

<p><b>APPLICATION REVIEW CHECKLIST</b></p> <p><b>LAND PROTECTION DIVISION</b> <b>HAZARDOUS WASTE PROGRAM</b></p>  <p><b>OKLAHOMA DEPARTMENT</b> <b>OF</b> <b>ENVIRONMENTAL QUALITY</b></p>	Facility Name: _____ Facility ID No.: _____ ODEQ Permit No.: _____ Reference No.: _____ Application Type: _____ Date: _____ (New/Modify/Renewal)	40 CFR 264 Subpart F  <u>RELEASES FROM</u> <u>SOLID WASTE</u> <u>MANAGEMENT UNITS</u>
	Administrative Reviewer: _____ Start Date: _____ Completion Date: _____ Technical Reviewer: _____ Start Date: _____ Completion Date: _____ Issuance Deadline: _____	ODEQ Form Number XXX - XXX
		Shaded areas for ODEQ use only

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
<b>APPLICABILITY - 264.90</b>							

Facility Name _____ Reference No. _____
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A. Reviewer's Initials _____ Tracking Date _____
T. Reviewer's Initials _____ Tracking Date _____

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 1	264.90(a)(1)		Applicable to facilities that treat, store, or dispose of hazardous waste, except as provided in paragraph (b) of this section.  The facility must satisfy paragraph (a)(2) of this section for all wastes placed in solid waste management units (SWMUs).				
SWMU 2	264.90(a)(2)		All SWMUs must comply with 264.101.  A surface impoundment, waste pile, and land treatment unit or landfill that receives wastes after 7/26/82 (hereinafter referred to as a "regulated unit") must comply with 264.91 through 264.100 in lieu of 264.101 for detecting, characterizing and responding to releases to the uppermost aquifer. The financial responsibility of 264.101 applies to regulated units.				
SWMU 3	264.90(b)		A regulated unit is not subject to regulation for releases into the uppermost aquifer if:				
SWMU 4	264.90(b)(1)		The facility is exempted under 264.1; or				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
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SWMU 5	264.90(b)(2)		<p>The facility operates a unit which the Agency finds:</p> <ul style="list-style-type: none"> <li>(i) Is an engineered structure,</li> <li>(ii) Does not receive or contain liquid waste or waste containing free liquids,</li> <li>(iii) Is designed and operated to exclude liquid, precipitation, run-on and run-off,</li> <li>(iv) Has both inner and outer layers of containment enclosing the waste,</li> <li>(v) Has a leak detection system built into each containment layer,</li> <li>(vi) The facility will continue to operate and maintain these leak detection systems during the active life, and closure and post-closure care periods, and</li> <li>(vii) To a reasonable degree of certainty, will not allow hazardous constituents to migrate out of the outer containment layer prior to the end of the post-closure care period; or</li> </ul>				
SWMU 6	264.90(b)(3)		<p>The Agency finds, pursuant to 264.280(d), that the treatment zone of a land treatment unit (regulated unit) does not contain hazardous constituents above background (statistically significant), and</p> <p>if an unsaturated zone monitoring program meeting 264.278 has not shown a statistically significant increase in hazardous constituents below the treatment zone during the operating life.</p> <p>An exemption under this paragraph only applies for the post-closure care period; or</p>				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
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SWMU 7	264.90(b)(4)		The Agency finds no potential migration of liquid from a regulated unit to the uppermost aquifer.  This demonstration must be certified by a qualified geologist or geotechnical engineer. Prediction must be based on the maximum rate of liquid migration; or				
SWMU 8	264.90(b)(5)		The facility designs and operates a pile in compliance with 264.250(c)				
SWMU 9	264.90(c)		The regulations under this subpart apply during the active life and closure periods. After closure, the regulations in this subpart:				
SWMU 10	264.90(c)(1)		Do not apply if the unit is clean closed, or closed to an acceptable health risk level;				
SWMU 11	264.90(c)(2)		Apply during the post-closure care period under 264.117 if the facility conducts a detection monitoring program under 264.98; or				
SWMU 12	264.90(c)(3)		Apply during the compliance period under 264.96 if the facility conducts a corrective action program under 264.99 or corrective action program under 264.100.				
SWMU 13	264.90(d)		Apply to miscellaneous units to comply with 264.601 through 264.603				
<b>REQUIRED PROGRAMS - 264.91</b>							
SWMU 14	264.91(a)		The facility must conduct a monitoring and response program as follows:				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
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SWMU 15	264.91(a)(1)		When hazardous constituents (264.93) are detected at a compliance point (264.95), the facility must institute a compliance monitoring program under 264.99.  Detected is defined as statistically significant as described in 264.98(f);				
SWMU 16	264.91(a)(2)		When the groundwater protection standard (264.92) is exceeded, the facility must institute a corrective action program under 264.100.  Exceeded is defined as statistically significant as described in 264.99(d);				
SWMU 17	264.91(a)(3)		When hazardous constituents (264.93) exceed concentration limits (264.94) in groundwater between the compliance point (264.95) and the downgradient facility boundary, the facility must institute a corrective action program under 264.100; or				
SWMU 18	264.91(a)(4)		In all other cases, the facility must institute a detection monitoring program under 264.98.				
SWMU 19	264.91(b)		The Agency will specify in the permit, specific elements of the monitoring and response program.  The Agency may include one or more of the programs in paragraph (a) of this section in the permit.				
<b>GROUNDWATER PROTECTION STANDARD - 264.92</b>  Hazardous constituents (264.93) detected in the groundwater from a regulated unit can not exceed the concentration limits (264.94) in the uppermost aquifer beyond the point of compliance (264.95) during the compliance period (264.96).  The Agency will establish this groundwater protection standard in the permit when hazardous constituents have been detected in groundwater.							

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
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<b>HAZARDOUS CONSTITUENTS - 264.93</b>							
SWMU 20	264.93(a)		The Agency will specify in the permit the hazardous constituents (appendix VIII of part 261) to which the groundwater protection standard applies.				
SWMU 21	264.93(b)		The Agency will exclude an appendix VIII constituent if that constituent does not pose hazard to human health of the environment. To grant an exemption, the Agency will consider the following:				
SWMU 22	264.93(b)(1)		<p>Potential adverse effects on groundwater quality, considering:</p> <ul style="list-style-type: none"> <li>(i) The physical and chemical characteristics of the waste, including its potential for migration;</li> <li>(ii) The hydrogeological characteristics;</li> <li>(iii) The quantity of groundwater and the flow direction;</li> <li>(iv) The proximity and withdrawal rates of groundwater users;</li> <li>(v) The current and future uses of groundwater;</li> <li>(vi) The existing quality of groundwater, including sources of contamination and cumulative impact on groundwater;</li> <li>(vii) The potential human exposure health risks;</li> <li>(viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;</li> <li>(ix) The persistence and permanence of the potential adverse effects; and</li> </ul>				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
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SWMU 23	264.93(b)(2)		<p>Potential adverse effects on hydraulically-connected surface water quality, considering:</p> <ul style="list-style-type: none"> <li>(i) The volume, physical and chemical characteristics of the waste;</li> <li>(ii) The hydrogeological characteristics;</li> <li>(iii) The quantity and quality of groundwater and the flow direction;</li> <li>(iv) The pattern of rainfall;</li> <li>(v) The proximity of the regulated unit to surface waters;</li> <li>(vi) The current and future uses of surface waters and any established quality standards;</li> <li>(vii) The existing quality of surface water, including sources of contamination and cumulative impact on surface water;</li> <li>(viii) The potential human exposure health risks;</li> <li>(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;</li> <li>(x) The persistence and permanence of the potential adverse effects.</li> </ul>				
SWMU 24	264.93(c)		In making any determination under paragraph (b) of this section, the Agency will consider any identification of underground sources of drinking water and exempted aquifers under 40 CFR 144.8.				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
<b>CONCENTRATION LIMITS - 264.94</b>							
SWMU 25	264.94(a)		The Agency will specify in the permit concentration limits for hazardous constituents (264.93) in the groundwater. The concentration of a hazardous constituent:				
SWMU 26	264.94(a)(1)		Must not exceed the background level at time of permit; or				
SWMU 27	264.94(a)(2)		Must not exceed levels in Table 1 (see at the end of the checklist) when background levels are under those in Table 1; or				
SWMU 28	264.94(a)(3)		Must not exceed an alternate limit set by the Agency under paragraph (b) of this section.				
SWMU 29	264.94(b)		The Agency may establish an alternate concentration limit and considering the following factors:				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_



ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 30	264.94(b)(1)		<p>Potential adverse effects on groundwater quality, considering:</p> <ul style="list-style-type: none"> <li>(i) The physical and chemical characteristics of the waste, including its potential for migration;</li> <li>(ii) The hydrogeological characteristics;</li> <li>(iii) The quantity of groundwater and the flow direction;</li> <li>(iv) The proximity and withdrawal rates of groundwater users;</li> <li>(v) The current and future uses of groundwater;</li> <li>(vi) The existing quality of groundwater, including sources of contamination and cumulative impact on groundwater;</li> <li>(vii) The potential human exposure health risks;</li> <li>(viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;</li> <li>(ix) The persistence and permanence of the potential adverse effects; and</li> </ul>				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
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SWMU 31	264.94(b)(2)		<p>Potential adverse effects on hydraulically-connected surface water quality, considering:</p> <ul style="list-style-type: none"> <li>(i) The volume, physical and chemical characteristics of the waste;</li> <li>(ii) The hydrogeological characteristics;</li> <li>(iii) The quantity and quality of groundwater and the flow direction;</li> <li>(iv) The pattern of rainfall;</li> <li>(v) The proximity of the regulated unit to surface waters;</li> <li>(vi) The current and future uses of surface waters and any established quality standards;</li> <li>(vii) The existing quality of surface water, including sources of contamination and cumulative impact on surface water;</li> <li>(viii) The potential human exposure health risks;</li> <li>(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;</li> <li>(x) The persistence and permanence of the potential adverse effects.</li> </ul>				
SWMU 32	264.94(c)		To make determination under paragraph (b) of this section about the use of groundwater, the Agency will consider any identification of underground sources of drinking water and exempted aquifers (144.8)				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
<b>POINT OF COMPLIANCE - 264.95</b>							
SWMU 33	264.95(a)		The Agency will determine in the permit the point of compliance at which the groundwater protection standard (264.92) applies and monitoring must be conducted.  The point of compliance is a vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated unit.				
SWMU 34	264.95(b)		The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit.				
SWMU 35	264.95(b)(1)		The waste management area includes liner, dike, or other barrier to contain waste in a regulated unit.				
SWMU 36	264.95(b)(2)		For more than one regulated unit, the waste management area is an imaginary line circumscribing the several regulated units.				
<b>COMPLIANCE PERIOD - 264.96</b>							
SWMU 37	264.96(a)		The Agency will specify in the permit the compliance period during which the groundwater protection standard (264.92) applies.  The compliance period includes the active and closure periods.				
SWMU 38	264.96(b)		The compliance period begins when the facility initiates the compliance monitoring programs (264.99).				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 39	264.96(c)		If the facility is engaged in a corrective action program at the end of the compliance period in paragraph (a) of this section, the compliance period is extended until the groundwater protection standard (264.92) has not been exceeded for three consecutive years.				
<b>GENERAL GROUNDWATER MONITORING REQUIREMENTS - 264.97</b>							
The facility must comply with the following requirements for any groundwater monitoring program to satisfy Detection Monitoring Program (264.98), Compliance Monitoring Program (264.99), or Corrective Action Program (264.100).							
SWMU 40	264.97(a)		The groundwater monitoring system must consist of sufficient wells at appropriate locations and depths to yields samples from the uppermost aquifer that:				
SWMU 41	264.97(a)(1)		Represent the quality of unaffected background water;  (i) A determination of background quality may include wells that are not upgradient where:  (A) Hydrogeologic conditions do not allow the facility to determine what wells are upgradient; and  (B) Sampling at other wells will provide background quality that is representative or more representative than that of the upgradient wells; and				
SWMU 42	264.97(a)(2)		Represent the quality of groundwater passing the point of compliance.				
SWMU 43	264.97(a)(3)		Allow for the detection of contamination from the waste management area to the uppermost aquifer.				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 44	264.97(b)		If a facility contains more than one regulated unit, separate groundwater monitoring systems are not required for each regulated unit, provided that provisions for sampling the groundwater in the uppermost aquifer will enable detection and measurement at the compliance point.				
SWMU 45	264.97(c)		All monitoring wells must be cased. This casing must be screened or perforated and packed.  The annular space above the sampling depth must be sealed to prevent contamination.				
SWMU 46	264.97(d)		The groundwater monitoring program must include consistent sampling and analysis procedures.  At a minimum the program must include procedures and techniques for:				
SWMU 47	264.97(d)(1)		Sample collection;				
SWMU 48	264.97(d)(2)		Sample preservation and shipment;				
SWMU 49	264.97(d)(3)		Analytical procedures; and				
SWMU 50	264.97(d)(4)		Chain of custody control.				
SWMU 51	264.97(e)		The groundwater monitoring program must include appropriate sampling and analytical methods.				
SWMU 52	264.97(f)		The ground-water monitoring program must include a determination of groundwater elevation each time groundwater is sampled.				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 53	264.97(g)		<p>In detection or compliance monitoring, data will be collected from background wells and wells at compliance points.</p> <p>The number and kinds of samples must be adequate to establish appropriate statistical background.</p> <p>Sample size shall be large enough to ensure reasonable confidence.</p> <p>The facility will determine the sampling procedure and interval subject to approval by the Agency. The sampling procedure shall be:</p>				
SWMU 54	264.97(g)(1)		A sequence of at least four samples to assure that an independent sample is obtained referencing the uppermost aquifer's effective porosity, hydraulic conductivity, and hydraulic gradient, and the fate and transport of contaminants, or				
SWMU 55	264.97(g)(2)		An alternate sampling procedure proposed by the facility and approved by the Agency.				
SWMU 56	264.97(h)		<p>The facility will specify one of the following statistical methods which, upon approval by the Agency, will be specified in the permit.</p> <p>The statistical test chosen shall be conducted separately for each hazardous constituent in each well.</p> <p>Where practical quantification limits (pqls) are used in any statistical procedures [(264.97(i)(5))], the pql must be proposed by the facility and approved by the Agency.</p> <p>Use of any of the following statistical methods must be protective of human health and the environment and must comply with performance standards outlined in paragraph (i) of this section.</p>				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
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SWMU 57	264.97(h)(1)		A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify evidence of contamination.  The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean for each constituent.				
SWMU 58	264.97(h)(2)		An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify evidence of contamination.  The method must include estimation and testing of the contrasts between each compliance well's median and the background median for each constituent.				
SWMU 59	264.97(h)(3)		A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.				
SWMU 60	264.97(h)(4)		A control chart approach that gives control limits for each constituent.				
SWMU 61	264.97(h)(5)		Another statistical test method submitted by the facility and approved by the Agency.				
SWMU 62	264.97(i)		Any statistical method under 264.97(h) shall comply with the following performance standards:				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
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SWMU 63	264.97(i)(1)		<p>The statistical method used to evaluate groundwater monitoring data shall be appropriate for the distribution of hazardous constituents.</p> <p>If the distribution of hazardous constituents is shown to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used.</p> <p>If the distributions for the constituents differ, more than one statistical method may be needed.</p>				
SWMU 64	264.97(i)(2)		<p>If an individual well comparison procedure is used to compare a constituent concentration with background or a groundwater protection standard, the test shall be done at Type I error level no less than 0.01 for each testing period.</p> <p>If a multiple comparisons procedure is used, the Type I error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained.</p> <p>This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.</p>				
SWMU 65	264.97(i)(3)		<p>If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its parameter values shall be proposed by the facility and for approval by the Agency.</p>				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_



ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 66	264.97(i)(4)		If a tolerance interval or a prediction interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population, shall be proposed by the facility and for approval by the Agency.  These parameters will be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent.				
SWMU 67	264.97(i)(5)		The statistical method shall account for data below the limit of detection with one or more statistical procedures.  Any practical quantification limit (pql) approved by the Agency under 264.97(h) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved.				
SWMU 68	264.97(i)(6)		If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.				
SWMU 69	264.97(j)		Groundwater monitoring data collected as under paragraph (g) of this section including actual levels of constituents must be maintained in the operating record. The Agency will specify in the permit when the data must be submitted for review.				
<b>DETECTION MONITORING PROGRAM - 264.98</b>							
SWMU 70	264.98(a)		The facility must monitor for indicator parameters, waste constituents, or reaction products in groundwater.  The Agency will specify the parameters or constituents in the permit after considering:				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
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SWMU 71	264.98(a)(1)		The types, quantities, and concentrations of constituents in wastes;				
SWMU 72	264.98(a)(2)		The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone;				
SWMU 73	264.98(a)(3)		The detectability of indicator parameters, waste constituents, and reaction products in groundwater; and				
SWMU 74	264.98(a)(4)		The concentration and coefficients of variation of monitoring parameters in the groundwater background.				
SWMU 75	264.98(b)		The facility must install a groundwater monitoring system at the compliance point (264.95). The groundwater monitoring system must comply with 264.97(a)(2), (b), and (c).				
SWMU 76	264.98(c)		The facility must conduct a groundwater monitoring program for each chemical parameter and hazardous constituent pursuant to paragraph (a) of this section in acc. with 264.97(g).  The facility must maintain groundwater data as measured and in form for determination of statistical significance under 264.97(h).				
SWMU 77	264.98(d)		The Agency will specify the frequencies for sampling and statistical testing to determine evidence of contamination for any parameter under paragraph (a) of this section in acc with 264.97(g).  A sequence of at least 4 samples from each well (background and compliance) must be collected at least semi-annually.				
SWMU 78	264.98(e)		The facility must determine the groundwater flow rate and direction in the uppermost aquifer annually.				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
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SWMU 79	264.98(f)		The facility must determine statistically whether there is evidence of contamination for any chemical parameter in the permit pursuant to paragraph (a) of this section at a frequency under paragraph (d) of this section.				
SWMU 80	264.98(f)(1)		In determining evidence of contamination, the facility must use methods in the permit under 264.97(h). These methods must compare compliance point data and background data.				
SWMU 81	264.98(f)(2)		The facility must determine statistically whether there is evidence of contamination at each monitoring well at the compliance point within a reasonable period after sampling.  The Agency will specify in the permit the reasonable period, after considering the statistical test and lab testing.				
SWMU 82	264.98(g)		If the facility determines pursuant to paragraph (f) of this section that there is evidence of contamination pursuant to paragraph (a) of this section at the compliance point, the facility must:				
SWMU 83	264.98(g)(1)		Notify the Agency in writing within 7 days which includes what chemical parameters;				
SWMU 84	264.98(g)(2)		Immediately sample all monitoring wells and determine whether constituents in appendix IX of 264 are present and the concentrations.				
SWMU 85	264.98(g)(3)		For any appendix IX compounds found, the facility may resample and reanalyze within one month.  If the second analyses confirm the initial results, then the constituents will form the basis for compliance monitoring  If the facility does not resample, the initial findings will form the basis for compliance monitoring.				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 86	264.98(g)(4)		<p>Within 90 days, the facility must submit a permit modification to establish a compliance monitoring program (264.99). The application must include:</p> <ul style="list-style-type: none"> <li>(i) Concentration of any appendix IX constituent detected at each monitoring well at the compliance point;</li> <li>(ii) Any proposed changes to the groundwater monitoring system to meet 264.99;</li> <li>(iii) Any proposed changes to the monitoring frequency, sampling and analysis procedures, or statistical methods to meet 264.99</li> <li>(iv) For each constituent detected at the compliance point, a proposed concentration limit under 264.94(a)(1) or (2), or alternate concentration limit under 264.94(b); and</li> </ul>				
SWMU 87	264.98(g)(5)		<p>Within 180 days, the facility must submit:</p> <ul style="list-style-type: none"> <li>(i) All data to justify an alternate concentration limit under 264.94(b); and</li> <li>(ii) An engineering feasibility plan for a corrective action plan to meet 264.100, unless: <ul style="list-style-type: none"> <li>(A) All hazardous constituents identified under paragraph (g)(2) of this section are listed in Table 1 of 264.94 and their concentrations are below those in Table 1; or</li> <li>(B) The facility has sought an alternate concentration limit under 264.94(b).</li> </ul> </li> </ul>				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 88	264.98(g)(6)		<p>If the facility so determines, pursuant to paragraph (f) of this section, it may demonstrate that the statistically significant difference of hazardous constituents is from a source other than a regulated unit or is from an error in sampling, analysis, or statistical evaluation, or natural variation in groundwater.</p> <p>The facility may make a demonstration in addition or in lieu of a permit modification under paragraph (g)(4) of this section. However, the facility is not relieved of the requirement to submit a permit modification unless the demonstration is approved. In making a demonstration, the facility must:</p> <ul style="list-style-type: none"> <li>(i) Within 7 days of the finding of contamination, notify the Agency that the facility intends to make a demonstration;</li> <li>(ii) Within 90 days, submit a report to demonstrate the source of contamination is other than a regulated unit, or resulted from an error;</li> <li>(iii) Within 90 days, submit an application for a permit modification to make any appropriate changes to detection monitoring program; and</li> <li>(iv) Continue to monitor.</li> </ul>				
SWMU 89	264.98(h)		<p>If the facility determines that the detection monitoring program no longer satisfies the requirements of this section, the facility must submit, within 90 days, a permit modification.</p>				
<b>COMPLIANCE MONITORING PROGRAM - 264.99</b>							

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 90	264.99(a)		The facility must monitor groundwater to determine whether regulated units comply with groundwater protection standard (264.92). The groundwater protection standard includes:				
SWMU 91	264.99(a)(1)		A list of hazardous constituents (264.93);				
SWMU 92	264.99(a)(2)		Concentration limits (264.94) for each of the hazardous constituents.				
SWMU 93	264.99(a)(3)		The compliance point (264.95); and				
SWMU 94	264.99(a)(4)		The compliance period (264.96).				
SWMU 95	264.99(b)		The facility must install a groundwater monitoring system at the compliance point (264.95). The system must comply with 264.97(a)(2), (b), and (c).				
SWMU 96	264.99(c)		The Agency will specify the sampling procedures and statistical methods consistent with 264.97(g) and (h).				
SWMU 97	264.99(c)(1)		The facility must conduct a sampling program for each hazardous constituent (264.97(g)).				
SWMU 98	264.99(c)(2)		The facility must record groundwater data as measured in form to determine statistical significance (264.97(h)) for the compliance period.				
SWMU 99	264.99(d)		The facility must determine whether there is statistically significant evidence of increased contamination for any hazardous constituent in the permit, pursuant to paragraph (a) of this section, at a frequency under paragraph (f) under this section.				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 100	264.99(d)(1)		In determining an increase in contamination, the facility must use the methods in the permit under 264.97(h).  The methods must compare data collected at the compliance point to a concentration limit (264.94).				
SWMU 101	264.99(d)(2)		The facility must determine whether there is an increase in contamination at the compliance point within a reasonable time after completion of sampling.  The Agency will specify that time period in the permit after considering the statistical and sampling tests.				
SWMU 102	264.99(e)		The facility must determine the groundwater flow rate and direction in the uppermost aquifer annually.				
SWMU 103	264.99(f)		The Agency will specify the frequencies for sampling and statistical testing to determine evidence of contamination in acc with 264.97(g).  A sequence of at least 4 samples from each well (background and compliance) must be collected at least semi-annually.				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_  
T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 104	264.99(g)		<p>The facility must analyze samples from the compliance point for all constituents in appendix IX of 264 annually to determine whether additional hazardous constituents are present in the uppermost aquifer and, if so, at what concentration, pursuant to 264.98(f).</p> <p>If additional appendix IX constituents are present, the facility may resample within 1 month and repeat the appendix IX analysis.</p> <p>If the second analysis confirms new constituents, the facility must report to the Agency within 7 days and add them to the monitoring list.</p> <p>If the facility chooses not to resample, the facility must report to the Agency initial analysis of constituents within 7 days and add them to the monitoring list.</p>				
SWMU 105	264.99(h)		If the facility determines, pursuant to paragraph (d) of this section, that any concentration limits (264.94) are being exceeded at the compliance point, the facility must:				
SWMU 106	264.99(h)(1)		Notify the Agency in writing within 7 days indicating what concentration limits have been exceeded.				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_



ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 107	264.99(h)(2)		Submit a permit modification application to establish a corrective action program (264.100) within 180 days, or within 90 days if an engineering study has been submitted under 264.98(h)(5). The application must include:  (i) A detailed description of corrective actions that will achieve compliance with the groundwater protection standard under paragraph (a) of this section; and  (ii) A groundwater monitoring program that will demonstrate the effectiveness of the corrective action. Such a groundwater monitoring program may be based on a compliance monitoring program developed to meet the requirements of this section.				
SWMU 108	264.99(i)		If the facility determines, pursuant to paragraph (d) of this section, that the concentration limits are being exceeded at the compliance point, the facility may demonstrate that a source other than a regulated unit, or an error in sampling, analysis, or statistical evaluation, or natural variation in groundwater caused the concentration limits to be exceeded. In making a demonstration, the facility must:				
SWMU 109	264.99(i)(1)		Within 7 days, notify the Agency that the facility intends to make a demonstration;				
SWMU 110	264.99(i)(2)		Within 90 days, submit a report to demonstrate a source other than the regulated unit caused the standard to be exceeded, or that the apparent noncompliance is due to error;				
SWMU 111	264.99(i)(3)		Within 90 days, submit an application for a permit modification to make any appropriate changes to the compliance monitoring program; and				
SWMU 112	264.99(i)(4)		Continue to monitor.				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 113	264.99(j)		If the facility determines that the compliance monitoring program no longer satisfies the requirements of this section, the facility must submit, within 90 days, a permit modification.				
<b>CORRECTIVE ACTION PROGRAM - 264.100</b>							
SWMU 114	264.100(a)		The facility must take corrective action to ensure that regulated units comply with groundwater protection standard (264.92). The groundwater protection standard includes:				
SWMU 115	264.100(a)(1)		A list of hazardous constituents (264.93);				
SWMU 116	264.100(a)(2)		Concentration limits (264.94) for each of the hazardous constituents.				
SWMU 117	264.100(a)(3)		The compliance point (264.95); and				
SWMU 118	264.100(a)(4)		The compliance period (264.96).				
SWMU 119	264.100(b)		The facility must implement a corrective action plan that prevents hazardous constituents from exceeding the concentration limits at the compliance point by removing the hazardous constituents or treating them in place. The permit will specify measures to be taken.				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 120	264.100(c)		The facility must begin corrective action within a reasonable time after the groundwater protection standard is exceeded. The Agency will specify that time period in the permit.  If the permit includes a corrective action program in addition to a compliance monitoring program, the permit will specify the commencement of the corrective action program and will operate in lieu of 264.99(i)(2).				
SWMU 121	264.100(d)		In conjunction with a corrective action program, the facility must establish and implement a groundwater monitoring program to demonstrate the effectiveness of the corrective action program.  Such a monitoring program may be based on the requirements of a compliance monitoring program (264.99) and must be as effective as that program in determining compliance with the groundwater protection standard (264.92) and in determining the success of a corrective action program under paragraph (e) of this section.				
SWMU 122	264.100(e)		In addition, the facility must conduct a corrective action program to remove or treat in place any hazardous constituents (264.93) that exceed concentration limits in groundwater (264.94):				
SWMU 123	264.100(e)(1)		Between the compliance point (264.95) and the downgradient boundary; and				
SWMU 124	264.100(e)(2)		Beyond the facility boundary, unless the facility demonstrates of inability to obtain permission to undertake such action.  The facility is not relieved of all responsibility to clean up an offsite migration where off-site access is denied.				
SWMU 125	264.100(e)(3)		Corrective action measures must be initiated and completed within a reasonable time.				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 126	264.100(e)(4)		Corrective action measures may be terminated once the concentration of hazardous constituents (264.93) is reduced to levels below the concentration limits (264.94)				
SWMU 127	264.100(f)		<p>The facility must continue corrective action measures during the compliance period to extent necessary to ensure that the groundwater protection standard is not exceeded.</p> <p>If the facility is conducting corrective action at the end of the compliance period, the facility must continue that corrective action for as long as necessary to achieve compliance with the groundwater protection standard.</p> <p>The facility may terminate corrective action measures beyond the active life (inc. Closure) if the facility can demonstrate, based on groundwater monitoring program under paragraph (d) of this section, that the groundwater protection standard (264.92) has not been exceeded for a period of 3 consecutive years.</p>				
SWMU 128	264.100(g)		The facility must report semi-annually the effectiveness of the corrective action plan.				
SWMU 129	264.100(h)		If the facility determines that the corrective action plan no longer satisfies the reqs of this section, the facility must, within 90 days, submit a permit modification.				
<b>CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS (SWMUs) - 264.101</b>							
SWMU 130	264.101(a)		A facility seeking a permit for TSD must institute corrective action for all releases of hazardous waste or HW constituents from any SWMU, regardless of time at which waste was placed in the unit.				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

ITEM #	FEDERAL REGULATIONS 40 CFR	STATE REGULATIONS OAC 252:205	GENERAL DESCRIPTION	INFO LOCATION	ADMIN. COMPLETE	TECHNICALLY COMPLETE	REMARKS
					YES/NO/NA	YES/NO/NA	
SWMU 131	264.101(b)		<p>Corrective action will be in the permit in accordance with this section and subpart of this part.</p> <p>The permit will contain the compliance schedules for such corrective action and financial assurances.</p>				
SWMU 132	164.101(c)		<p>The facility must implement corrective actions beyond the facility boundary as necessary, unless the facility demonstrates inability to obtain permission to undertake such action.</p> <p>The facility is not relieved of all responsibility to clean up an offsite migration where off-site access is denied.</p> <p>On-site measures to address such releases will be determined on a case-by-case basis.</p> <p>Assurances of financial responsibility for such corrective action must be provided.</p>				

Facility Name \_\_\_\_\_  
Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

Table 1  
 MAXIMUM CONCENTRATION OF CONSTITUENTS  
 FOR GROUNDWATER PROTECTION  
 (264.94)

Constituents	Max. Conc. (mg/L)
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Mercury	0.002
Selenium	0.01
Silver	0.05
Endrin *	0.0002
Lindane *	0.004
Methoxychlor	0.1
Toxaphene	0.005
2,4-D *	0.1
2,4,5-TP Silvex *	0.01

\* See chemical names in 40 CFR

Facility Name \_\_\_\_\_  
 Reference No. \_\_\_\_\_

A. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_

T. Reviewer's Initials \_\_\_\_\_ Tracking Date \_\_\_\_\_