratios - Factors to be considered.** Mandated loss ratio benefits under the policies specified in section 45-06-08-01 must return benefits to group policyholders in the aggregate of not less than seventy-five percent of premium received and to individual policyholders in the aggregate of not less than sixty-five percent of premium received. Association group business which is marketed to individuals and individually underwritten and issued is considered individual coverage for loss ratio purposes. These minimum standards must be on the basis of incurred claims experienced and earned premiums for the entire period for which rates are computed to provide coverage in accordance with accepted actuarial principles and practices. In evaluating the experienced loss ratio, due consideration must be given to all relevant factors, including:

1. Statistical credibility of incurred claims experience and earned premiums;
2. The period for which rates are computed to provide coverage;
3. Experienced and projected trends;
4. Concentration of experience within early policy duration;
5. Expected claim fluctuation;
6. Experience refunds, adjustments, or dividends;
7. Renewability features;
8. Interest; and
9. Policy reserves.

**History:** Effective July 1, 1994; amended effective March 1, 2004.

**General Authority:** NDCC 26.1-36-37.2

**Law Implemented:** NDCC 26.1-36-37.2

## CHAPTER 45-08-02

### 45-08-02-02. Definition Definitions. For purposes of this chapter:

1. "Carrier" means a person or an entity that offers or provides a policy, contract, or certificate of insurance coverage in this state. "Carrier" includes an insurer, a health maintenance organization, a nonprofit service corporation, or any other person or entity providing a policy, contract, or certificate of insurance coverage subject to state insurance regulation.
2. The term "~~group-type~~ Group-type basis" means a benefit plan, other than "salary budget" plans utilizing individual insurance policies, certificates, or subscriber contracts, which meets the following conditions:
  - 1- a. Coverage is provided through insurance policies, certificates, or subscriber contracts to classes of employees or members defined in terms of conditions pertaining to employment or membership.
  - 2- b. The coverage is not available to the general public and can be obtained and maintained only because of the covered person's membership in or connection with the particular organization or group, including bank depositor groups.
  - 3- c. There are arrangements for bulk payment of premiums or subscription charges to the insurer or nonprofit service corporation.
  - 4- d. There is sponsorship of the plan by the employer, union, bank, or association.
3. a. "Health insurance coverage" means a hospital and medical expense incurred policy, a nonprofit health care service plan contract, a health maintenance organization subscriber contract, or any other health care plan or arrangement that pays for or furnishes medical or health care services whether by insurance or otherwise.
  - b. "Health insurance coverage" shall not include one or more, or any combination of, the following:
    - (1) Coverage only for accident, or disability income insurance, or any combination thereof;
    - (2) Coverage issued as a supplement to liability insurance;
    - (3) Liability insurance, including general liability insurance and automobile liability insurance;

- (4) Workers' compensation or similar insurance;
- (5) Automobile medical payment insurance;
- (6) Credit-only insurance;
- (7) Coverage for onsite medical clinics; and
- (8) Other similar insurance coverage, specified in federal regulations issued pursuant to the Health Insurance Portability and Accountability Act of 1996 (HIPAA) [Pub. L. No. 104-191], under which benefits for medical care are secondary or incidental to other insurance benefits.

c. "Health insurance coverage" shall not include the following benefits if they are provided under a separate policy, certificate or contract of insurance or are otherwise not an integral part of the coverage:

- (1) Limited scope dental or vision benefits;
- (2) Benefits for long-term care, nursing home care, home health care, community-based care, or any combination thereof; or
- (3) Other similar, limited benefits specified in federal regulations issued pursuant to HIPAA.

d. "Health insurance coverage" shall not include the following benefits if the benefits are provided under a separate policy, certificate or contract of insurance, there is no coordination between the provision of the benefits and any exclusion of benefits under any group health plan maintained by the same plan sponsor, and the benefits are paid with respect to an event without regard to whether benefits are provided with respect to such an event under any group health plan maintained by the same plan sponsor:

- (1) Coverage only for a specified disease or illness; or
- (2) Hospital indemnity or other fixed indemnity insurance.

e. "Health insurance coverage" shall not include the following if offered as a separate policy, certificate, or contract of insurance:

- (1) Medicare supplemental health insurance as defined under section 1882(g)(1) of the Social Security Act;
- (2) Coverage supplemental to the coverage provided under chapter 55 of title 10, United States Code; or



Additional Party Involved / AKA Information						
Type:	Name (Last):	(First):	(Middle):	Date of birth:	Age:	SSN:
Street Address (include P.O. Box and apartment #'s):			Address Type: <input type="checkbox"/> Res. <input type="checkbox"/> Bus. <input type="checkbox"/> Maildrop <input type="checkbox"/> Other	Fed. TIN <input type="checkbox"/> Number:	EIN <input type="checkbox"/>	Sex: M <input type="checkbox"/> F <input type="checkbox"/>
City:	State:	Zip:	County:	Telephone No.: ( )	Phone Type: <input type="checkbox"/> home <input type="checkbox"/> cell <input type="checkbox"/> bus.	
Driver's License #:	State:	VIN:		Telephone No.: ( )	Phone Type: <input type="checkbox"/> home <input type="checkbox"/> cell <input type="checkbox"/> bus.	
Vehicle Year:	Make:	Model:	License Plate #:	Reported Injuries:		
Employer:	Address & Phone #:			Occupation:		
Involvement in referral:						
Additional Party Involved / AKA Information						
Type:	Name (Last):	(First):	(Middle):	Date of birth:	Age:	SSN:
Street Address (include P.O. Box and apartment #'s):			Address Type: <input type="checkbox"/> Res. <input type="checkbox"/> Bus. <input type="checkbox"/> Maildrop <input type="checkbox"/> Other	Fed. TIN <input type="checkbox"/> Number:	EIN <input type="checkbox"/>	Sex: M <input type="checkbox"/> F <input type="checkbox"/>
City:	State:	Zip:	County:	Telephone No.: ( )	Phone Type: <input type="checkbox"/> home <input type="checkbox"/> cell <input type="checkbox"/> bus.	
Driver's License #:	State:	VIN:		Telephone No.: ( )	Phone Type: <input type="checkbox"/> home <input type="checkbox"/> cell <input type="checkbox"/> bus.	
Vehicle Year:	Make:	Model:	License Plate #:	Reported Injuries:		
Employer:	Address & Phone #:			Occupation:		
Involvement in referral:						
Additional Party Involved / AKA Information						
Type:	Name (Last):	(First):	(Middle):	Date of birth:	Age:	SSN:
Street Address (include P.O. Box and apartment #'s):			Address Type: <input type="checkbox"/> Res. <input type="checkbox"/> Bus. <input type="checkbox"/> Maildrop <input type="checkbox"/> Other	Fed. TIN <input type="checkbox"/> Number:	EIN <input type="checkbox"/>	Sex: M <input type="checkbox"/> F <input type="checkbox"/>
City:	State:	Zip:	County:	Telephone No.: ( )	Phone Type: <input type="checkbox"/> home <input type="checkbox"/> cell <input type="checkbox"/> bus.	
Driver's License #:	State:	VIN:		Telephone No.: ( )	Phone Type: <input type="checkbox"/> home <input type="checkbox"/> cell <input type="checkbox"/> bus.	
Vehicle Year:	Make:	Model:	License Plate #:	Reported Injuries:		
Employer:	Address & Phone #:			Occupation:		
Involvement in referral:						
Additional Party Involved / AKA Information						
Type:	Name (Last):	(First):	(Middle):	Date of birth:	Age:	SSN:
Street Address (include P.O. Box and apartment #'s):			Address Type: <input type="checkbox"/> Res. <input type="checkbox"/> Bus. <input type="checkbox"/> Maildrop <input type="checkbox"/> Other	Fed. TIN <input type="checkbox"/> Number:	EIN <input type="checkbox"/>	Sex: M <input type="checkbox"/> F <input type="checkbox"/>
City:	State:	Zip:	County:	Telephone No.: ( )	Phone Type: <input type="checkbox"/> home <input type="checkbox"/> cell <input type="checkbox"/> bus.	
Driver's License #:	State:	VIN:		Telephone No.: ( )	Phone Type: <input type="checkbox"/> home <input type="checkbox"/> cell <input type="checkbox"/> bus.	
Vehicle Year:	Make:	Model:	License Plate #:	Reported Injuries:		
Employer:	Address & Phone #:			Occupation:		
Involvement in referral:						

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(3) Similar supplemental coverage provided to coverage under a group health plan.

**History:** Effective March 1, 1988; amended effective March 1, 2004.

**General Authority:** NDCC 26.1-04-08, 28-32-02

**Law Implemented:** NDCC 26.1-04-03(7), 26.1-30-19, 26.1-33-11, 26.1-33-12, 26.1-36-22, 26.1-36-23, 26.1-36-23.1

**45-08-02-06. Extension of benefits.**

1. Every group policy or certificate or other contract subject to these rules hereafter issued, or under which the level of benefits is hereafter altered, modified, or amended, must provide a reasonable provision for extension of benefits in the event of total disability at the date of discontinuance of the group coverage, as required by the following ~~paragraphs of this section~~ subsections.
2. In the case of a group life plan which contains a disability benefit extension of any type (e.g., premium waiver extension, extended death benefit in event of total disability, or payment of income for a specified period during total disability), the discontinuance of the group policy does not operate to terminate such extension.
3. In the case of a group plan providing benefits for loss of time from work or specific indemnity during hospital confinement, discontinuance of the policy during a disability has no effect on benefits payable for that disability or confinement.
4. In the case of hospital or medical expense coverages other than dental and maternity expense, a reasonable extension of benefits or accrued liability provision is required. Such a provision will be considered "reasonable" if it provides an extension of at least twelve months under "major medical" and "comprehensive medical" type coverages, and under other types of hospital or medical expense coverages provides either an extension of at least ninety days or an accrued liability for expenses incurred during a period of disability or during a period of at least ninety days starting with a specific event which occurred while coverage was in force (e.g., an accident).
5. Any applicable extension of benefits or accrued liability must be described in any policy or contract involved as well as in group insurance certificates. The benefits payable during any period of extension or accrued liability may be subject to the policy's or contract's regular benefit limits (e.g., benefits ceasing at exhaustion of a benefit period or of maximum benefits). For hospital or medical

expense coverages, the benefit payments may be limited to payments applicable to the disabling condition only.

**History:** Effective March 1, 1988; amended effective March 1, 2004.

**General Authority:** NDCC 26.1-04-08, 28-32-02

**Law Implemented:** NDCC 26.1-04-03(7), 26.1-30-19, 26.1-33-11, 26.1-33-12, 26.1-36-22, 26.1-36-23, 26.1-36-23.1

**45-08-02-07. Continuance of coverage in situations involving replacement of one carrier by another.**

1. This section shall indicate the carrier responsible for liability in those instances in which one carrier's (succeeding carrier) contract replaces a plan of similar benefits of another (prior contract).
2. Liability of prior carrier. The prior carrier remains liable only to the extent of its accrued liabilities and extensions of benefits. The position of the prior carrier is the same whether the group policyholder or other entity secures replacement coverage from a new carrier, self-insures, or foregoes the provision of coverage.
3. Liability of succeeding carrier.
  - a. (1) ~~Each person who is eligible for coverage in accordance with the succeeding carrier's plan of benefits (in respect of classes eligible and activity at work and nonconfinement rules) is covered by that carrier's plan of benefits. If the individual was validly covered under the prior plan on the date of discontinuance, each individual who is eligible for coverage in accordance with the succeeding carrier's plan of benefits with respect to the class or classes of individuals eligible for coverage under the succeeding carrier's plan and any actively-at-work and nonconfinement rules and requests enrollment shall be enrolled and covered by the succeeding carrier's plan of benefits.~~
    - (2) In the case of health insurance coverage:
      - (a) A succeeding carrier shall not have any nonconfinement rules in its plan of benefits; and
      - (b) Any actively-at-work rules provided in the succeeding carrier's plan of benefits shall provide that absence from work due to any health status-related factor be treated as being actively at work.
    - (3) For purposes of this paragraph, "health status-related factor" means any of the following factors:

- (a) Health status;
- (b) Medical condition, including both physical and mental illnesses;
- (c) Claims experience;
- (d) Receipt of health care;
- (e) Medical history;
- (f) Genetic information;
- (g) Evidence of insurability, including conditions arising out of acts of domestic violence; or
- (h) Disability.

b. Each person not covered under the succeeding carrier's plan of benefits in accordance with subdivision a must nevertheless be covered by the succeeding carrier in accordance with the following rules if such individual was validly covered (including benefit extension) under the prior plan on the date of discontinuance. Any reference in the following rules to an individual who was or was not totally disabled is a reference to the individual's status immediately prior to the date the succeeding carrier's coverage becomes effective.

- (1) The minimum level of benefits to be provided by the succeeding carrier shall be the applicable level of benefits of the prior carrier's plan reduced by any benefits payable by the prior plan.
- (2) Coverage must be provided by the succeeding carrier until at least the earliest of the following dates:
  - (a) The date the individual becomes eligible under the succeeding carrier's plan as described in subdivision a.
  - (b) For each type of coverage, the date the individual's coverage would terminate in accordance with the succeeding carrier's plan provisions applicable to individual termination of coverage (e.g., at termination of employment or ceasing to be eligible dependent, as the case may be).
  - (c) In the case of an individual who was totally disabled, and in the case of a type of coverage for which section 45-08-02-06 requires an extension of accrued

liability, the end of any period of extension or accrued liability which is required of the prior carrier by section 45-08-02-06 or, if the prior carrier's policy or contract is not subject to that section, would have been required of that carrier had its policy or contract been subject to section 45-08-02-06 at the time the prior plan was discontinued and replaced by the succeeding carrier's plan.

- c. For health insurance coverage, in the case of an individual who was totally disabled at the time the prior carrier's plan was discontinued and replaced by the succeeding carrier's plan, and in the case in which section 45-08-02-06 requires an extension of benefits or accrued liability, the minimum level of benefits to be provided by the succeeding carrier shall be the applicable level of benefits of the prior carrier's plan reduced by any benefits paid by the prior plan.
- d. In the case of a preexisting conditions limitation included in the succeeding carrier's plan, the level of benefits applicable to preexisting conditions of persons becoming covered by the succeeding carrier's plan in accordance with this subsection during the period of time this limitation applies under the new plan shall be the lessor of:
- (1) The benefits of the new plan determined without application of the preexisting conditions limitation; and
  - (2) The benefits of the prior plan.
- d- e. The succeeding carrier, in applying any deductibles or coinsurance amounts applicable to the out-of-pocket maximums or waiting periods in its plan, shall give credit for the satisfaction or partial satisfaction of the same or similar provisions under a prior plan providing similar benefits. In the case of deductible provisions or coinsurance amounts applicable to the out-of-pocket maximums, the credit shall apply for the same or overlapping benefits periods and must be given for expenses actually incurred and applied against the deductible or coinsurance provisions of the prior carrier's plan during the ninety days preceding the effective date of the succeeding carrier's plan but only to the extent these expenses are recognized under the terms of the succeeding carrier's plan and are subject to similar deductible or coinsurance provision.
- e- f. In any situation where a determination of the prior carrier's benefit is required by the succeeding carrier, at the succeeding carrier's request the prior carrier shall furnish a statement of the benefits available or pertinent information, sufficient to permit verification of the benefit determination or the determination itself by the

succeeding carrier. For the purposes of this section, benefits of the prior plan will be determined in accordance with all of the definitions, conditions, and covered expense provisions of the prior plan rather than those of the succeeding plan. The benefit determination will be made as if coverage had not been replaced by the succeeding carrier.

**History:** Effective March 1, 1988; amended effective March 1, 2004.

**General Authority:** NDCC 26.1-04-08, 28-32-02

**Law Implemented:** NDCC 26.1-04-03(7), 26.1-30-19, 26.1-33-11, 26.1-33-12, 26.1-36-22, 26.1-36-23, 26.1-36-23.1

**ARTICLE 45-15**

**INSURANCE FRAUD**

Chapter

45-15-01

Insurance Fraud

**CHAPTER 45-15-01**

**INSURANCE FRAUD**

Section

45-15-01-01

Insurance Fraud

**45-15-01-01. Insurance fraud.** A person engaged in the business of insurance having knowledge or a reasonable belief that a fraudulent insurance act has been, is being, or will be committed shall provide information concerning the known or suspected fraudulent insurance act to the commissioner in writing within sixty days of having that knowledge or reasonable belief. The information may be reported on the national association of insurance commissioners uniform suspected insurance fraud reporting form, a copy of which is attached as appendix A. Thereafter, the person engaged in the business of insurance shall promptly provide to the commissioner any additional information that the commissioner may request concerning the known or suspected fraudulent insurance act. For the purposes of this rule, a reasonable belief means that the person engaged in the business of insurance has ascertained, after reviewing the facts surrounding the possible fraudulent insurance act through its internal fraud activities and processes, if such activities and processes are in place, that a given fact or combination of facts exist and that the circumstances in their totality result in a determination that a fraudulent insurance act was committed.

**History:** Effective March 1, 2004.

**General Authority:** NDCC 28-32-02

**Law Implemented:** NDCC 26.1-02.1, 26.1-02.1-11

## UNIFORM SUSPECTED INSURANCE FRAUD REPORTING FORM

State of \_\_\_\_\_  
 Division of Insurance Fraud Bureau

*For State Use Only*

Case No.	Subno.	RPT
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Reporting Person:		Insurance Company:		NAIC#	
Mailing address:				Phone number: ( )	
				Fax number: ( )	
				E-mail address:	
Detailed synopsis. Attach additional pages, if necessary.					
Date of Loss / Injury:			Dates of Service: to		
Address of Loss / Injury:			Description of Service:		
(City)		(State)	(Zip)		
Claim #			Policy #		
Reserve Amount \$	Amount Paid \$	Date Paid	Procedure Code #'s:	<input type="checkbox"/> CPT	<input type="checkbox"/> CDT
Loss Amount \$	Settlement Amt. \$	Date Paid	Civil Litigation Pending:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
			Insurance Type		
			<input type="checkbox"/> PC <input type="checkbox"/> WC		
			<input type="checkbox"/> HC <input type="checkbox"/> Auto		
			<input type="checkbox"/> Life <input type="checkbox"/> Disability		
<b>Subject Information</b>					
Type:	Name (Last / Business):	(First):	(Middle):	Date of birth:	Age: SSN:
Street Address (include P.O. Box and apartment #'s):		Address Type: <input type="checkbox"/> Res. <input type="checkbox"/> Bus.		Fed. TIN <input type="checkbox"/>	EIN <input type="checkbox"/>
		<input type="checkbox"/> Maildrop <input type="checkbox"/> Other		Number: Sex: M <input type="checkbox"/> F <input type="checkbox"/>	
City:	State:	Zip:	County:	Telephone No.:	Phone Type:
				( )	<input type="checkbox"/> home <input type="checkbox"/> cell <input type="checkbox"/> bus.
Driver's License #:	State:	VIN:		Telephone No.:	Phone Type:
				( )	<input type="checkbox"/> home <input type="checkbox"/> cell <input type="checkbox"/> bus.
Vehicle Year:	Make:	Model:	License Plate #:	Reported Injuries:	
Employer:	Address & Phone #:			Occupation:	
Additional Party Involved <input type="checkbox"/>		Sec Additional Party Involved/AKA <input type="checkbox"/>		Comments:	
AKA Information: <input type="checkbox"/>		Information			
<b>Case Details (check all that apply)</b>					
SIU Investigation Completed <input type="checkbox"/> Yes <input type="checkbox"/> No			Date Completed:		
Is there any reason to believe that this incident is related to other suspected fraudulent activity? <input type="checkbox"/> Yes <input type="checkbox"/> No					
<input type="checkbox"/> Statements (Witness / Insured / Subject)	<input type="checkbox"/> EUC / Deposition	<input type="checkbox"/> Law Enforcement / Other Agency Reports			
<input type="checkbox"/> Sworn <input type="checkbox"/> Recorded	<input type="checkbox"/> Copies of Receipts	<input type="checkbox"/> Claim History Extracts			
<input type="checkbox"/> Proof of Loss	<input type="checkbox"/> Expert Reports	<input type="checkbox"/> IME Reports			
<input type="checkbox"/> Continuance of Disability Forms	<input type="checkbox"/> Videos / Photos	<input type="checkbox"/> Investigative Reports			
<input type="checkbox"/> Medical Records	<input type="checkbox"/> Claim Information	<input type="checkbox"/> External Database results			
<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other			
<b>Identify Other Agency You Have Contacted Regarding This Referral</b>					
Agency Type: <input type="checkbox"/> Other State Fraud Bureau <input type="checkbox"/> Law Enforcement <input type="checkbox"/> Other Insurance Company <input type="checkbox"/> Regulatory Agency <input type="checkbox"/> Other					
Agency: _____		Contact Person: _____			
(Address) _____		(City) _____		(State) _____ (Zip) _____	
Telephone ( ) _____		Fax ( ) _____		Case/Claim No. _____	

**Suspected Fraud Types (check all that apply)**

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Arson<br><input type="checkbox"/> home <input type="checkbox"/> vehicle <input type="checkbox"/> business<br><input type="checkbox"/> Fictitious loss <input type="checkbox"/> damages <input type="checkbox"/><br><input type="checkbox"/> Fictitious theft<br><input type="checkbox"/> vehicle <input type="checkbox"/> property<br><input type="checkbox"/> Inflated inventory<br><input type="checkbox"/> Inflated loss <input type="checkbox"/> damages <input type="checkbox"/><br><input type="checkbox"/> Inflated theft<br><input type="checkbox"/> vehicle <input type="checkbox"/> property<br><input type="checkbox"/> Double-dipping<br><input type="checkbox"/> Exaggerated injuries<br><input type="checkbox"/> Injuries not related to work<br><input type="checkbox"/> Malingerers<br><input type="checkbox"/> Misappropriated vehicle salvage<br><input type="checkbox"/> Premium avoidance<br><input type="checkbox"/> Prior injuries<br><input type="checkbox"/> Slip and fall<br><input type="checkbox"/> Staged injury / accident at work<br><input type="checkbox"/> Staged collisions<br><input type="checkbox"/> Paper accidents<br><input type="checkbox"/> Other _____ | <input type="checkbox"/> Agent fraud<br><input type="checkbox"/> Application fraud<br><input type="checkbox"/> Billing for services/products not provided<br><input type="checkbox"/> Failure to disclose multiple insurance companies<br><input type="checkbox"/> False claims<br><input type="checkbox"/> Illegal solicitation (cappers)<br><input type="checkbox"/> Issued fraudulent insurance policies, certificates, binders, ID cards<br><input type="checkbox"/> Misrepresentation of services / products provided<br><input type="checkbox"/> Kickbacks/bribery<br><input type="checkbox"/> Money laundering<br><input type="checkbox"/> Multiple claims<br><input type="checkbox"/> Possession/sold fraudulent insurance policies, certificates, binders, ID cards<br><input type="checkbox"/> Questioned documents<br><input type="checkbox"/> altered <input type="checkbox"/> forged <input type="checkbox"/> falsified<br><input type="checkbox"/> duplicated<br><input type="checkbox"/> Received compensation for referral to health care provider or attorney<br><input type="checkbox"/> Ring / organized activity type | <input type="checkbox"/> Duplicate billing for same service<br><input type="checkbox"/> Forged prescriptions<br><input type="checkbox"/> Fraudulent death claims<br><input type="checkbox"/> Over-utilization of services<br><input type="checkbox"/> Prescription abuse / doctor shopping<br><input type="checkbox"/> Prescriptions issued for non-medical purposes<br><input type="checkbox"/> Unbundling<br><input type="checkbox"/> Upcoding<br><input type="checkbox"/> Misrepresented non-covered services as covered<br><input type="checkbox"/> Changing dates of service, CPT/CDT/diagnostic codes<br><input type="checkbox"/> Charges inconsistent with services provided<br><input type="checkbox"/> Products billed are inconsistent with the products<br><input type="checkbox"/> Using unqualified/unlicensed persons to perform billable services<br><input type="checkbox"/> Other _____ |
|--|---|--|

**Subject / Additional Party Types**

- |  |   |  |
|--|---|--|
| CL Claimant<br>IN Insured<br>WT Witness<br>LC Lawyer for Claimant<br>LI Lawyer for Insured<br>INS Insurer<br>SI Self-insured<br>IE Insurance Company Employee<br>IB Agent/Broker<br>IS Adjuster<br>IR Appraiser<br>SIS Salvage Shop<br>SY Salvage Yard Owner / Employee<br>TY Tow Yard Owner / Employee<br>MD Medical Doctor<br>DO Doctor of Osteopathic Medicine<br>DEN Dentist | PH Pharmacist<br>CHI Chiropractor<br>NP Nurse Practitioner<br>LPN Licensed Practical Nurse<br>PT Physical Therapist<br>PA Physician's Assistant<br>OP Optometrist<br>PO Podiatrist<br>RD Radiologist<br>MT Massage Therapist<br>AMB Ambulance Service Employee<br>DMH DMH Supplier<br>HHA Home Health Agency<br>MR Laboratory<br>MH Medical Clinic/Hospital<br>MA Medical Administrative<br>BS Billing Services | TPA Third Party Administrator<br>FP False Provider<br>UP Unlicensed Provider<br>MN Other Medical Personnel<br>MS Medical Specialist<br>DS Dental Specialist<br>NS Nurse Specialist<br>OI Other _____ |
|--|---|--|

