



AHWMA/RCRA OPERATING PERMIT APPLICATION COMPLETENESS/TECHNICAL EVALUATION CHECKLIST

DISCLAIMER: This checklist is not an official ADEQ policy document. This checklist is a tool used by ADEQ permit writers to evaluate hazardous waste permit applications. The checklist is periodically revised by ADEQ, following the adoption of new regulatory requirements.

NOTE: An agency shall not base a licensing decision in whole or in part on a licensing requirement or condition that is not specifically authorized by statute, rule or state tribal gaming compact. A general grant of authority in statute does not constitute a basis for imposing a licensing requirement or condition unless a rule is made pursuant to that general grant of authority that specifically authorizes the requirement or condition. This section may be enforced in a private civil action and relief may be awarded against the state. The court may award reasonable attorney fees, damages and all fees associated with the license application to a party that prevails in an action against the state for a violation of this section. A state employee may not intentionally or knowingly violate this section. A violation of this section is cause for disciplinary action or dismissal pursuant to the agency's adopted personnel policy. This section does not abrogate the immunity provided by section 12-820.01 or 12-820.02.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION A. PART A GENERAL INFORMATION REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
A-1	Description of Activities Conducted which Require Facility to Obtain a Permit under the Resource Conservation and Recovery Act (RCRA), and Brief Description of Nature of the Business	270.13(a),(m)		
A-2	Name, Mailing Address, and Location of Facility for which the Application is Submitted, including a Topographic Map	270.13(b),(l)		
A-3	Up to Four Standard Industrial Classification Codes which Best Reflect the Products or Services Provided by the Facility	270.13(c)		
A-4	Operator/Owner's Name, Address, Telephone Number, and Ownership Status	270.13(d),(e)	Ownership status must include status as federal, state, private, public, or other entity.	
A-5	Facility is New, Existing, or Located on Indian Lands	270.13(f),(g)	Description must include information on whether this is a first or revised application with date of last signed permit application.	
A-6	Description of Processes to be Used for Treating, Storing, and Disposing of Hazardous Waste	270.13(i)	Description must include design capacity for these items.	
A-7	Specification of the Hazardous Wastes Listed or Designated Under 261	270.13(j)	Specifications must include estimate on quantity of waste to be treated, stored, or disposed of.	

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SECTION A. PART A GENERAL INFORMATION REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
A-8 Listing of all Permits or Construction Approvals Received or Applied for	270.13(k)	Permits include the following programs: Hazardous Waste Management under RCRA; Underground Injection Control under the Solid Waste Disposal Act; Prevention of Significant Deterioration, Nonattainment Program, and National Emissions Standards for Hazardous Pollutants under the Clean Air Act; ocean dumping permits under the Marine Protection Research and Sanctuaries Act; dredge and fill permits under Section 404 of the Clean Water Act; or other relevant environmental permits including state permits.		

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION B. FACILITY DESCRIPTION

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
B-1 General Description	270.14(b)(1)			
B-2 Topographic Map	270.14	Show a distance of 1,000 feet around the unit at a scale of 1 inch to not more than 200 feet (multiple maps may be submitted at this scale), and should be similar to Part A topographic map.		
B-2a General Requirements	270.14(b)(19)			
Scale and Date	270.14(b)(19)(i)	Other scales may be used if justified.		
The 100-Year Flood Plain Area	270.14(b)(19)(ii)			
Surface Waters	270.14(b)(19)(iii)			
Surrounding Land Use	270.14(b)(19)(iv)			
Wind Rose	270.14(b)(19)(v)			
Map Orientation	270.14(b)(19)(vi)			
Legal Boundaries	270.14(b)(19)(vii)			
Access Control	270.14(b)(19)(viii)			
Injection and Withdrawal Wells (On Site and Off Site)	270.14(b)(19)(ix)			
Buildings and Other Structures	270.14(b)(19)(x)	270.14(b)(19)(x) for example list.		
Drainage and Flood Control Barriers	270.14(b)(19)(xi)			
Location of the Treatment or Disposal Unit(s) and Decontamination Areas	270.14(b)(19)(xii)			
Location of Solid Waste Management Units	270.14(d)(1)(i)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION B. FACILITY DESCRIPTION

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
B-2b Additional Information on the Topographic Map for Land Disposal Facilities	270.14(c)(3)			
Uppermost Aquifer and Hydraulically Connected Aquifers Beneath Facility Property	270.14(c)(2)			
Groundwater Flow Direction	270.14(c)(2)			
Waste Management Areas	270.14(c)(3)			
Property Boundaries	270.14(c)(3)			
Point of Compliance Location	270.14(c)(3); 264.95	Point of compliance is defined in 264.95.		
Location of Groundwater Monitoring Wells	270.14(c)(3); 264.97			
Extent of any Groundwater Contaminant Plume	270.14(c)(4)(i)			
B-3 Facility Location Information	270.14(b)(11); 264.18			
B-3a Seismic Requirements	270.14(b)(11)(i), (ii); 264.18(a)	Seismic requirements applicable only to new facilities.		
Political Jurisdiction in which Facility is Proposed to be Located	270.14(b)(11)(i)			
Indication of Whether Facility is Listed in Appendix VI of 264 (New Facilities)	270.14(b)(11)(i)			
New Facility must be Located at Least 200 feet from a Fault which has had Displacement in Holocene Time	270.14(b)(11)(ii); 264.18(a)	If facility location is listed in Appendix VI of 264, this information is required.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION B. FACILITY DESCRIPTION

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
B-3b Flood Plain Requirements	270.14(b)(11)(iii), (iv); 264.18(b)			
Copy of Federal Insurance Administration or other Flood Map	270.14(b)(11)(iii)	Reference source used to determine whether facility is located in 100-year flood plain.		
B-3b(1) Demonstration that Facility is Designed, Constructed, Operated, and Maintained to Prevent Washout, or Detailed Description of Procedures to be Followed to Remove Hazardous Waste to Safety before Facility is Flooded	270.14(b)(11)(iv); 264.18(b)	Flood plain requirements applicable if facility is located in 100-year flood plain.		
B-3b(1)(a) Engineering Analysis to Indicate the Various Hydrodynamic and Hydrostatic Forces Expected to Result from the 100-Year Flood Plain	270.14(b)(11)(iv); 264.18(b)	Flood plain requirements applicable if facility is located in 100-year flood plain.		
Demonstration that no Adverse Effects will Result from Failure to Remove Waste by Providing:	270.14(b)(11)(iv); 264.18(b)(ii)	Flood plain requirements applicable if facility is located in 100-year flood plain.		
Volume and Physical and Chemical Characteristics of the Waste in the Facility	270.14(b)(11)(iv); 264.18(b)(ii)(A)	Flood plain requirements applicable if facility is located in 100-year flood plain.		
Concentration of Hazardous Constituents that Would Potentially Affect Surface Waters as a Result of Washout	270.14(b)(11)(iv); 264.18(b)(ii)(B)	Flood plain requirements applicable if facility is located in 100-year flood plain.		
Impact of such Concentration on Current or Potential uses of, and Water Quality Standards Established for, the Affected Surface Waters	270.14(b)(11)(iv); 264.18(b)(ii)(C)	Flood plain requirements applicable if facility is located in 100-year flood plain.		

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SECTION B. FACILITY DESCRIPTION				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
Impact of Hazardous Constituents on the Sediments of Affected Surface Waters, or the Soils of the 100-Year Flood Plain, that could Result from Washout	270.14(b)(11)(iv); 264.18(b)(ii)(D)	Flood plain requirements applicable if facility is located in 100-year flood plain.		
Plan and Schedule for Future Compliance	270.14(b)(11)(v)	Flood plain requirements applicable if facility is located in 100-year flood plain and not in compliance with 264.18(b).		
B-4 Traffic Patterns	270.14(b)(10)	Show turns across traffic lanes and stacking lanes, if appropriate.		
Estimate of Number and Types of Vehicles around the Facility	270.14(b)(10)			
Traffic Control Signs and Signals	270.14(b)(10)			
Road Surface Composition and Load-Bearing Capacity	270.14(b)(10)			

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION C. WASTE CHARACTERISTICS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
C-1 Chemical and Physical Analyses	270.14(b)(2); 264.13(a)	Data generated by testing the waste, published data on the waste, or data gathered from similar processes may be used.		
C-1a Containerized Waste	270.15(b)(1); 264.172	Demonstrate that waste is compatible with container construction materials.		
C-1b Waste in Tank Systems	270.16(a); 264.190(a); 264.191(b)(2); 264.192(a)(2)	Demonstrate that tank construction materials are compatible with waste stored in tank.		
C-1c Waste in Piles	270.18(a); 264.250(c)(1), (4)			
C-1d Landfilled Wastes	270.21(a) 264.13(c)(3); 264.314	Demonstrate that sorbent materials are non-biodegradable.		
C-1e Wastes Incinerated and Wastes used in Performance Tests	270.19(c); 270.62(b); 264.341			
C-1f Wastes to be Land Treated	270.20(b)(4); 264.271(a)(1), (2); 264.272; 264.276, Part 261 Appendix VIII	If food-chain crops will be grown in or on treatment zone, identify hazardous constituents reasonably expected to be in or derived from waste.		
C-1g Wastes in Miscellaneous Treatment Units	270.23(d)			
C-1h Wastes in Boilers and Industrial Furnaces	270.66(c); 266.102(b)			
C-1i Wastes on Drip Pads	270.26; 264.570			
C-2 Waste Analysis Plan	270.14(b)(3); 264.13(b),(c)			

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SECTION C. WASTE CHARACTERISTICS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
C-2a Parameters and Rationale	270.14(b)(3); 264.13(b)(1)			
C-2b Test Methods	270.14(b)(3); 264.13(b)(2)			
C-2c Sampling Methods	270.14(b)(3); 264.13(b)(3)	If a sampling method described in 261 Appendix I is not used, facility must provide detailed description of proposed method and demonstrate its equivalency.		
C-2d Frequency of Analyses	270.14(b)(3); 264.13(b)(4)			
C-2e Additional Requirements for Wastes Generated Off Site	270.14(b)(3); 264.13 (b)(5), (c); 264.73(b)	Describe statistical method used to determine a representative sample of incoming waste.		
C-2f Additional Requirements for Ignitable, Reactive, or Incompatible Wastes	270.14(b)(3); 264.13(b)(6); 264.17			
C-2g Additional Requirements Pertaining to BIF Facilities	270.22; 266.102(e)(6)(ii) (C),(e)(6)(iii)			
C-3 Waste Analysis Requirements Pertaining to Land Disposal Restrictions	270.14(b)(3); 264.13; 264.73; Part 268			
C-3a Waste Analysis	270.14(a); 264.13(a)(1); 268.1; 268.7; 268.9; 268.32 - 268.37; 268.41 - 268.43	Waste that was newly identified or newly listed as hazardous after 11/08/84 for which the U.S. Environmental Protection Agency has not promulgated land disposal prohibitions or treatment standards are not subject to land disposal provisions.		
C-3a(1) Spent Solvent and Dioxin Wastes	270.14(a); 264.13(a)(1); 268.2(f)(1); 268.7; 268.30; 268.31			

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SECTION C. WASTE CHARACTERISTICS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
C-3a(2) California List Wastes	270.14(a); 264.13(a)(1); 268.7; 268.32; 268.42(a); RCRA Section 3004(d)			
C-3a(3) Listed Wastes	270.14(a); 264.13(a)(1); 268.7; 268.33 - 268.36; 268.41 - 268.43	Arsenic-containing nonwastewater may use the extraction procedure (EP) toxicity test to determine compliance with treatment standards.		
C-3a(4) Characteristic Wastes	270.14(a); 264.13(a)(1); 268.7, 268.9; 268.37; Part 268 Appendix I, IX	Characteristic D008 lead nonwastewater and D004 arsenic nonwastewater may use EP toxicity test to determine compliance with treatment standards.		
C-3a(5) Radioactive Mixed Waste	270.14(a); 264.13(a); 268.7; 268.35(c),(d); 268.36(d); 268.42(d)	Hazardous debris containing radioactive waste must comply with treatment standards specified in 268.45.		
C-3a(6) Leachates	270.14(a); 264.13(a); 268.35(a)	Leachate that originates from newly identified waste is not coded as F039 waste, but is labeled with newly listed waste code from which it is derived.		
C-3a(7) Lab Packs	270.14(a); 264.13(a); 268.7(a)(7),(8); 268.42(c); Part 268 Appendix IV	Lab packs containing California list polychlorinated biphenyls (PCB) or dioxins must be treated according to special incineration requirements detailed in 268.42(a).		
C-3a(8) Contaminated Debris	270.13(n); 268.2(g); 268.7; 268.9; 268.36; 268.45			

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SECTION C. WASTE CHARACTERISTICS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
C-3a(9) Waste Mixtures and Wastes with Overlapping Requirements	270.14(a); 264.13(a)(1); 268.7; 268.9; 268.41; 268.43; 268.45(a)	Waste that carries more than one characteristic or listed waste code must be treated to the most stringent treatment requirement for each hazardous waste constituent of concern.		
C-3a(10) Dilution and Aggregation of Wastes	270.14(a); 268.3			
C-3b Notification, Certification, and Recordkeeping Requirements	270.14(a); 264.13; 264.73; 268.7; 268.9(d)			
C-3b(1) Retention of Generator Notices and Certifications	270.14(a); 264.13; 268.7(a)			
C-3b(2) Notification and Certification Requirements for Treatment Facilities	270.14(a); 264.13; 268.7(b)			
C-3b(3) Notification and Certification Requirements for Land Disposal Facilities	270.14(a); 264.13; 268.7(c)(1)			
C-3b(4) Wastes Shipped to Subtitle C Facilities	270.14(a); 264.13; 268.7(a),(b)(6)			
C-3b(5) Wastes Shipped to Subtitle D Facilities	270.14(a); 264.13; 268.7(d); 268.9(d)			
C-3b(6) Recyclable Materials	270.14(a); 264.13; 268.7(b)(7)			
C-3b(7) Recordkeeping	270.14(a); 264.13; 264.73; 268.7(a)(5),(a)(6),(a)(7), (d)	Recycling facilities must keep records of name and location of each entity receiving hazardous waste-derived product.		
C-3c Requirement Pertaining to the Storage of Restricted Wastes	270.14(a); 264.73; 268.50			
C-3c(1) Restricted Wastes Stored in Containers	270.14(a); 264.73; 268.50(a)(2)(i)			

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SECTION C. WASTE CHARACTERISTICS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
C-3c(2) Restricted Wastes Stored in Tanks	270.14(a); 264.73; 268.50(a)(2)(ii)			
C-3c(3) Storage of Liquid PCB Wastes	270.14(a); 264.73; 268.50(f)			
C-3d Exemptions, Extensions, and Variances to Land Disposal Restrictions				
C-3d(1) Case-by-Case Extensions to an Effective Date	270.14(b)(21); 268.5			
C-3d(2) Exemption from Prohibition	270.14(b)(21); 268.6			
C-3d(3) Variance from a Treatment Standard	270.14(a); 264.73; 268.7; 268.44			
C-3d(4) Requirements for Surface Impoundments Exempted from Land Disposal Restrictions	270.14(a); 264.13(b)(7); 268.4; 268.14			
C-3d(4)(a) Exemption for Newly Identified or Listed Wastes	270.14(a); 264.13; 268.14	If owner/operator continues to treat newly listed or characteristic hazardous waste after 48 months from promulgation of new waste listing or characteristic, surface impoundment must be in compliance with 268.4.		
C-3d(4)(b) Treatment of Wastes	270.14(a); 264.13; 268.4(a)(1),(b)			
C-3d(4)(c) Sampling and Testing	270.14(a); 264.13(b)(6); 268.4(a)(2)(i),(iv)			
C-3d(4)(d) Annual Removal of Residues	270.14(a); 264.13(b)(7)(iii); 268.4(a)(2)(ii)			
C-3d(4)(e) Design Requirements	270.14(a); 264.13; 268.4(a)(3),(4)			

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - CONTAINERS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-1 Containers	270.15; 264.170			
D-1a Containers with Free Liquids	270.15; 264.175(a),(b)	Containers storing waste with free liquids must meet secondary containment requirements of 264.175(b).		
D-1a(1) Description of Containers	270.14(b)(1); 264.171,172	Specify numbers of containers, sizes, and specifications.		
D-1a(2) Container Management Practices	270.14(a); 264.173	Containers must be kept closed and must not be handled in any manner which could cause them to rupture or leak. Specify aisle space and stacking height.		
D-1a(3) Secondary Containment System Design and Operation	270.15(a)(1); 264.175(a),(d)	Provide detailed design and profile drawings showing container storage areas.		
D-1a(3)(a) Requirement for the Base or Liner to Contain Liquids	270.15; 264.175(b)(1)	Demonstrate that base is impervious to waste stored and precipitation.		
D-1a(3)(b) Containment System Drainage	270.15(a)(2); 264.175(b)(2)	Containment system must be designed and operated to remove liquids resulting from leaks, spills, or precipitation.		
D-1a(3)(c) Containment System Capacity	270.15(a)(3); 264.175(b)(3)	Containment system must have capacity to hold 10 percent of container volume or volume of the largest container, whichever is greater.		
D-1a(3)(d) Control of Runon	270.15(a)(4); 264.175(b)(4)	Runon from storm water must be prevented unless containment system has sufficient excess capacity.		
D-1a(3)(e) Removal of Liquids from Containment System	270.15(a)(5); 264.175(b)(5)	Accumulated liquids must be removed in timely manner to prevent containment system from overflowing.		
D-1b Containers without Free Liquids				
D-1b(1) Test for Free Liquids	270.15(b)(1)	Documentation that waste does not contain free liquids must be provided by test results or other information.		

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SECTION D. PROCESS INFORMATION - CONTAINERS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-1b(2) Description of Containers	270.14(a); 264.171; 264.172	Describe numbers, sizes, and specifications of containers.		
D-1b(3) Container Management Practices	270.14(a); 264.173	Same comment as D-1a(2).		
D-1b(4) Container Storage Area Drainage	270.15(b)(2); 264.175(c)	Same comment as D-1a(3)(b).		

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SECTION D. PROCESS INFORMATION - TANKS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-2 Tank Systems	270.16; 264.191 - 194			
D-2a Tank Systems Descriptions	270.14(b)(1)	Describe type (aboveground, underground) and specific location of each tank.		
D-2a(1) Dimensions and Capacity of each Tank	270.16(b)			
D-2a(2) Description of Feed Systems, Safety Cutoff, Bypass Systems, and Pressure Controls	270.16(c); 264.194(b)			
D-2a(3) Diagram of Piping, Instrumentation, and Process Flow	270.16(d)			
D-2a(4) Ignitable, Reactive, and Incompatible Wastes	270.16(j); 264.17(b); 264.198,199	Demonstrate that waste is stored or treated in a way that protects against ignition or reaction.		
D-2b Existing Tank Systems				
D-2b(1) Assessment of Existing Tank System's Integrity	270.16(a); 264.191	A written tank assessment must be certified by an independent, qualified, registered professional engineer.		
D-2c New Tank System				
D-2c(1) Assessment of New Tank System's Integrity	270.16(a),(e); 264.192(a)	A written tank assessment must be certified by an independent, qualified, registered professional engineer.		
D-2c(2) Description of Tank System Installation and Testing Plans and Procedures	270.16(f); 264.192(b) - (e)	A new tank installation must be inspected by an independent, qualified, installation inspector or registered professional engineer.		
D-2d Containment and Detection of Releases	270.16(g); 264.193	Leak detection system must be capable of detecting leaks within 24 hours.		

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SECTION D. PROCESS INFORMATION - TANKS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-2d(1) Plans and Description of the Design, Construction, and Operation of the Secondary Containment System	270.16(g); 264.193(b) - (f)			
D-2d(1)(a) Tank Age Determination	270.16(g); 264.193(a)	Age of each tank must be accurately determined to ascertain when secondary containment requirements apply.		
D-2d(1)(b) Requirements for Secondary Containment and Leak Detection	270.16(g); 264.193(b),(c); 264.1101(b)(3)(iii)	A detailed description of the construction, installation, and operation of the secondary containment system is required.		
D-2d(1)(c) Requirements for External Liner, Vault, Double-walled Tank or Equivalent Device	270.16(g); 264.193(d),(e)	Secondary containment must consist of liner, vault, double-walled tank, or equivalent device approved by regional administrator.		
D-2d(1)(d) Secondary Containment and Leak Detection Requirements for Ancillary Equipment	270.16(g); 264.193(f)	Secondary containment is required for ancillary equipment except as provided in 264.193(f).		
D-2d(1)(e) Containment Buildings Used as Secondary Containment for Tank Systems	270.16(g); 264.1101(b)(3)(iii)	A containment building can serve as secondary containment for a tank system provided it meets requirements of 264.193(b),(c)(1&2),(d)(1).		
D-2d(2) Requirements for Tank Systems until Secondary Containment is Implemented	270.16(h); 264.193(i)	Annual leak tests are required until secondary containment is provided.		
D-2d(3) Variance from Secondary Containment Requirements	270.16(h); 264.193(g)			
D-2d(3)(a) Variance Based on a Demonstration of Equivalent Protection of Groundwater and Surface Water	270.16(h)(1); 264.193(g)(1),(h)	Detailed plans and engineering and hydrogeologic reports are required to demonstrate equivalent protection of groundwater and surface water.		

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SECTION D. PROCESS INFORMATION - TANKS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-2d(3)(b) Variance Based on a Demonstration of No Substantial Present or Potential Hazard	270.16(h)(2); 264.193(g)(2),(h)	Provide detailed assessment of substantial present or potential hazards posed to human health or the environment, should a release enter the environment.		
D-2d(3)(c) Exemption Based on No Free Liquids and Location Inside a Building	270.16(h); 264.190(a)	Demonstrate that tanks used to treat or store hazardous waste contain no free liquid as defined by Paint Filter Test (SW-846 Method 9095).		
D-2e Controls and Practices to Prevent Spills and Overflows	270.16(i); 264.194(a),(b); 264.195	Provide detailed description of controls and practices used to prevent spills and overflows.		

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SECTION D. PROCESS INFORMATION - WASTE PILES

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3 Waste Piles	270.18; 264.250 - 259			
D-3a List of Wastes	270.18(a)	List all hazardous waste to be placed in waste piles.		
D-3b Liner Exemption	270.18(b)			
D-3b(1) Enclosed Dry Piles	270.18(b); 264.250(c)	Demonstrate that neither runoff, nor leachate is generated from the pile.		
D-3b(1)(a) Protection from Precipitation	270.18(b); 264.250(c)	Demonstrate that pile is inside or under structure that provides complete protection from precipitation.		
D-3b(1)(b) Free Liquids	270.18(b); 264.250(c)(1)	Demonstrate that neither liquids, nor materials containing free liquids are placed in the pile.		
D-3b(1)(c) Runon Protection	270.18(b); 264.250(c)(2)	Demonstrate that pile is protected from surface water runon.		
D-3b(1)(d) Wind Dispersal Control	270.18(b); 264.250(c)(3)	Demonstrate that pile design and operation controls wind dispersal of waste.		
D-3b(1)(e) Leachate Generation	270.18(b); 264.250(c)(4)	Demonstrate that pile will not generate leachate through decomposition or other reactions.		
D-3b(2) Exemption for Monofills	270.18(b); 264.251(e)	This exemption applies only to waste generated from foundry furnace emission controls or metal casting molding sand that are not hazardous waste for reasons other than toxicity characteristics.		
D-3b(3) Alternate Design/No Migration	270.18(c)(1); 264.251(b)	This exemption from liner requirements is based on documenting that design, operating practices, and local aspects will prevent migration of hazardous constituents into groundwater or surface water in the future.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - WASTE PILES

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3b(4) Exemption Based on Alternative Design and Location	270.18(c)(1); 264.251(d)	Document that alternative design and operating practices, together with location characteristics, will prevent migration of any hazardous constituent into groundwater or surface water at least as effectively as a double liner with leachate detection system, and will allow detection of hazardous constituents through the top liner as least as effectively.		
D-3b(5) Exemption for Replacement Waste Piles	270.18(c); 264.251(f)	Demonstrate (1) that existing unit was constructed in compliance with design standards of Sections 3004(o)(1)(A)(i) and 3004(o)(5) of Resource Conservation and Recovery Act, and (2) there is no reason to believe that liner is not functioning as designed.		
D-3c Liner System	270.18(c)(1); 264.251(a)(1)(i),(c)	Describe liner system and demonstrate that flow of liquids through liner will be prevented.		
D-3c(1) Liner Description	270.18(c)(1); 264.251(a)(1)(i),(c)	Describe and draw liner system to demonstrate that any flow of liquids through the liner will be prevented.		
D-3c(1)(a) Synthetic Liners	270.18(c)(1); 264.251(a)(1),(c) (1)	Describe type, thickness, material, and brand name and manufacturer of liner.		
D-3c(1)(b) Soil Liner	270.18(c)(1); 264.251(a),(c)(1)(i) (B)	Describe bottom composite liner including its classification, thickness, and hydraulic conductivity.		
D-3c(2) Liner Location Relative to High Water Table	270.18(c)(1); 264.251(a)(1)(i)	Provide data showing seasonal fluctuations in depth to water table and the location of seasonal high water table in relation to liner system.		

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SECTION D. PROCESS INFORMATION - WASTE PILES

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3c(3) Calculation of Required Soil Liner Thickness	270.18(c)(1); 264.251(a)(1)(i)	Calculations using either numerical simulation techniques (unsaturated flow conditions) or Darcy Law-derived transit time equations (saturated flow conditions) must be provided.		
D-3c(4) Liner Strength Requirements	270.18(c)(1); 264.251(a)(1)(i)	Provide calculations showing minimum strength requirements for liners considering pressure gradients, installation and operating stresses, and climatic change stresses.		
D-3c(5) Liner Strength Demonstration	270.18(c)(1); 264.251(a)(1)(i)	Demonstrate that liner exceeds minimum strength requirements.		
D-3c(6) Liner/Waste Compatibility Testing Results	270.18(c)(1); 264.251(a)(1)(i)	Demonstrate that liner material is compatible with both waste and leachate.		
D-3c(7) Liner Installation	270.18(c)(1); 264.251(a)(1)(i)	Describe procedures for installing liner.		
D-3c(7)(a) Synthetic Liner Seaming	270.18(c)(1); 264.251(a)(1)(i)	Describe techniques to be used to bond membrane liner seams and the strength and chemical compatibility of seams with waste and leachate.		
D-3c(7)(b) Soil Liner Compaction	270.18(c)(1); 264.251(a)(1)(i)	Describe procedures for installing soil liner and compacting liner to achieve desired permeability. Include maximum height of lifts to be placed.		
D-3c(7)(c) Installation Inspection/testing Programs	270.18(c)(1); 264.254(a)	Describe quality assurance/quality control procedures to be used during liner installation.		
D-3c(8) Liner Coverage	270.18(c)(1); 264.251(a)(1)(iii)	Demonstrate that liner will be installed to cover all surrounding earth likely to be in contact with waste or leachate.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - WASTE PILES

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3c(9) Liner Exposure Prevention	270.18(c)(1); 264.251(a)(1)(i)	Demonstrate that either the liner is protected from, or is resistant to, exposure to climatic conditions.		
D-3c(10) Synthetic Liner Bedding	270.18(c)(1); 264.251(a)(1)(i)	Demonstrate that sufficient bedding will be provided above and below liner to prevent rupture during installation and operation.		
D-3d Liner Foundation Report				
D-3d(1) Liner Foundation Design Description	270.18(c)(1); 264.251(a)(1)(ii)	Describe liner foundation design and materials of construction and ability to withstand expected static and dynamic loadings.		
D-3d(2) Subsurface Exploration Data	270.18(c)(1); 264.251(a)(1)(ii)	Verify engineering characteristics of foundation materials through subsurface exploration.		
D-3d(3) Laboratory Testing Data	270.18(c)(1); 264.251(a)(1)(ii)			
D-3d(4) Engineering Analyses	270.18(c)(1); 264.251(a)(1)(ii)			
D-3d(4)(a) Settlement Potential	270.18(c)(1); 264.251(a)(1)(ii)			
D-3d(4)(b) Bearing Capacity and Stability	270.18(c)(1); 264.251(a)(1)(ii)			
D-3d(4)(c) Potential for Bottom Heave or Blow-Out	270.18(c)(1); 264.251(a)(1)(ii)			
D-3d(4)(d) Construction and Operational Loading	270.18(c)(1); 264.251(a)(1)(ii)			
D-3d(5) Foundation Installation Procedures	270.18(c)(1); 264.251(a)(1)(ii)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - WASTE PILES

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3d(6) Foundation Installation Inspection Program	270.18(c)(1); 264.251(a)(1)(ii)	Describe quality assurance/quality control procedures to be used during foundation installation.		
D-3e Leachate Collection and Removal System	270.18(c); 264.251(a)(2),(c) (2)	Describe design and operation of system to collect and remove leachate from new portions of existing waste piles and from new waste piles.		
D-3e(1) Upper Leachate Collection and Removal System	270.18(c)(1); 264.251(a)(2),(c) (2)	Describe design and operating conditions to ensure that leachate depth over the liner does not exceed 1 foot.		
D-3e(2) Leachate Detection System	270.18(c)(1); 264.251(a)(2),(c) (3)	Describe design and operating features of leachate detection system.		
D-3e(2)(a) Grading and Drainage	270.18(c)(1); 264.251(a)(2); 264.221(c)(2)(ii)	Demonstrate that leak detection system design meets or exceeds specifications described in referenced regulations.		
D-3e(3) Chemical Resistance	270.18(c); 264.251(a)(2)(i)(A) (c)(3); 264.251(c)(3)	Demonstrate that all leachate collection and removal system components are chemically resistant to waste managed in the pile and the leachate expected to be generated.		
D-3e(4) Strength of Materials	270.18(c); 264.251(a)(2)(i)(B); 264.251(c)(3)	Demonstrate that system components are of sufficient strength and thickness to prevent collapse under expected static and dynamic loadings.		
D-3e(5) Prevention of Clogging	270.18(c); 264.251(a)(2)(ii); 264.251(c)(3)	Demonstrate that leachate collection and removal system's design and operation will prevent clogging throughout active life and post-closure period of waste pile.		
D-3e(6) Installation	270.18(c); 264.251(a)(2)	Describe installation methods and construction quality assurance/quality control procedures.		

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SECTION D. PROCESS INFORMATION - WASTE PILES

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3e(7) Maintenance	270.18(c); 264.251(a)(2)	Describe anticipated maintenance activities that will be used to assure proper leachate management system operation throughout pile's expected active life.		
D-3e(8) Liquid Removal	270.18(c); 264.251(c)(3)	Describe leachate removal system, including sumps and other equipment, and fate of the collected leachate.		
D-3e(9) Location Relative to Water Table	270.18(c); 264.251(c)(4)	Demonstrate that operation of leak detection system will not be adversely affected by presence of groundwater.		
D-3f Action Leakage Rate	270.18(c)(1)(v); 264.252	Action leakage rate must be approved by regional administrator based on system design.		
D-3f(1) Determination of Action Leakage Rate	270.18(c)(1)(v); 264.252(a)	Determine action leakage rate for waste pile units subject to 264.251(c),(d). Include adequate safety margin to allow for uncertainties in design, construction, operation, and location of leak detection system, waste and leachate characteristics, sources of other liquids in system, and proposed response actions.		
D-3f(2) Monitoring of Leakage	270.18(c)(1)(v); 264.252(b)	Weekly leachate flow rate data must be converted to average daily flow rate.		
D-3g Leakage Response Action Plan	270.18(c)(1)(v); 264.253			
D-3g(1) Response Action	270.18(c)(1)(v); 264.253(a)	Provide response action plan to describe actions to be taken if flow rate into leak detection system exceeds action leakage rate.		
D-3g(2) Leak and/or Remedial Determinations	270.18(c)(1)(v); 264.253(b),(c)	Response action plan must describe actions to be taken to comply with 264.223(b),(c) if the action leakage rate is exceeded.		

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SECTION D. PROCESS INFORMATION - WASTE PILES

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3g(3) Notifications	270.18(c)(1)(v); 264.253(b)	Response action plan must indicate that regional administrator will be (1) notified in writing within 7 days of determining that action leakage rate has been exceeded, (2) provided with preliminary assessment and action plan within 14 days of initial determination that action leakage rate has been exceeded, and (3) provided with status report within 30 days after original notification that action leakage rate has been exceeded. Regional administrator must receive monthly status reports for as long as flow rate exceeds action leakage rate.		
D-3h Runon Control System	270.18(c)(2); 264.251(g)	Describe system that will be used to prevent runon into active portions of piles.		
D-3h(1) Calculation of Peak Flow	270.18(c)(2); 264.251(g)	Identify peak surface water flow expected to result from 25-year design storm. Describe data sources and methods used to make peak flow calculation.		
D-3h(2) Design and Performance	270.18(c)(2); 264.251(g)	Demonstrate that runon control system design will prevent runon from reaching active portions of unit.		
D-3h(3) Construction	270.18(c)(2); 264.251(g)	Describe runon control system construction methods and any construction quality assurance/quality control procedures.		
D-3h(4) Maintenance	270.18(c)(2); 264.251(g)	Describe any maintenance activities required to assure continued proper runon system operation throughout unit's active life.		
D-3i Runoff Control System	270.18(c)(3); 264.251(h)	Describe the runoff control system to be used to collect and control runoff from active portions.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - WASTE PILES**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3i(1) Calculation of Peak Flow	270.18(c)(3); 264.251(h)	Identify the total runoff volume expected to result from a 24-hour, 25-year storm, and include data sources and methods used to make peak flow calculation.		
D-3i(2) Design and Performance	270.18(c)(3); 264.251(h)	Demonstrate that system has sufficient capacity to collect and hold total runoff volume calculated in D-3i(1).		
D-3i(3) Construction	270.18(c)(3); 264.251(h)	Describe runoff system construction methods and any construction quality assurance/quality control procedures.		
D-3i(4) Maintenance	270.18(c)(3); 264.251(h)	Describe any maintenance activities required to assure continued proper runoff system operation throughout unit's active life.		
D-3j Management of Collection and Holding Units	270.18(c)(4); 264.251(i)	Describe how collection and holding facilities will be managed to maintain system design capacity.		
D-3k Control of Wind Dispersal	270.18(c)(5); 264.251(j)	Describe how pile is covered or otherwise managed to control wind dispersal.		
D-3l Groundwater Monitoring Exemption	270.18(b); 264.90(b)(2)	To receive exemption from groundwater monitoring requirements of Subpart F, conditions specified in D-3l(1) through D-3l(7) must be met.		
D-3l(1) Engineered Structure	270.18(b); 264.90(b)(2)(i)	Provide design data showing that unit is engineered structure.		
D-3l(2) No Liquid Wastes	270.18(b); 264.90(b)(2)(ii)	Describe procedures for ensuring that no liquid waste or waste containing free liquids will be received by, or contained in, unit.		

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SECTION D. PROCESS INFORMATION - WASTE PILES

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3l(3) Exclusion of Liquids	270.18(b); 264.90(b)(2)(iii)	Demonstrate how liquids, precipitation, and other runoff will be excluded from unit.		
D-3l(4) Containment System	270.18(b); 264.90(b)(2)(iv)	Describe containment system (both inner and outer layers) that will enclose waste.		
D-3l(5) Leak Detection System	270.18(b); 264.90(b)(2)(v)	Describe design and operating data demonstrating leak detection system built into each containment layer.		
D-3l(6) Operation of Leak Detection System	270.18(b); 264.90(b)(2)(vi)	Demonstrate means for ensuring continuing operation and maintenance of leak detection systems during active life of unit and closure and post-closure care periods.		
D-3(7) No Migration	270.18(b); 264.90(b)(2)(vii)	Demonstrate to reasonable degree of certainty that unit will not allow hazardous constituents to migrate beyond outer layer of containment system prior to end of post-closure care period.		
D-3m Treatment Within the Pile	270.18(e)	If any treatment is conducted in pile, provide descriptions specified in D-3m(1) through D-3m(3).		
D-3m(1) Treatment Process Description	270.18(e)	Describe the process by which wastes are treated and the effect of the treatment on the wastes.		
D-3m(2) Equipment Used	270.18(e)	Describe any equipment or other materials required to initiate or promote treatment.		
D-3m(3) Residuals Description	270.18(e)	Describe nature and quantity of waste remaining in pile after treatment is complete.		

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SECTION D. PROCESS INFORMATION - WASTE PILES				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-3n	Special Waste Management Plan for Piles Containing Wastes F020, F021, F022, F023, F026, and F027	270.18(i); 264.259	If waste pile is not enclosed, provide plan describing how pile will be designed, constructed, operated, and maintained in order to protect human health and environment.	
D-3n(1)	Waste Description	270.18(i)(1); 264.259(a)(1)	Identify volume, physical, and chemical characteristics of waste, including potential to migrate through soil or volatilize or escape into atmosphere.	
D-3n(2)	Soil Description	270.18(i)(2); 264.259(a)(2)	Describe attenuative properties of underlying and surrounding soils or other materials.	
D-3n(3)	Mobilizing Properties	270.18(i)(3); 264.259(a)(3)	Describe mobilizing properties of other materials codisposed of with this waste.	
D-3n(4)	Additional Management Techniques	270.18(i)(4); 264.259(a)(4)	Document effectiveness of additional treatment, design, operating, or monitoring techniques.	
D-3o	Construction Quality Assurance Program	270.18(c)(iv); 264.19	Provide written construction quality assurance program to comply with regulations found in 264.19.	

Notes:

^a Considerations in addition to the requirements presented in the regulations.

^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.

^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

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SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4	Surface Impoundments			
D-4a	List of Wastes	270.17(a)	Provide list of all hazardous waste placed, or to be placed, in surface impoundments.	
D-4b	Liner System Exemption Requests	270.17(b)		
D-4b(1)	Exemption Based on Existing Portion	270.17(b)(1); 264.221(c)	Existing portions of surface impoundments with waste in place on November 8, 1994, and having only vertical expansion are exempted from liner system requirements. New units, lateral expansion of existing units, and replacement units at existing facilities are not exempt. Provide plan indicating limits of existing portions.	
D-4b(2)	Exemption Based on Alternative Design and Location	270.17(b)(1); 264.221(d)		
D-4b(3)	Exemption for Replacement Surface Impoundments	270.17(b); 264.221(f)		
D-4c	Liner System, General Items	270.17(b)(1)	Provides discussion of the following items that apply to liner system as a whole.	
D-4c(1)	Liner System Description	270.17(b)(1)	Provide detailed description of liner system, demonstrating that any flow of liquids into and through liners will be prevented. The liner system includes liner foundation, bottom composite liner, leachate detection system, top synthetic liner, and any protective layer placed to protect top synthetic liner.	
D-4c(2)	Liner System Location Relative to High Water Table	270.17(b)(1), (3); 264.221(a)	Provide geological cross sections showing groundwater levels with seasonal fluctuations and liner foundation elevations.	

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Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4c(3) Load on Liner System	270.17(b)(1); 264.221(a)(1),(b)	Provide results of calculations defining maximum loads or stresses that will be placed on liner system.		
D-4c(4) Liner System Coverage	270.17(b)(1); 264.221(a)(1), (b)	Demonstrate that liner system will be installed to cover all surrounding earth likely to be in contact with waste or leachate.		
D-4c(5) Liner System Exposure Prevention	270.17(b)(1); 264.221(a)(1), (b)	Demonstrate that liner system will not be exposed to elements, or that if exposed, exposure will not result in unacceptable degradation of system.		
D-4d Liner System Foundation				
D-4d(1) Foundation Description	270.17(b)(1); 264.221(a)(2)	Describe foundation for liner system, including materials, and indicate bearing elevations and any load-bearing embankments placed to support liner system.		
D-4d(2) Subsurface Exploration Data	270.17(b)(1); 264.221(a)(2)	The engineering characteristics of liner system foundation materials should be verified through subsurface explorations. Provide information to fully describe these efforts.		
D-4d(3) Laboratory Testing Data	270.17(b)(1); 264.221(a)(2)	Provide index testing results to classify site materials and lab test data to evaluate engineering properties of foundation materials. Provide references to standard test procedures.		
D-4d(4) Engineering Analyses	270.17(b)(1); 264.221(a)(2)	Provide engineering analyses based on subsurface exploration and laboratory testing data. Include discussion of methods used, assumptions, copies of calculations, and appropriate references.		

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Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4d(4)(a) Settlement Potential	270.17(b)(1); 264.221(a)(2)	Provide estimates of total and differential settlement of liner system foundation.		
D-4d(4)(b) Bearing Capacity	270.17(b)(1); 264.221(a)(2)	Provide analysis of allowable bearing capacity of liner system foundation.		
D-4d(4)(c) Potential for Excess Hydrostatic or Gas Pressure	270.17(b)(1); 264.221(a)(2)	Provide estimates of potential or bottom heave or blow-out of liner system or line foundation due to unequal hydrostatic or gas pressures.		
D-4e Liner System, Liners				
D-4e(1) Synthetic Liners	270.17(b)(1); 264.221(a),(c)	For each synthetic liner in system or under consideration, provide the following general information: thickness; type; material; brand name; and manufacturer.		
D-4e(1)(a) Synthetic Liner Compatibility Data	270.17(b)(1); 264.221(a)(1)	Provide summary and discussion of test results and conclusions as to suitability of synthetic liner based on liner/waste compatibility testing.		
D-4e(1)(b) Synthetic Liner Strength	270.17(b)(1); 264.221(a)(1)	Provide data showing that synthetic liners, including seams, have sufficient strength after exposure to waste and waste leachate.		
D-4e(1)(c) Synthetic Liner Bedding	270.17(b)(1); 264.221(a)(2)	Demonstrate that sufficient bedding will be provided above and below the synthetic liners to prevent rupture during installation and operation. Synthetic membrane of bottom composite liner should be placed directly on soil portion.		
D-4e(2) Soil Liners	270.17(b)(1); 264.221(a); (c)(1)	Describe soil portion of bottom composite liner, including classification, thickness, hydraulic conductivity, and material specifications.		

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SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4e(2)(a) Material Testing Data	270.17(b)(1); 264.221(c)	Provide complete results for index tests, laboratory and/or in situ permeability tests, strength tests, consolidation tests, and shrink-swell properties of soil liner material. Discuss potential for dispersion and piping of soil due to flow of liquid through soil liner layer.		
D-4e(2)(b) Soil Liner Compatibility Data	270.17(b)(1); 264.221(a)(1)	Provide complete results of permeability testing of soil liner material using representative of leachate from surface impoundment.		
D-4e(2)(c) Soil Liner Strength	270.17(b)(1); 264.221(a)(1)	Demonstrate that soil liner has sufficient strength to support loads/stresses computed in item D-4c(3).		
D-4f Liner System, Leachate Detection System	270.17(b)(1); 264.221(c)(2)			
D-4f(1) Systems Operation and Design	270.17(b)(1); 264.221(c)(2),(4)	Describe design features of leachate detection system and how system will function to detect any leakage through either liner in timely manner.		
D-4f(2) Drainage Material	270.17(b)(1); 264.221(c)(2)(ii)	Describe leachate detection system drainage material.		
D-4f(3) Grading and Drainage	270.17(b)(1); 264.221(c)(2)	Indicate slopes of leachate detection system and provide contour plan for system along with plan showing layout and spacing of piping system and any sumps, pumps, etc. Demonstrate that leak detection system is appropriately graded to assure that leakage at any point in liner system is detected in timely manner.		
D-4f(4) System Compatibility	270.17(b)(1); 264.221(c)(2)(iii)			
D-4f(5) System Strength				

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4f(5)(a) Stability of Drainage Layers	270.17(b)(1); 264.221(c)(2)(iii)	Demonstrate that drainage layer of leachate detection system has sufficient soil-bearing capacity to support loads. Provide calculations showing that drainage layer placed on sloped surfaces of surface impoundment or foundations will be stable during construction.		
D-4f(5)(b) Strength of Piping	270.17(b)(1); 264.221(c)(2)(iii)	Demonstrate that pipes used in piping systems have sufficient strength to support loads as computed in item D-4c(3).		
D-4f(6) Prevention of Clogging	270.17(b)(1); 264.221(c)(2)(iv)			
D-4f(7) Liquid Removal	270.17(b)(1); 264.221(c)(2)(v), (c)(3)	Indicate fate of collected leachate, which is considered hazardous waste.		
D-4f(8) Location Relative to Water Table	270.17(b)(3); 264.221(c)(4)			
D-4g Liner System, Construction and Maintenance				
D-4g(1) Material Specifications	270.17(b)(1); 264.221(a)			
D-4g(1)(a) Synthetic Liners	270.17(b)(1); 264.221(a)	Provide detailed material specifications for specific synthetic liner(s) to be used.		
D-4g(1)(b) Soil Liners	270.17(b)(1); 264.221(a)	For soil liners constructed of borrowed material, provide specifications; for soil liners using in-place soil, provide specifications to be used to assure that all existing materials meet requirements of liner design.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4g(1)(c) Leachate Detection System	270.17(b)(1); 264.221(a)	Provide material specifications for drainage layer material, filter fabric or filter layer, piping, and sumps.		
D-4g(2) Construction Specifications				
D-4g(2)(a) Liner System Foundation	270.17(b)(1); 264.221(a)	For installed foundations, provide construction specifications of foundation installation procedures. For units that use the in-place material for liner system foundation, provide construction specifications for preparation.		
D-4g(2)(b) Soil Liner	270.17(b)(1); 264.221(a),(a)(2)	Describe procedures for installing soil liner.		
D-4g(2)(c) Synthetic Liners	270.17(b)(1); 264.221(a); 264.226(a)(1)	Provide construction specifications for placement of synthetic liners.		
D-4g(2)(d) Leachate Detection System	270.17(b)(1); 264.221(a)	Provide construction specifications for placement of leachate detection system components, including drainage layers, piping, filter layers, sumps, pumps, etc.		
D-4g(3) Construction Quality Assurance (CQA) Program	270.17(b)(1),(4); 270.30(k)(2); 264.19; 264.226(a)	Provide complete details of CQA program to be used during construction of liner system to assure that it is built as designed.		
D-4g(4) Maintenance Procedures for Leachate Detection System	270.17(b)(1); 264.221(a)	Describe anticipated maintenance activities that will be used to assure proper operation of leachate detection systems throughout surface impoundment's expected life.		
D-4g(5) Liner Repairs During Operations	270.17(b)(1); 264.221(a)	Describe methods that will be used to repair any damage to liner that occurs while surface impoundment is in operation (such as a drag line ripping the liner during cleaning operations).		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4h	Action Leakage Rate	270.17(b)(5); 264.222		
D-4h(1)	Determination of Action Leakage Rate	270.17(b)(5); 264.222(a)	Identify action leakage rate for surface impoundment units subject to liner system provisions of 264.221(c) and 264.221(d).	
D-4h(2)	Monitoring of Leakage	270.17(b)(5); 264.222(b)		
D-4i	Leakage Response Action Plan	270.17(b)(5); 264.223		
D-4i(1)	Response Action	270.17(b)(5); 264.223(a)		
D-4i(2)	Leak and/or Remedial Determinations	270.17(b)(5); 264.223(b),(c)		
D-4i(3)	Notifications	270.17(b)(5); 264.223(b)		
D-4j	Prevention of Overtopping	270.17(b)(6); 264.221(g)	Describe design and/or operating procedures that will protect against impoundment overtopping/overflow.	
D-4j(1)	Design Features	270.17(b)(6); 264.221(g)	Describe design features used to prevent overtopping, such as spillways or weirs for flow-through systems, automatic or manual controls, and sensors and alarms.	
D-4j(2)	Operating Procedure	270.17(b)(6); 264.221(g)	If operating procedures are instrumental to preventing overtopping, describe those procedures.	
D-4j(3)	Overtopping Prevention	270.17(b)(6); 264.221(g)	Unless foolproof controls are used to prevent overtopping, provide results of calculations showing that adequate freeboard will be available following 100-year, 24-hour storm event.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4j(4) Freeboard Requirements	270.17(b); 264.221(g)	Freeboard requirements associated with normal and extreme wind activity should be determined unless automatic controls are used and freeboard equals or exceeds 2 feet.		
D-4j(5) Outflow Destination	270.17(b); 264.221(g)	Describe fate of liquids released through flow control devices. Identify location to which waste would be moved in event of emergency.		
D-4k Dike Stability				
D-4k(1) Engineer's Certification	270.17(d); 264.226(c)			
D-4k(2) Dike Design Description	270.17(b)(7); 264.221(h)	Provide data and/or drawings specifying design layout of the dikes and their components, including materials of construction. Determine capability of dikes to withstand failure from expected static and dynamic loadings and effects of erosion.		
D-4k(3) Erosion and Piping Protection	270.17(b); 264.221(h)	Demonstrate that dikes are designed and constructed to minimize erosion and piping, and to prevent failure due to excessive erosion. Describe procedures for correcting erosion problems identified during unit's operating life.		
D-4k(4) Subsurface Soil Conditions	270.17(b)(7); 264.221(h)	Engineering characteristics of dike foundation materials should be verified through testing and subsurface explorations, as necessary. These explorations may include: test borings; test pits or trenches; in situ tests; and geophysical exploration methods.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - SURFACE IMPOUNDMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-4k(5) Stability Analysis	270.17(b); 264.221(h)	Describe stability analyses and results for the following conditions, as appropriate: foundation soil bearing failure of settlement; failure in dike slopes; failure of impoundment cut slopes; build-up of hydrostatic pressure due to failure of drainage system, dike cover, and liner; and rapid drawdown.		
D-4k(6) Strength and Compressibility Test Results	270.17(b); 264.221(h)	Provide results of strength and consolidation tests on dike materials together with description of sampling procedures and test methods.		
D-4k(7) Dike Construction Procedures	270.17(b); 264.221(h)	Describe methods to be used to construct dikes at new units.		
D-4k(8) Dike Construction Inspection Program	270.17(b); 264.221(h)	Describe inspection, monitoring, sampling and testing methods, and frequencies to be used during dike construction to assure that new dikes meet design requirements.		
D-4l Special Waste Management Plan for Surface Impoundments Containing Wastes F020, F021, F022, F023, F026, and F027	270.17(i); 264.231(a)			

Notes:

- ^a Considerations in addition to the requirements presented in the regulations.
- ^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.
- ^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - INCINERATORS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-5 Incinerators	270.19; 264.340 - 264.351			
D-5a Justification for Exemption	270.19(a)	To justify exemption under 264.340(b) or (c), document the following: (1) waste contains no, or insignificant, concentrations of Part 261, Appendix VIII materials; and (2) waste is considered hazardous solely because it is (a) ignitable and/or corrosive, or (b) reactive.		
D-5b Trial Burn	270.19(b)			
D-5b(1) Trial Burn Plan	270.19(b)	Submit trial burn plan or results of trial burn, including all required determinations.		
D-5b(1)(a) Detailed Engineering Description of Incinerator	270.62(b)(2)(ii)	Provide information per regulatory citation. Also, include process and instrumentation diagram.		
D-5b(1)(b) Sampling and Monitoring Procedures	270.62(b)(2)(iii)	Describe sampling and monitoring procedures during trial burn per regulatory citation. Sampling and analysis methods approved by the U.S. Environmental Protection Agency (EPA) must be used or, alternatively, a demonstration of equivalence with EPA-approved methods must be made.		
D-5b(1)(c) Trial Burn Schedule	270.62(b)(2)(iv)			
D-5b(1)(d) Test Protocols	270.62(b)(2)(v)			
D-5b(1)(e) Pollution Control Equipment Operation	270.62(b)(2)(vi)			
D-5b(1)(f) Shutdown Procedures	270.62(b)(2)(vii)			
D-5c Data Submitted in Lieu of Trial Burn	270.19(c)	Provide information per regulatory citation in lieu of trial burn plan.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - INCINERATORS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-5c(1) Detailed Engineering Description of Incinerator	270.19(c)(2)	Provide information per regulatory citation. Also, include process and instrumentation diagram.		
D-5c(2) Expected Incinerator Operation	270.19(c)(6)			
D-5c(3) Design and Operating Conditions	270.19(c)(4)			
D-5c(4) Previous Trial Burn Results	270.19(c)(5)	Describe results from all previously conducted, approved trial burns.		
D-5d Determinations	270.62(b)(7)			

Notes:

^a Considerations in addition to the requirements presented in the regulations.^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LANDFILLS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6 Landfills	270.21; 264.300 - 264.317			
D-6a List of Wastes	270.21(a)			
D-6b(1) Exemption Based on Existing Portion	270.21(b)(1); 264.301(a)	Existing portions of landfills that have waste in place on November 8, 1984, and will have only vertical expansion are exempted from liner system requirements. Provide plan showing limits of existing portion.		
D-6b(2) Exemption Based on Alternative Design and Location	270.21(b)(1); 264.301(d)			
D-6b(3) Exemption for Replacement Landfill Unit	270.21(b)(1); 264.301(f)			
D-6b(4) Exemption for Monofills	270.21(b)(1); 264.301(e)			
D-6b(5) Groundwater Monitoring Exemption	270.21(c); 264.90(b)(2)	If exemption from Subpart F groundwater monitoring requirements is sought, provide data demonstrating that the following conditions are met.		
D-6b(5)(a) Engineered Structure	270.21(c); 264.90(b)(2)(i)	Provide design data showing that unit for which exemption is sought is an engineered structure.		
D-6b(5)(b) No Liquid Waste	270.21(c); 264.90(b)(2)(ii)	Describe procedures for ensuring that no liquid waste or waste containing free liquids will be received by, or contained, in the unit.		
D-6b(5)(c) Exclusion of Liquids	270.21(c); 264.90(b)(2)(iii)	Provide design and operating data demonstrating how liquids, precipitation, and other runoff and runoff will be excluded from the unit.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LANDFILLS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6b(5)(d) Containment System	270.21(c); 264.90(b)(2)(iv)	Describe containment system (both inner and outer layers) that will enclose waste.		
D-6b(5)(e) Leak Detection System	270.21(c); 264.90(b)(2)(v)	Describe design and operating data demonstrating leak detection system built into each containment layer.		
D-6b(5)(f) Operation of Leak Detection System	270.21(c); 264.90(b)(2)(vi)	Demonstrate means for ensuring continuing operation and maintenance of leak detection systems during active life of unit and closure and post-closure care periods.		
D-6b(5)(g) No Migration	270.21(c); 264.90(b)(2)(vii)	Demonstrate that unit will not allow hazardous constituents to migrate beyond outer layer of containment system prior to end of post-closure care period.		
D-6c Liner System, General Items	270.21(b)(1); 264.301(a),(c)	Discuss the items that apply to liner system as a whole.		
D-6c(1) Liner System Description	270.21(b)(1); 264.301(a),(c)	Provide detailed description of liner system, demonstrating that any flow of liquids into and through liners will be prevented. Liner system includes liner foundation, bottom composite liner, leachate detection system, top synthetic liner, and any protective layer placed to protect leachate collection system from damage.		
D-6c(2) Liner System Location Relative to High Water Table	270.21(b)(1); 264.301(a)(1)(i)	Provide geological cross sections showing groundwater levels with seasonal fluctuations and liner foundation elevations.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LANDFILLS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6c(3) Loads on Liner System	270.21(b)(1); 264.301(a)(1)(i)	Provide results of calculations defining maximum loads or stresses that will be placed on liner system considering: C both static and dynamic loads C stresses due to installation or construction C stresses resulting from operating equipment C stresses due to maximum quantity of waste, cover, and proposed post-closure land use C stresses resulting from settlement, subsidence, or uplift C internal and external pressure gradients.		
D-6c(4) Liner System Coverage	270.21(b)(1); 264.301(a)(1)(iii)			
D-6c(5) Liner System Exposure Prevention	270.21(b)(1); 264.301(a)(1)(i)	Demonstrate that the liner system will not be exposed to wind or sunlight or, if exposure to any part of the system is to be permitted, that such exposure will not result in unacceptable degradation of that portion of the system.		
D-6d Liner System, Foundation				
D-6d(1) Foundation Description	270.21(b)(1); 264.301(a)(1)(ii)	Describe foundation for liner system, including foundation materials and indicate bearing elevations on geological and construction drawings. Indicate any load-bearing embankments placed to support liner system.		
D-6d(2) Subsurface Exploration Data	270.21(b)(1); 264.301(a)(1)(ii)	Verify engineering characteristics of liner system foundation materials through subsurface explorations. Provide information to fully describe these efforts.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - LANDFILLS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6d(3) Laboratory Testing Data	270.21(b)(1); 264.301(a)(1)(ii)	Provide index testing results to classify site materials and lab test data to evaluate engineering properties of foundation materials. Provide references to standard test procedures.		
D-6d(4) Engineering Analyses	270.21(b)(1); 264.301(a)(1)(ii)	Provide engineering analyses based on subsurface exploration and laboratory testing data. Include discussion of methods used, assumptions, copies of calculations, and appropriate references.		
D-6d(4)(a) Settlement Potential	270.21(b)(1); 264.301(a)(1)(ii)	Provide estimates of total and differential settlement of liner system foundation. Consider stresses imposed by liner system and applicable stresses computed in item D-6c(3).		
D-6d(4)(b) Bearing Capacity	270.21(b)(1); 264.301(a)(1)(ii)	Provide analysis of allowable bearing capacity of liner system foundation.		
D-6d(4)(c) Stability of Landfill Slopes	270.21(b)(1); 264.301(a)(1)(ii)	Provide, as appropriate, analyses of stability of: C excavated slopes for units constructed below grade C embankment slopes for units constructed with earthen dikes or berms C landfill slopes consisting of liner system or cover system placed on waste.		
D-6d(4)(d) Potential for Excess Hydrostatic or Gas Pressure	270.21(b)(1); 264.301(a)(1)(ii)	Provide estimates of potential for bottom heave or blow-out of liner system due to unequal hydrostatic or gas pressures.		
D-6e Liner System, Liners				
D-6e(1) Synthetic Liners	270.21(b)(1); 264.301(a)(1)(ii),(c)	For each synthetic liner in system or under consideration, provide following general information: thickness; type; material; brand name; and manufacturer.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LANDFILLS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6e(1)(a) Synthetic Liner Compatibility Data	270.21(b)(1); 264.301(a)(1)(i)	Provide summary and discuss test results and conclusions as to suitability of synthetic liner based on liner/waste compatibility testing.		
D-6e(1)(b) Synthetic Liner Strength	270.21(b)(1); 264.301(a)(1)(i)	Provide data showing that synthetic liners, including seams, have sufficient strength after exposure to waste and waste leachate.		
D-6e(1)(c) Synthetic Liner Bedding	270.21(b)(1); 264.301(a)(1)(ii)	Demonstrate that sufficient bedding will be provided above and below synthetic liners to prevent rupture during installation and operation. Synthetic membrane of bottom composite liner should be placed directly on soil portion.		
D-6e(2) Soil Liners	270.21(b)(1); 264.301(a),(c)	Provide description of soil portion of bottom composite liner, including its classification, thickness, hydraulic conductivity, and material specifications.		
D-6e(2)(a) Material Testing Data	270.21(b)(1); 264.301(c)	Provide complete results for index tests, laboratory and/or in situ permeability tests, strength tests, consolidation tests, and shrink-swell properties of soil liner material. Discuss potential for dispersion and piping of soil due to flow of liquid through soil liner layer.		
D-6e(2)(b) Soil Liner Compatibility Data	270.21(b)(1); 264.301(a)(1)(i); 264.301(c)(3)(iii)	Provide complete test results of permeability testing of soil liner material using representative of leachate from surface impoundment.		
D-6e(2)(c) Soil Liner Strength	270.21(b)(1); 264.301(a)(1)(i); 264.301(c)(3)(iii)	Demonstrate that soil liner has sufficient strength to support loads/stresses computed in item D-4c(3).		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LANDFILLS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6f Liner System, Leachate Collection/Detection Systems	270.21(b)(1); 264.301(a)(2); 264.301(c)(2),(3)			
D-6f(1) System Operation and Design	270.21(b)(1); 264.301(a)(2); 264.301(c)(2),(3)	Describe design features of leachate detection system and how system will function to detect any leakage through either liner in timely manner.		
D-6f(2) Drainage Material	270.21(b)(1); 264.301(a)(2),(c)(3) (ii)	Describe leachate detection system drainage material.		
D-6f(3) Grading and Drainage	270.21(b)(1); 264.301(a)(2),(c)(2), (3)	Indicate slopes of leachate detection system and provide contour plan for system along with plan showing layout and spacing of piping system and any sumps, pumps, etc. Demonstrate that leak detection system is appropriately graded to assure that leakage at any point in liner system is detected in timely manner.		
D-6f(4) Maximum Leachate Head	270.21(b)(1); 264.301(a)(2),(c)(2)			
D-6f(5) Systems Compatibility	270.21(b)(1); 264.301(a)(2)(i)(A), (c)(3)(iii)			
D-6f(6) Systems Strength	270.21(b)(1); 264.301(a)(2)(i)(B), (c)(3)(iii)			
D-6f(6)(a) Stability of Drainage Layers	270.21(b)(1); 264.301(a)(2)(i)(B), (c)(3)(iii)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LANDFILLS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6f(6)(b) Strength of Piping	270.21(b)(1); 264.301(a)(2)(i)(B), (c)(3)(iii)	Demonstrate that pipe used in piping systems have sufficient strength to support loads as computed in item D-6c(3).		
D-6f(7) Prevention of Clogging	270.21(b)(1); 264.301(a)(2)(ii), (c)(3)(iv)			
D-6f(8) Liquid Removal	270.21(b)(1); 264.301(c)(3)(v),(4)			
D-6f(9) Location Relative to Water Table	270.21(b)(1)(iii); 264.301(c)(5)			
D-6g Liner System, Construction and Maintenance				
D-6g(1) Material Specifications				
D-6g(1)(a) Synthetic Liners	270.21(b)(1); 264.301(a)(1)	Provide detailed material specifications for specific synthetic liner or liners to be used.		
D-6g(1)(b) Soil Liners	270.21(b)(1); 264.301(a)(1)	For soil liners constructed of borrowed material, provide specifications. For soil liners using in-place soil, provide specifications to be used to assure that all existing materials meet requirements of liner design.		
D-6g(1)(c) Leachate Collection/Detection Systems	270.21(b)(1); 264.301(a),(c)	Provide material specifications for drainage layer material, filter fabric or filter layer, piping, and sumps.		
D-6g(2) Construction Specifications				
D-6g(2)(a) Liner System Foundation	270.21(b)(1); 264.301(a)(1); 264.303(a)	Provide construction specifications of foundation installation procedures. For units that use in-place material for liner system foundation, provide construction specifications for preparation of foundation.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LANDFILLS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6g(2)(b) Soil Liner	270.21(b)(1); 264.301(a)(1); 264.303(a)(2)	Describe procedures for installing soil liner.		
D-6g(2)(c) Synthetic Liners	270.21(b)(1); 264.301(a)(1); 264.303(a)(1)	Provide construction specifications for placement of synthetic liners.		
D-6g(2)(d) Leachate Collection/Detection Systems	270.31(b)(1); 264.301(a),(c)	Provide construction specifications for placement of all components of leachate collection/detection systems.		
D-6g(3) Certified Quality Auditor (CQA) Program	270.21(b)(1); 270.30(k)(2); 264.19; 264.303(a)	Provide complete details of CQA program to be used during construction of liner system to assure that it is built as designed.		
D-6g(4) Maintenance Procedures for Leachate Collection/Detection Systems	270.21(b)(1); 264.301(a),(c)	Describe anticipated maintenance activities that will be used to assure proper operation of leachate collection/detection systems throughout landfill's expected life.		
D-6g(5) Liner Repairs During Operations	270.21(b)(1); 264.301(a)	Describe methods that will be used to repair any damage to liner that occurs while landfill is in operation during placement of waste (such as a dozer ripping the liner).		
D-6h Action Leakage Rate	270.21(b)(1)(v); 264.302			
D-6h(1) Determination of the Action Leakage Rate	270.21(b)(1)(v); 264.302(a)			

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SECTION D. PROCESS INFORMATION - LANDFILLS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6h(2) Monitoring the Leakage	270.21(b)(1)(v); 264.302(b)	To determine if action leakage rate has been exceeded, owner/operator must convert required leachate flow rate monitoring data to average daily flow rate for each sump. This average daily flow rate must be calculated weekly during active life of facility and closure period, and monthly during post-closure care period.		
D-6i Leakage Response Action Plan	270.21(b)(1)(v); 264.304			
D-6i(1) Response Actions	270.21(b)(1)(v); 264.304(a)			
D-6i(2) Leak and/or Remedial Determinations	270.21(b)(1)(v); 264.304(b),(c)			
D-6i(3) Notifications	270.21(b)(1)(v); 264.304(b)			
D-6j Runon and Runoff Control Systems				
D-6j(1) Runon Control System	270.21(b)(2); 264.301(g)	Describe system that will be used to prevent runon onto active portions of landfills.		
D-6j(1)(a) Design and Performance	270.21(b)(2); 264.301(g)	Describe runon control system design and how that design prevents runon from reaching active portions of site. Provide plan view.		
D-6j(1)(b) Calculation of Peak Flow	270.21(b)(1); 264.301(g)	Identify peak surface water flow expected to result from 2-year design storm. Provide copies of calculations and data.		
D-6j(2) Runoff Control System	270.21(b)(3); 264.301(h)	Describe runoff control system to be used to collect and control runoff from active portions.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - LANDFILLS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6j(2)(a) Design and Performance	270.21(b)(3); 264.301(h)	Describe runoff collection and control system design. Indicate fate of collected runoff that is considered hazardous waste until tested and/or treated.		
D-6j(2)(b) Calculation of Peak Flow	270.21(b)(3); 264.301(h)	Identify total runoff volume expected to result from at least a 24-hour, 25-year storm event. Provide copies of calculations and data.		
D-6j(3) Management of Collection and Holding Units	270.21(b)(4); 264.301(i)	Describe how collection and holding facilities associated with runoff and runoff control systems will be emptied or otherwise managed expeditiously after storms to maintain system design capacity. Describe fate of liquids discharged from these systems.		
D-6j(4) Construction	270.21(b)(2),(3); 264.301(g),(h)	Provide detailed construction and material specifications for runoff and runoff control systems.		
D-6j(5) Maintenance	270.21(b)(2),(3); 264.301(g),(h)	Describe any maintenance activities required to assure continued proper operations of runoff and runoff control systems throughout active life of unit.		
D-6k Control of Wind Dispersal	270.21(b)(5); 264.301(j)			
D-6L Liquids in Landfills				
D-6L(1) Bulk or Noncontainerized Free Liquids	270.21(h); 264.314	Describe procedures that will be used to ensure that no bulk or noncontainerized liquid hazardous waste or waste with free liquids will be placed in landfill. Demonstrate, by paint filter test, Method 9095, that no free liquids will be placed in landfill.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LANDFILLS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6L(2) Containers Holding Free Liquids	270.21(h); 264.314(d)	For facilities that intend to dispose of containers holding free liquids, describe how free liquids will be removed from containers or stabilized within container before container is placed in landfill. If liquid is removed, container must be backfilled or crushed.		
D-6L(3) Restriction to Small Containers	270.21(h); 264.314(d)(2)	If small containers are to be disposed of in landfill, demonstrate by indicating container volume, that containers will be very small (such as ampules).		
D-6L(4) Nonstorage Containers	270.21(h); 264.314(d)(3)	If nonstorage containers are to be disposed of in landfill, demonstrate by describing the containers designed to hold free liquids for use other than storage (e.g., batteries, capacitors).		
D-6L(5) Lab Packs	270.21(h); 264.314(d)(4)	Describe how it will be assured that lab packs to be landfilled containing free liquids meet requirements for lab packs.		
D-6L(5)(a) Inside Containers	270.21(h); 264.314(d)(4); 264.316(a)			
D-6L(5)(b) Overpack	270.21(h); 264.314(d)(4); 264.316(b)	Demonstrate that overpacking consists of metal, Department of Transportation (DOT) containers, metal DOT containers, with open heads no larger than 110 gallons; and sufficient sorbent material determined to be non-biodegradable to completely sorb all liquid contents of inside container.		
D-6L(5)(c) Sorbent Material	270.21(h); 264.314(d)(4),(e) 264.316	Demonstrate that sorbent materials used are not capable of reacting dangerously with, being decomposed by, or being ignited by contents of inside containers.		

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SECTION D. PROCESS INFORMATION - LANDFILLS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-6L(5)(d) Incompatible Wastes	270.21(h); 264.314(d)(4); 264.316(d)	Demonstrate that incompatible waste will not be placed in same outside containers.		
D-6L(5)(e) Reactive Wastes	270.21(h); 264.314(d)(4); 264.316(d)	Demonstrate that incompatible waste will not be placed in same outside containers.		
D-6m Containerized Wastes	270.21(i); 264.315			
D-6n Special Waste Management Plan for Landfills Containing Wastes F020, F021, F022, F023, F026, and F027	270.21(j); 264.317	Provide plan for waste management in this special facility. Plan must address the following factors.		
D-6n(1) Waste Descriptions	270.21(j)(1); 264.317(a)(1)	Identify volume, physical, and chemical characteristics of waste, including potential to migrate through soil or volatilize or escape into atmosphere.		
D-6n(2) Soil Description	270.21(j)(2); 264.317(a)(2)	Describe attenuative properties of underlying and surrounding soils or other materials.		
D-6n(3) Mobilizing Properties	270.21(j)(2); 264.317(a)(2)	Describe mobilizing properties of other materials codisposed of with this waste.		

Notes:

^a Considerations in addition to the requirements presented in the regulations.

^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.

^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LAND TREATMENT

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-7 Land Treatment	270.20; 264.270 - 264.283			
D-7a Treatment Demonstration	270.20(a); 264.272			
D-7a(1) Demonstration Wastes	270.20(a)(1); 264.272(a),(c)(1)(i)	Describe waste used in demonstration and waste to be treated during normal operation. Identify concentrations of all hazardous constituents reasonably expected to be present in both wastes.		
D-7a(2) Demonstration Data Sources	270.20(a)(2); 264.272(b)	Describe source of data used for treatment demonstration and provide available determinations.		
D-7a(2)(a) Existing Literature	270.20(a)(2); 264.272(b)	If existing literature is used to demonstrate treatment, submit brief written review of scientific literature and previous studies that contain pertinent information. Information sources should be properly referenced. In general, existing literature will not be acceptable as demonstration unless it can be shown that site and waste characteristics are identical to those in literature.		
D-7a(2)(b) Operating Data	270.20(a)(2); 264.272(b)	Provide any operating data gathered from units to be permitted, including application rate data and operating records.		
D-7a(3) Laboratory/Field Testing Programs	270.20(a)(3); 264.272(b),(c)	Field and laboratory tests to be used for demonstration must be thoroughly described. Include interpretive discussions as appropriate.		
D-7a(3)(a) Toxicity Testing	270.20(a)(2); 264.272(b)	Describe acute toxicity test procedures used to estimate impact of waste application or waste constituents on soil biota responsible for waste treatment.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LAND TREATMENT

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-7a(3)(b) Field Plot Testing	270.20(a)(2),(3); 264.272(b),(c)	Describe field plot studies used to demonstrate treatability of waste(s) or waste constituents.		
D-7a(3)(c) Laboratory Testing	270.20(b)(2),(3); 264.272(b),(c)	Describe laboratory test methods used to demonstrate treatability of waste(s) or waste constituents.		
D-7b Land Treatment Program	270.20(b); 264.271	Describe characteristics and operating conditions of land treatment unit(s) to be permitted.		
D-7b(1) List of Wastes	270.20(b)(1); 264.271(b)			
D-7b(2) Operating Procedures	270.20(b)(2); 264.273(a)	Describe operating procedures used to assure uniform and complete degradation, transformation, and immobilization.		
D-7b(2)(a) Waste Application Rates	270.20(b)(2)(i); 264.273(a)(1)	Identify rate and frequency of waste application and concentration of limiting constituents in waste.		
D-7b(2)(b) Waste Application Methods	270.20(b)(2)(i); 264.273(a)(1)	Describe method(s) used to apply and incorporate waste into treatment zone.		
D-7b(2)(c) Control of Soil pH	270.20(b)(2)(ii); 264.273(a)(2)	Identify acceptable limits of soil pH and describe rationale for those limits. Describe how soil pH will be measured and adjusted, including a schedule for the same.		
D-7b(2)(d) Enhancement of Microbial or Chemical Reactions	270.20(b)(2)(iii); 264.273(a)(3)	Describe measures used to enhance treatment, including method and frequency of such measures (e.g., fertilization, microbial inoculations, soil aeration).		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LAND TREATMENT

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-7b(2)(e) Control of Soil Moisture	270.20(b)(2)(iv); 264.273(a)(4)	Identify limits on soil moisture content. Describe how soil moisture will be monitored and adjusted, if necessary.		
D-7c Unsaturated Zone Monitoring Plan	270.20(b)(3); 264.278	Submit unsaturated zone monitoring plan describing measures used to determine if hazardous wastes have migrated from treatment zone.		
D-7c(1) Soil-Pore Liquid Monitoring	270.20(b)(3); 264.278	Describe program for sampling and analysis of soil-pore liquid to detect migration of dissolved constituents below treatment zone.		
D-7c(1)(a) Sampling Location	270.20(b)(3)(ii); 264.278(b), (d)	Identify sampling locations and indicate that samples will be collected immediately below treatment zone.		
D-7c(1)(b) Sampling Frequency	270.20(b)(3)(i); 264.278(e)	Provide schedule for sampling soil-pore liquid.		
D-7c(1)(c) Sampling Equipment	270.20(b)(3)(i); 264.278(e)	Identify equipment used to obtain soil-pore liquid samples.		
D-7c(1)(d) Sampling Equipment Installation	270.20(b)(3)(i); 264.278(e)	Describe procedures used to install soil-pore liquid monitoring devices.		
D-7c(1)(e) Sampling Procedures	270.20(b)(3)(i); 264.278(e)(1),(2)			
D-7c(1)(f) Analytical Procedures	270.20(b)(3)(iii); 264.278(e)(3)	Identify analytical procedures used to determine concentration of hazardous constituents in soil-pore liquid samples.		
D-7c(1)(g) Chain of Custody	270.20(b)(3)(iv); 264.278(e)(4)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LAND TREATMENT

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-7c(1)(h) Background Values	270.20(b)(3)(v); 264.278(c)	Describe sampling and analytical program used to establish background soil-pore liquid concentrations of hazardous constituents. Provide background data, if available.		
D-7c(1)(i) Statistical Methods	270.20(b)(3)(vi); 264.278(f)	Describe statistical methods that will be used to determine differences between background and treatment zone concentrations of hazardous constituents.		
D-7c(1)(j) Justification of Principle Hazardous Constituents	270.20(b)(3)(vii); 264.278(a)(2)	Provide suggested list of 261 Appendix VIII hazardous constituents to be monitored for in soil-pore liquids.		
D-7c(2) Soil Core Monitoring	270.20(b)(3); 264.278	Describe program for monitoring soil cores to detect migration of hazardous constituents below treatment zone.		
D-7c(2)(a) Sampling Location	270.20(b)(3)(ii); 264.278(b),(d)	Identify sampling locations and indicate that soil cores will be collected immediately below treatment zone.		
D-7c(2)(b) Sampling Frequency	270.20(b)(3)(i); 264.278(e)	Provide schedule for sampling soil.		
D-7c(2)(c) Sampling Equipment	270.20(b)(3)(i); 264.278(e)	Identify equipment used to sample soil cores.		
D-7c(2)(d) Sampling Procedures	270.20(b)(3)(i); 264.278(e)(1),(2)			
D-7c(2)(e) Analytical Procedures	270.20(b)(3)(iii); 264.278(e)(3)	Identify analytical methods used to determine concentration of hazardous constituents in soil core samples.		
D-7c(2)(f) Chain of Custody	270.20(b)(3)(iv); 264.278(e)(4)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - LAND TREATMENT**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-7c(2)(g) Background Values	270.20(b)(3)(v); 264.278(c)	Describe sampling and analytical program used to establish background soil core concentrations of hazardous constituents. Provide background data, if available.		
D-7c(2)(h) Statistical Methods	270.20(b)(3)(vi); 264.278(f)	Describe statistical methods that will be used to determine differences between background and treatment zone concentrations of hazardous constituents.		
D-7c(2)(i) Justification of Principal Hazardous Constituents	270.20(b)(3)(vii); 264.278(a)(2)	Provide suggested list of 261 Appendix VIII hazardous constituents to be monitored for in soil core samples.		
D-7d Treatment Zone Description	270.20(b)(5); 264.271(c)	Identify dimensions of treatment zone.		
D-7d(1) Horizontal and Vertical Dimensions	270.20(b)(5); 264.271(c)			
D-7d(2) Soil Survey	270.20(b)(2); 264.272(c)(1)(iv)	Provide map or plat plan delineating horizontal boundaries of treatment zone and all soil series occurring within treatment zone.		
D-7d(3) Soil Series Descriptions	270.20(b)(2); 264.272(c)(1)(iv)	Submit description of each soil series identified within treatment zone.		
D-7d(4) Soil Sampling Data	270.20(b)(2); 264.272(1)(iv)			
D-7d(5) Seasonal High Water Table	270.20(b); 264.271(c)(2)	Identify depth to seasonal high water table and source of that data.		
D-7e Unit Design, Construction, Operation, and Maintenance	270.20(c); 264.273	Describe design, construction, operation, and maintenance of runoff, runoff, and wind dispersal controls.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LAND TREATMENT

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-7e(1) Runon Control	270.20(c)(1); 264.273(c)	Submit scale drawing of unit showing any runon controls used.		
D-7e(2) Runoff Control	270.20(c)(1); 264.273(c)	Describe runoff collection and control system.		
D-7e(3) Minimizing Hazardous Constituent Runoff	270.20(c)(3); 264.273(b)			
D-7e(4) Management of Accumulated Runon and Runoff	270.20(c)(4); 264.273(e)	Describe fate of collected surface water, including sampling and analysis protocols for determining contaminant levels.		
D-7e(5) Control of Wind Dispersal	270.20(c)(6); 264.273(f)			
D-7f Food-Chain Crops	270.20(d); 264.276	Demonstrate that there is no substantial risk to human health or environment caused by growth of food-chain crops on unit.		
D-7f(1) Food-Chain Crop Demonstration	270.20(d); 264.276(a)(1)			
D-7f(1)(a) Demonstration Basis	270.20(d)(1),(2); 264.276(a)(3)(i)	Show that demonstration results will be representative of unit to be permitted.		
D-7f(1)(b) Test Procedures	270.20(d)(3); 264.276(a)(3)(ii)	Describe procedures used in any tests referenced or conducted.		
D-7f(2) Cadmium-Bearing Wastes	270.20(e); 264.276(b)			
D-7f(2)(a) Crops for Human Consumption	270.20(e); 264.276(b)(1)	If crops are to be grown for human consumption, provide: soil pH; soil pH controls; cadmium-loading rate; and soil cation exchange capacity.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - LAND TREATMENT

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-7f(2)(b) Animal Feed	270.20(e); 264.276(b)(2)	If only animal feed is to be grown, provide soil pH and soil pH controls. Provide copy of operating plan demonstrating how animal feed will be distributed to preclude ingestion by humans, including control of alternative land use.		
D-7g Special Waste Management Plan for Land Treatment Units Containing Wastes F020, F021, F022, F023, F026, and F027	270.20(i); 264.283	Provide plan describing how land treatment units containing referenced waste are, or will be, designed, constructed, operated, and maintained to protect human health and environment.		
D-7g(1) Waste Description	270.20(i)(1); 264.283(a)(1)			
D-7g(2) Soil Description	270.20(i)(2); 264.283(a)(2)			
D-7g(3) Mobilizing Properties	270.20(i)(3); 264.283(a)(3)			
D-7g(4) Additional Management Techniques	270.20(i)(4); 264.283(a)(4)			
D-7h Incompatible Wastes	270.20(h); 264.282	Indicate that incompatible waste will not be placed in, or on, the same treatment zone.		

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - MISCELLANEOUS TREATMENT				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-8 Miscellaneous Units	270.23; 264.601	Identify all miscellaneous units that treat, store, or dispose of hazardous waste at facility, but do not fit current definition of container, tank, surface impoundment, etc. These units may include: C geologic repositories C deactivated missile silos C thermal treatment units other than incinerators, boilers, or industrial furnaces C units open burning and open detonating explosive waste C certain chemical/physical/biological treatment units.		
D-8a Description of Miscellaneous Units	270.23(a)			
D-8b Waste Characterization	270.23; 264.601(a)(1), (b)(1),(c)(1)	Provide information on volume and concentration of waste in order to determine release potential.		
D-8c Treatment Effectiveness	270.23(d)			
D-8d Environmental Performance Standards for Miscellaneous Units		Environmental performance standards must be established and maintained to protect human health and environment.		
D-8d(1) Protection of Groundwater and Subsurface Environment	270.23(b),(c); 264.601(a)			
D-8d(1)(a) Environmental Assessment	270.23(b),(c); 264.601(a)	Applicant must conduct assessment of potential for releases to groundwater or the subsurface environment. Both saturated and unsaturated zones must be considered in evaluating potential for subsurface migration.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - MISCELLANEOUS TREATMENT				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-8d(1)(b) Performance Standards	270.23(b); 264.601	Based on assessments, performance standards must be developed and maintained.		
D-8d(2) Protection of Surface Water, Wetlands, and Soil Surfaces	270.23(b),(c); 264.601(b)			
D-8d(2)(a) Environmental Assessment	270.23(b),(c); 264.601(b)	Applicant must conduct assessment of potential for releases to surface water, wetlands, or soil surface.		
D-8d(2)(b) Performance Standards	270.23; 264.601	Based on assessments, performance standards must be developed and maintained.		
D-8d(3) Protection of the Atmosphere	270.23(b),(c); 264.601			
D-8d(3)(a) Environmental Assessment	270.23(b),(c); 264.601(c)	Applicant must conduct assessment of potential for release to air.		
D-8d(3)(b) Performance Standards	270.23; 264.601	Based on assessments, performance standards must be developed and maintained.		
D-8e Monitoring, Analysis, Inspection, Response, Reporting, and Corrective Action	270.23(a); 264.602			
D-8e(1) Elements of a Monitoring Program	270.23(a); 264.602	Monitoring program must include procedures for sampling, analysis, and evaluation of data, suitable response procedures, and a regular inspection schedule.		
D-8e(2) Air Monitoring Alternatives	270.23(a); 264.602	For situations in which ambient air monitoring would be unsafe or impractical, possible alternatives may include analysis of waste, emissions measurements, and periodic monitoring with portable detectors.		

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - BOILERS/INDUSTRIAL FURNACES				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-9	Boilers and Industrial Furnaces (BIF)			
D-9a	Waivers/Exemptions	270.22(a)(2)(i); 266.104(a)(4); 266.110	If applying for waiver or exemption, provide information demonstrating compliance with requirements outlined in this section.	
D-9a(1)	Waiver of Destruction and Removal Efficiency (DRE) Trial Burn for Boilers	270.22(a)(2)(i); 266.104(a)(4); 266.110		
D-9a(2)	Low Risk Waste Exemption	270.22(a)(2)(ii); 266.104(a)(5); 266.109(a)	The DRE standard for a BIF may be waived provided certain criteria listed in regulatory citation are met and documented.	
D-9a(3)	Waiver of Particulate Matter Standard	270.22(a)(4); 266.109(b)	The particulate matter standard of 266.105 and trial burn for particulate matter may be waived if: the BIF complies with Tier I or Adjusted Tier I metals feed rate screening limits under 266.106(b) or (e) and submits documentation showing conformance with trial burn waiver under checklist Section D-9a(4) below; and BIF meets requirements of low risk waste exemption under checklist Section D-9a(2) above.	
D-9a(4)	Waiver of Trial Burn for Metals	270.22(a)(3); 266.106(b),(e)		
D-9a(5)	Waiver of Trial Burn for Hydrogen Chloride (HCl)/Cl ₂	270.22(a)(5); 266.107(b),(e)		
D-9b	Pretrial Burn Requirements for New BIFs	270.66(b)(1); 266.102(d)(4)(i); 266.102(e)	Time required to bring new BIF to point of operational readiness for trial burn must be minimum necessary and cannot exceed 720 hours, or up to 1,440 hours if applicant shows good cause for requiring an extension.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - BOILERS/INDUSTRIAL FURNACES				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-9b(1) Pretrial Burn Requirements for New BIFs - Organic Emission Standards	270.66(b)(1)(i); 266.102(e)(2); 266.104(d),(e)			
D-9b(2) Pretrial Burn Requirements for New BIFs - Particle Matter Emissions Standards	270.66(b)(1)(i); 266.105			
D-9b(3) Pretrial Burn Requirements for New BIFs - Metal Emissions Standards	270.66(b)(1)(i); 266.102(e)(4)(i), (ii); 266.106			
D-9b(4) Pretrial Burn Requirements for New BIFs - Alternative Metals Approach	270.66(b); 266.102(e)(4)(iii); 266.106(f)	For conformance with alternative metals approach, description of operating conditions must: describe approach that will be used to comply; specify how approach ensures compliance with metals emissions standards of 266.106(c) and (d); specify how approach can be effectively implemented and monitored; and provide such other information as necessary to ensure that the standards of 266.106(c) or (d) are met.		
D-9b(5) Pretrial Burn Requirements for New BIFs - Hydrogen Chloride/Chlorine Emission Standards	270.66(b)(1)(i); 266.102(e)(5)(i); 266.107			
D-9b(6) Pretrial Burn Requirements for New BIFs - Fugitive Emissions	270.66(b)(1)(i); 266.102(e)(7)(i)	Description of operating conditions must thoroughly describe method by which fugitive emissions will be controlled.		
D-9b(7) Pretrial Burn Requirements for New BIFs - Automatic Waste Feed Cutoff	270.66(b)(1)(i); 266.102(e)(7)(ii), (iii)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - BOILERS/INDUSTRIAL FURNACES				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-9b(8)	Pretrial Burn Requirements for New BIFs - Monitoring Requirements	270.66(b)(1)(i); 266.102(e)(8),(10)		
D-9c	Trial Burn Plan Requirements for All BIFs	270.66(b)(2),(c), (e); 266.102(d)(4)(ii)		
D-9d	Trial Burn Results	270.22(a)(6); 270.66(d),(f)	Results of trial burn, as specified in regulatory citation, must be submitted within 90 days of completing trial burn. The submittal must be certified on behalf of applicant by signature of a person authorized to sign a permit application or a report under 270.11.	
D-9e	Post-Trial Burn Requirements for New BIFs	270.66(b)(3)(ii); 266.102(d)(4)(iii),(e)	Post-trial burn requirements for new BIFs are the same as pretrial burn requirements for new BIFs with the following exceptions: C No documentation of total burn hours is required; no limit to length of time for burning. C Must submit statement identifying conditions necessary to operate in compliance. C Must submit statement specifying that BIF will stop burning when changes in combustion properties or feed rates or BIF design or operating conditions deviate from approved post-trial burn period.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - BOILERS/INDUSTRIAL FURNACES				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-9f Data in Lieu of Trial Burn	270.22(a)(6); 270.66(c)(3)	A BIF may seek exemption from trial burn requirements by submitting information provided by previous compliance testing of same device, or from compliance testing or trial or operational burns of similar BIFs burning similar hazardous waste under similar conditions.		
D-9g Alternative Hydrocarbons (HC) Limit for Industrial Furnaces with Organic Matter in Raw Materials	270.22(b); 266.104(f)			
D-9h Alternative Metals Implementation Approach	270.22(c); 266.106(f)	For conformance with an alternative metals implementation approach, the information must: C Describe approach that will be used to comply. C Specify how approach ensures compliance with the metals emissions standards of 266.106(c) and (d). C Specify how approach can be effectively implemented and monitored. C Provide such other information as necessary to ensure that standards are met.		
D-9i Monitoring Requirements	270.22; 266.102(e)(6),(8)	Various parameters must be continuously monitored per 266.102(e)(6) while burning hazardous waste. Data must be maintained in operating record until closure of facility.		
D-9j Automatic Waste Feed Cutoff System	270.22(d); 266.102(e)(7)(ii)	All facilities must submit description of automatic waste feed cutoff system, including any pre-alarm systems that may be used.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - BOILERS/INDUSTRIAL FURNACES				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-9k Direct Transfer Standards	270.22(e); 266.111; Part 264 Subparts I and J	BIFs that directly feed hazardous waste from a transport vehicle to a BIF without use of a storage unit must submit a description of the direct transfer procedures that will be used, along with other information as specified in regulatory citation.		
D-9k(1) Direct Transfer Standards - Containment System	270.22(e); 264.175	In areas where direct transfer vehicles are located, a complete description of containment system must be provided.		
D-9k(2) Direct Transfer Standards - Condition of Containers	270.22(e); 264.171			
D-9k(3) Direct Transfer Standards - Compatibility of Waste with Container	270.22(e); 264.172			
D-9k(4) Direct Transfer Standards - Management of Containers	270.22(e); 264.173			
D-9k(5) Direct Transfer Standards - Special Requirements of Ignitable or Reactive Waste	270.22(e); 264.176	Provide documentation of location of all containers holding ignitable/reactive waste.		
D-9k(6) Direct Transfer Standards - Special Requirements of Incompatible Wastes	270.22(e); 264.177	Provide statement and description of procedures to ensure compliance with management standards for incompatible waste.		
D-9k(7) Direct Transfer Standards - Closure	270.22(e); 264.178	Describe how all hazardous waste and hazardous waste residues will be removed from containment system at closure.		
D-9k(8) Direct Transfer Standards - Secondary Containment Requirements	270.22(e); 266.111(e)	Owners/operators must submit documentation demonstrating conformance with secondary containment requirements of 265.193(b),(c), and (f) - (h).		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - BOILERS/INDUSTRIAL FURNACES				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-9L Bevill Residues	270.22(f); 266.112; Part 266 Appendices VII and IX			

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - CONTAINMENT BUILDINGS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-10 Containment Buildings	270.14(a),(b) 264.1100 - 264.1102			
D-10a Containment Building Description	270.14(a),(b) 264.1100(a); 264.1101(a)			
D-10a(1) Construction	270.14(a),(b) 264.1100(a); 264.1101(a)	Provide description of unit, include dimensions and materials of construction.		
D-10a(2) Strength Requirements	270.14(a),(b) 264.1100(a); 264.1101(a)	Provide results of calculations defining maximum loads or stresses that will be placed on containment building system.		
D-10a(3) Design Requirements for Units Not Managing Liquids	270.14(a),(b) 264.1100(b); 264.1101(d)			
D-10a(3)(a) Primary Barrier	270.14(a),(b) 264.1100(a),(b); 264.1101(a)(4)	Provide detailed description of primary barrier, and demonstrate that it is sufficiently durable to withstand movement of personnel, waste, and handling equipment within unit.		
D-10a(4) Design Requirements for Units Managing Liquids	270.14(a),(b) 264.1100(c); 264.1101(a)(4),(b)			
D-10a(4)(a) Primary Barrier	270.14(a),(b) 264.1100(c)(1); 264.1101(b)(1)	Describe how primary barrier is designed and constructed to prevent migration of hazardous constituents into barrier.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - CONTAINMENT BUILDINGS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-10a(4)(b) Liquid Collection System	270.14(a),(b) 264.1100(c)(2); 264.1101(b)(3)	Describe in detail liquid collection system that must be designed and constructed of materials to minimize accumulation of liquid on primary barrier.		
D-10a(4)(c) Secondary Containment System	270.14(a),(b) 264.1100(c)(3)			
D-10a(4)(c)(i) Leak Detection System	270.14(a),(b) 264.1100(c)(3); 264.1101(a),(b)(3)	Describe design and operating features of leak detection system.		
D-10a(4)(C)(ii) Secondary Barrier	270.14(a),(b) 264.1100(b)(3); 264.1101(b)(3)	Describe how secondary barrier is designed and constructed to prevent migration of hazardous constituents into barrier.		
D-10a(4)(d) Temporary Variance from Secondary Containment Requirements	270.14(a),(b) 264.1101(b)(4)			
D-10a(4)(e) Waiver of Secondary Containment Requirements	270.14(a),(b) 264.1101(e)			
D-10a(5) Design of Units Managing Both Liquids and Nonliquids in the Same Unit	270.14(a),(b) 264.1101(d)	Identify areas of containment building that are constructed both with and without secondary containment, if applicable.		
D-10a(6) Compatibility of Structure with Wastes	270.14(a),(b) 264.1101(a)(2), (b)(3)(iii)	Demonstrate that all surfaces in contact with hazardous waste, collected liquids, or leachate must be chemically compatible with those waste.		
D-10a(7) Fugitive Dust Emissions	270.14(a),(b) 264.1100(d); 264.1101(c)(1)(iv); Part 60 Appendix A			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS**SECTION D. PROCESS INFORMATION - CONTAINMENT BUILDINGS**

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-10a(8) Structural Integrity Requirements	270.14(a),(b) 264.1101(a)(2)			
D-10a(9) Certification of Design	270.14(a),(b) 264.1101(c)(2)			
D-10b Containment Building Operations	270.14(a),(b) 264.1101(c)			
D-10b(1) Primary Barrier Integrity	270.14(a),(b) 264.1101(b)(2)(ii), (c)(1)(i)			
D-10b(2) Volume of Waste	270.14(a),(b) 264.1101(c)(1)(ii)	Describe how owner/operator will maintain level of stored and/or treated hazardous waste within containment walls of unit so that height of any containment wall is not exceeded.		
D-10b(3) Tracking of Waste Out of Unit	270.14(a),(b) 264.1100(e); 264.1101(c)(1)(iii)			
D-10b(4) Liquids Removal	270.14(a),(b) 264.1101(b)(2)(ii), (b)(3)	Describe sumps and liquid removal methods for liquids collection and leak detection systems. Indicate fate of collected liquids and leachates, which are considered hazardous waste.		
D-10b(5) Management of Incompatible Wastes	270.14(a),(b) 264.1101(a)(3)	Indicate whether incompatible waste or treatment reagents will be placed in the unit or its secondary containment system.		
D-10b(6) Management of Liquids and Nonliquids in the Same Unit	270.14(a),(b) 264.1101(d)(2),(3)	For containment buildings that contain areas both with and without secondary containment, describe measures to prevent release of liquids or wet materials into areas without secondary containment.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - CONTAINMENT BUILDINGS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-10b(7) Fugitive Dust Emissions	270.14(a),(b) 264.1100(d); 264.1101(c)(1)(iv); Part 60 Appendix A			
D-10b(8) Treatment of Wastes	270.14(a),(b) 264.1101(b)(3)(ii)	If treatment of waste is conducted in containment building, describe how treatment will be conducted to prevent release of liquids, wet materials, or liquid aerosols to other portions of building.		
D-10b(9) Equipment Decontamination	270.14(a),(b) 264.1101(c)(1)(iii)	Identify area used to decontaminate equipment and collect and manage any rinsate from decontamination. Identify fate of decontamination residues.		
D-10c Containment Buildings as Tank Secondary Containment	270.14(a),(b) 264.1101(b)(3)(iii)	Indicate whether containment building is intended to serve as a secondary containment system for a tank placed in the building. The unit must meet the requirements of 264.193(b), 264.193(c)(1), 264.193(c)(2), and 264.193(d)(1).		

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION D. PROCESS INFORMATION - DRIP PADS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-11 Drip Pads	270.26; 264.570 - .575			
D-11a Drip Pad Description	270.26(c); 264.573(a)			
D-11a(1) Construction	270.26(c); 264.573(a)(1) - (4); 264.573(b)(1) - (3)	Provide a description of the unit including dimensions and materials of construction. Drip pads must: be constructed of nonearthen materials; be sloped to free-drain treated wood drippage, rain and other waters or wastes to the associated collection system; and, have a curb or berm around the perimeter.		
D-11a(1)(a) Existing Drip Pads	270.26(c); 264.572(a); 264.573(a)(4)	Existing drip pads must have a hydraulic conductivity of less than or equal to 1×10^{-7} centimeters per second. Provide a copy of the most recent written assessment of the drip pad. This assessment must be reviewed and certified by an independent, qualified registered professional engineer (PE). The assessment must be reviewed, updated and recertified annually.		
D-11a(1)(b) New Drip Pads	270.26(c); 264.572(b); 264.573(b)	New drip pads must have a synthetic liner installed below the pad. The liner must be constructed of materials that will prevent waste from being absorbed into the liner. A leakage detection system and a leakage collection system are also required.		
D-11b(1) Preventive Maintenance	270.26(c); 264.573(c)	Drip pads must be maintained to remain free of cracks, gaps, corrosion, etc., that could cause a release of hazardous waste.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION D. PROCESS INFORMATION - DRIP PADS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
D-11b(2) Prevent Runon and Runoff	270.26(c); 264.573(d), (e), (L)	The drip pad and associated collection system must be operated to prevent runoff. Unless protected by a structure, the runon and runoff control systems must have the capacity to prevent flow onto the drip pad from a 24-hour, 25-year storm. All collection systems must be emptied as soon as possible after storms to maintain design capacity.		
D-11b(3) Certification	270.26(c); 264.573(g)	Provide certification from a qualified, registered PE stating the drip pad meets the requirements of section 264.573.		
D-11b(4) Maintaining Collection System	270.26(c); 264.573(h)	Provide plan for removal of drippage and accumulated precipitation from collection system as necessary to prevent overflow.		
D-11b(5) Cleaning Drip Pad Surface	270.26(c); 264.573(i),(j)	Drip pad surface must be cleaned appropriately to allow weekly inspection of the entire surface and to minimize tracking of hazardous waste or hazardous waste constituents off the drip pad.		
D-11b(6) Recordkeeping	270.26(c); 264.573(k)	Maintain records sufficient to document that all treated wood is held on the pad following treatment in accordance with the requirements of this section.		

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION E. GROUNDWATER MONITORING

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
E-1 Exemption from Groundwater Protection Requirements	270.14(c)			
E-1a Waste Piles	270.18(b); 264.90(b)(2), (5)			
E-1b Landfill	270.14(c); 264.90(b)(2)			
E-1c No Migration	270.14(c); 264.90(b)(4)			
E-1d Drip Pad	270.26(b); 264.90(b)(2)			
E-2 Interim Status Groundwater Monitoring Data	270.14(c)(1)			
E-2a Description of Wells	270.14(c)(1)	A copy of topographic map provided for 270.14(b) on which location and identification of each interim status monitoring well is indicated. Details of design and construction of each interim status monitoring well.		
E-2b Description of Sampling and Analysis Procedures	270.14(c)(1); 265.92	A copy of facility's groundwater sampling and analysis plan.		
E-2c Monitoring Data	270.14(c)(1); 265.92	Provide all interim status monitoring results.		
E-2d Statistical Procedures	270.14(c)(1); 265.93	Provide information relating to statistical procedures.		
E-2e Groundwater Assessment Plan	270.14(c)(1); 265.93(d)(2)	If required, based on statistical comparison results, provide specific plan for groundwater quality assessment program along with results obtained from implementation of plan.		
E-3 General Hydrogeologic Information	270.14(c)(2)	Include description of regional and site-specific geologic and hydrogeological setting.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION E. GROUNDWATER MONITORING

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
E-4 Topographic Map Requirements	270.14(c)(2), (3),(4)(i)			
E-5 Contaminant Plume Description	270.14(c)(2), (4),(7)	In some cases, contaminant plumes may be defined under groundwater quality assessment programs carried out during interim status period which may not address complete list of Appendix VIII constituents as required under 270.14(c)(4). Additional monitoring may be required to identify concentration of each Appendix VIII constituent in plume.		
E-6 General Monitoring Program Requirements	270.14(c)(5); 264.90(b)(4); 264.97			
E-6a Description of Wells	270.14(c)(5); 264.97(a),(b),(c)			
E-6b Description of Sampling and Analysis Procedures	270.14(c)(5); 264.97(d),(e),(f)			
E-6c Procedures for Establishing Background Quality	270.14(c)(5); 264.97(a)(1),(g)			
E-6d Statistical Procedures	270.14(c)(5); 264.97(h), (i)(1),(5),(6)			
E-6d(1) Parametric Analysis of Variance (ANOVA)	270.14(c)(5); 264.97(h)(1), (i)(2)			
E-6d(2) Nonparametric ANOVA (based on ranks)	270.14(c)(5); 264.97(h)(2), (i)(2)			
E-6d(3) Tolerance or Prediction Interval Procedure	270.14(c)(5); 264.97(h)(3), (i)(4)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION E. GROUNDWATER MONITORING

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
E-6d(4) Control Chart Approach	270.14(c)(5); 264.97(h)(4), (i)(3)			
E-6d(5) Alternative Approach	270.14(c)(5); 264.97(h)(5),(i)			
E-7 Detection Monitoring Program	270.14(c)(6); 264.91(a)(4); 264.98			
E-7a Indicator Parameters, Waste Constituents, Reaction Products to be Monitored	270.14(c)(6) (i); 264.98(a)			
E-7b Groundwater Monitoring System	270.14(c)(6) (ii); 264.97(a) (2),(b),(c); 264.98(b)	Identify number, location, and depth of each well, and describe well construction materials.		
E-7c Background Groundwater Concentration Values for Proposed Parameters	270.14(c)(6) (iii); 264.97 (g); 264.98(c), (d)			
E-7d Proposed Sampling and Analysis Procedures	270.14(c)(6) (iv); 264.97 (d),(e),(f); 264.98(d),(e), (f)			
E-7e Statistically Significant Increase in any Constituent or Parameter Identified at any Compliance Point Monitoring Well	270.14(c)(6); 264.98(g); Part 264 Appendix IX			
E-8 Compliance Monitoring Program	270.14(c)(7); 264.99			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION E. GROUNDWATER MONITORING

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
E-8a Waste Description	270.14(c)(7)(i)	Description must include historical records of volumes, types, and chemical composition of waste placed in units in waste management areas.		
E-8b Characterization of Contaminated Groundwater	270.14(c)(7)(ii)	For each well at point of compliance and for each background well, provide concentrations of each constituent in 261 Appendix VIII, major cations and anions, and constituents listed in Table 1 of 264.94, if not already mentioned above.		
E-8c Hazardous Constituents to be Monitored in Compliance Program	270.14(c)(7)(iii); 264.98(g)(3); 264.99(a)(1)			
E-8d Concentration Limits	270.14(c)(7)(iv); 264.94, 264.97(g),(h); 264.99(a)(2)			
E-8e Alternate Concentration Limits	270.14(c)(7)(iv); 264.94(b); 264.99(a)(2)	Provide justification for establishing alternate concentration limits. Justification must address the following two factors.		
E-8e(1) Adverse Effects on Groundwater Quality	270.14(c)(7)(iv); 264.94(b)(1)			
E-8e(2) Potential Adverse Effects	270.14(c)(7)(iv); 264.94(b)(2)			
E-8f Engineering Report Describing Groundwater Monitoring Systems	270.14(c)(7)(v); 264.95; 264.97(a)(2), (b),(c); 264.99(b)	Provide details supporting representative nature of groundwater quality at background monitoring points and compliance monitoring point.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION E. GROUNDWATER MONITORING

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
E-8g	Proposed Sampling and Statistical Analysis Procedures for Groundwater Data	270.14(c)(7)(vi); 264.97(d),(e),(f); 264.99(c) - (g)		
E-8h	Groundwater Protection Standard Exceeded at Compliance Point Monitoring Well	270.14(c)(8); 264.99(h),(i)		
E-9	Corrective Action Program	270.14(c)(8); 264.99(j); 264.100		
E-9a	Characterization of Contaminated Groundwater	270.14(c)(8)(i)	For each well at point of compliance and for each background well, provide concentrations of each constituent in 261 Appendix VIII, major cations and anions, and constituents listed in Table 1 of 264.94, if not already determined by the above.	
E-9b	Concentration Limits	270.14(c)(8)(ii); 264.94; 264.100(a)(2)		
E-9c	Alternate Concentration Limits	270.14(c)(8)(ii); 264.94(b); 264.100(a)(2)	Provide justification for establishing alternate concentration limits. Justification must address the following two factors.	
E-9c(1)	Adverse Effects on Groundwater Quality	270.14(c)(8); 264.94(b)(1)		
E-9c(2)	Potential Adverse Effects	270.14(c)(8); 264.94(b)(2)		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION E. GROUNDWATER MONITORING				
Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
E-9d	Corrective Action Plan	270.14(c)(8)(iii); 264.100(b)	Provide detailed plans and engineering report on corrective actions proposed for facility, including maps of engineered structures, construction details, plans for removing waste, description of treatment technologies, effectiveness of correction program, description of reinjection system, additional hydrogeologic data, operation and maintenance plans, and closure and post-closure plans.	
E-9e	Groundwater Monitoring Program	270.14(c)(8)(iv); 264.100(d)		
E-9e(1)	Description of Monitoring System	270.14(c)(7)(v),(8)		
E-9e(2)	Description of Sampling and Analysis Procedures	270.14(c)(7)(v),(8)		
E-9e(3)	Monitoring Data and Statistical Analysis Procedures	270.14(c)(7)(v),(8)		
E-9e(4)	Reporting Requirements	270.14(c)(7); 264.100(g)		

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION F. PROCEDURES TO PREVENT HAZARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-1 Security	270.14(b)(4); 264.14			
F-1a Security Procedures and Equipment	270.14(b)(4); 264.14	Unless waiver is granted, facility must have surveillance system or a barrier to entry.		
F-1a(1) 24-Hour Surveillance System	270.14(b)(4); 264.14	Monitor/camera, guards, or personnel must continuously monitor or control access to active parts of facility.		
F-1a(2)(a) Barrier	270.14(b)(4); 264.14	This item required if 24-hour surveillance system is not feasible. Describe artificial or natural barrier.		
F-1a(2)(b) Means to Control Entry	270.14(b)(4); 264.14	This item required if 24-hour surveillance system is not feasible.		
F-1a(3) Warning Signs	270.14(b)(4); 264.14	Signs in english must be posted at each entrance, and be legible from 25 feet.		
F-1b Waiver	270.14(b)(4); 264.14	Owner/operator must prevent unknowing entry, and minimize unauthorized entry of persons or livestock unless can demonstrate:		
F-1b(1) Injury to Intruder	270.14(b)(4); 264.14	Assure physical contact with waste, structure, or equipment will not injure unknowing intruder.		
F-1b(2) Violation Caused by Intruder	270.14(b)(4); 264.14	Assure disturbance of waste or equipment by unauthorized intruder will not cause a violation.		
F-2 Inspection Schedule	270.14(b)(5); 264.15	Inspection is required for monitoring equipment, safety emergency equipment, communication and alarm systems, decontamination equipment, security devices, and operating and structural equipment.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION F. PROCEDURES TO PREVENT HAZARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-2a	General Inspection Requirements	270.14(b)(5); 264.15(a),(b); 264.33		
F-2a(1)	Types of Problems	270.14(b)(5); 264.15(b)(3)	Inspection checklist must identify types of problem.	
F-2a(2)	Frequency of Inspections	270.14(b)(5); 264.15(b)(4)	Based on rate of deterioration of equipment and probability of environmental or human health incident.	
F-2a(3)	Schedule of Remedial Action	270.14(b)(5); 264.15(c)	Owner/operator must immediately remedy any deterioration or malfunction of equipment or structures to ensure problem does not lead to environmental or human health hazard.	
F-2a(4)	Inspection Log	270.14(b)(5); 264.15(d)	Provide example log or summary.	
F-2b	Specific Process Inspection Requirements	270.14(b)(5)		
F-2b(1)	Container Inspection	270.14(b)(5); 264.174	Inspect at least weekly.	
F-2b(2)	Tank System Inspection	270.14(b)(5); 264.195	Owner/operator must develop schedule and inspect at least once daily.	
F-2b(2)(a)	Tank System External Corrosion and Releases	270.14(b)(5); 264.195(b)(1)	Owner/operator must inspect that aboveground portion and check for corrosion.	
F-2b(2)(b)	Tank System Construction Materials and Surrounding Area	270.14(b)(5); 264.195(b)(3)	Observe construction materials and area around external portion for signs of release of hazardous waste.	
F-2b(2)(c)	Tank System Overfilling Control Equipment	270.14(b)(5); 264.195(a)	Develop and follow schedule for inspection of overfill controls.	
F-2b(2)(d)	Tank System Monitoring and Leak Detection Equipment	270.14(b)(5); 264.195(b)(2)	Analyze data gathered from monitoring equipment to ensure tank is operating according to design.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION F. PROCEDURES TO PREVENT HAZARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-2b(2)(e) Tank System Cathodic Protection	270.14(b)(5); 264.195(c)	Inspect according to schedule.		
F-2b(3) Waste Pile Inspection	270.14(b)(5); 270.18(d); 264.254(b)	Describe how waste pile will be inspected daily and after storms.		
F-2b(3)(a) Runon and Runoff Control System	270.14(b)(5); 264.254(b)(1)	Inspections should identify deterioration, malfunction, or improper operation of control system.		
F-2b(3)(b) Wind Dispersal System	270.14(b)(5); 264.254(b)(2)	Facility should inspect proper function of wind dispersal system.		
F-2b(3)(c) Leachate Collection and Removal System	270.14(b)(5); 270.18 (d); 264.254(b)(3), (c)	Determine whether there is leachate present in functioning double liner system.		
F-2b(4) Surface Impoundment Inspection	270.14(b)(5); 270.17(c); 264.226(b),(c)	Describe how each surface impoundment will be inspected to meet requirements of monitoring and inspection and waiver requirement.		
F-2b(4)(a) Condition Assessment	270.14(b)(5); 264.226(b)	Describe how surface impoundment will be inspected weekly and after storms.		
F-2b(4)(a)(1) Overtopping Control System	270.14(b)(5); 264.226(b)(1)	Inspect for deteriorating, malfunction, or improper operation of control system.		
F-2b(4)(a)(2) Impoundment Contents	270.14(b)(5); 264.226(b)(2)	Inspect for sudden drop in level of impoundment contents.		
F-2b(4)(a)(3) Dikes and Containment Devices	270.14(b)(5); 264.226(b)(3)	Inspect for severe erosion in containment devices.		
F-2b(4)(b) Structural Integrity	270.14(b)(5); 264.226(c)	Specify procedure for assessing integrity of surface impoundments.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION F. PROCEDURES TO PREVENT HAZARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-2b(4)(c) Leak Detection System	270.14(b)(5); 270.17(c); 264.226(d)	Describe how double liner system and leak detection system will be inspected.		
F-2b(5)(a) Incinerator and Associated Equipment	270.14(b)(5); 264.347(b)	Describe procedures for daily visual inspection of incinerator and associated equipment.		
F-2b(5)(b) Incinerator Waste Feed Cutoff System and Alarms	270.14(b)(5); 264.347(c)	Describe procedure and frequency of testing emergency waste feed cutoff system.		
F-2b(6) Landfill Inspection	270.14(b)(5); 264.303(b)	For operating landfill, describe how it will be inspected weekly and after storms.		
F-2b(6)(a) Runon and Runoff Control System	270.14(b)(5); 264.303(b)(1)	Deterioration, malfunction, or improper operation of runon and runoff control system.		
F-2b(6)(b) Wind Dispersal Control System	270.14(b)(5); 264.303(b)(2)	Proper functioning of wind dispersal control systems, where present.		
F-2b(6)(c) Leachate Collection and Removal System	270.14(b)(5); 264.303(b)(3), (c)	In properly functioning double liner system, is there a presence of leachate? Leak detection required under 264.301(c) or 264.301(d) must record amount of leakage from each system weekly.		
F-2b(7) Land Treatment Facility Inspection	270.14(b)(5); 264.273(g)	Describe how land treatment facility will be inspected weekly and after storms.		
F-2b(7)(a) Runon and Runoff Control System	270.14(b)(5); 264.273(g)(1)			
F-2b(7)(b) Wind Dispersal Control System	270.14(b)(5); 264.273(g)(2)			
F-2b(8) Miscellaneous Unit Inspections	270.14(b)(5); 264.602	Provide inspection program that ensures compliance with standards in 264.601 and 270.23.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION F. PROCEDURES TO PREVENT HAZARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-2b(9) Boilers and Industrial Furnaces (BIF) Inspection	270.14(b)(5); 264.15; 266.102(a)(2)(ii),(e)(8); 266.111(e)(3)	Demonstrate that BIF will be visually inspected daily, automatic waste feed cutoff inspected at least weekly, and direct transfer area at least once an hour when waste is being transferred.		
F-2b(10) Containment Building Inspection	270.14(b)(5); 264.1101(c)(3), (4)	Demonstrate owner/operator will inspect and document at least weekly, monitoring equipment, leak detection equipment, containment building, and surrounding areas for waste releases.		
F-2b(11) Drip Pad Inspection	270.14(b)(5); 264.574	Demonstrate that the drip pad owner/operator will inspect and document at least weekly and after storms, the leak detection and collection equipment, the drip pad surface, and the runoff and runoff control systems for evidence of deterioration, malfunction, improper operation, or leakage of hazardous waste.		
F-3 Waiver or Documentation of Preparedness and Prevention Requirements	270.14(b)(6) 264.32(a) - (d)	Facility must submit justification for any waiver to requirements of this section.		
F-3(a) Equipment Requirements	270.14(b); 264.32			
F-3(a)(1) Internal Communication	270.14(b); 264.32(a)	Describe internal communication or alarm system used to provide immediate emergency instruction to personnel.		
F-3(a)(2) External Communication	270.14(b); 264.32(b)	Describe device for summoning emergency assistance from local police, fire, or state/local emergency response.		
F-3(a)(3) Emergency Equipment	270.14(b); 264.32(c)	Demonstrate that portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment are available.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION F. PROCEDURES TO PREVENT HAZARDS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-3(a)(4)	Water and Fire Control	270.14(b); 264.32(d)	Demonstrate facility has adequate fire control systems, water volume and pressure, foaming equipment, automatic sprinklers, etc.	
F-3(a)(5)	Testing and Maintenance of Equipment	270.14(b); 264.33	Demonstrate communication, alarm, fire control equipment, spill control equipment, and decontamination equipment are tested and maintained.	
F-3(a)(6)	Access to Communication or Alarm System	270.14(b); 264.34	When waste is being hauled, all personnel must have access to internal alarm or communication device.	
F-3(b)	Aisle Space Requirement	270.14(b); 264.35	Aisle space is required for unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment in case of emergency.	
F-3(c)	Documentation of Arrangements with:	270.14(b); 264.37	Owner/operator must make arrangements, as appropriate, with type of waste and hazard potential, for the potential need for services.	
F-3(c)(1)	Police/Fire Department	270.14(b); 264.37(a)(1)	Arrange to familiarize local fire department and police with facility.	
F-3(c)(2)	Emergency Response Teams	270.14(b); 264.37(a)(2), (a)(3)		
F-3(c)(3)	Local Hospitals	270.14(b); 264.37(a)(4)	Arrange to familiarize local hospital with properties of hazardous waste and possible types of injury or illness to expect.	
F-3(c)(4)	Document Agreement Refusal	270.14(b); 264.37(b)	Document refusal to enter into a coordination agreement.	
F-4	Prevention Procedures, Structures, and Equipment	270.14		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION F. PROCEDURES TO PREVENT HAZARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-4(a) Unloading Procedures	270.14(b)(8)(i)	Describe procedure used to prevent hazards in unloading operations. Identify possible loading and unloading hazards, and document steps taken to minimize or eliminate possibility of these hazards.		
F-4(b) Runoff	270.14(b)(8)(ii)	Describe procedure used to prevent runoff from hazardous waste handling areas.		
F-4(c) Water Supplies	270.14(b)(8)(iii)	Describe procedure, structures, equipment used to prevent contamination of water supply.		
F-4(d) Equipment and Power Failure	270.14(b)(8)(iv)	Describe procedure used to mitigate the effects of equipment failure and power outages.		
F-4(e) Personnel Protection Procedures	270.14(b)(8)(v)	Describe procedure, structures, equipment used to prevent contamination of personnel to hazardous waste.		
F-4(f) Procedures to Minimize Releases to the Atmosphere	270.14(b)(8)(vi)	Describe procedure, structures, equipment used to prevent hazardous waste releases to the atmosphere.		
F-5 Prevention of Reaction of Ignitable, Reactive, and Incompatible Waste	270.14(b)(9)			
F-5a Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Wastes	270.14(b)(9); 264.17(a),(b)	Waste must be protected from sources of ignition or reaction. Describe precautions taken by facility to prevent actual ignition, including sources of spontaneous ignition and radiant heat. Owner/operator must designate safe areas for smoking and open flames. Post signs where hazard exists.		
F-5b General Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Waste	270.14(b)(9); 264.17(a)	Describe precautions taken by facility to prevent reactions that generate heat, produce flammable byproducts, cause risk of fire or explosion, threaten structural integrity, or pose threat to human life or the environment.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION F. PROCEDURES TO PREVENT HAZARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-5b(1)	Documentation of Adequacy of Procedures	270.14(b); 264.17(c)	Published literature, trial test, waste analyses, or similar processes may be used.	
F-5c	Management of Ignitable or Reactive Wastes in Containers	270.15(c); 264.176	Demonstrate that ignitable containers are at least 15 meters from facility property line.	
F-5d	Management of Incompatible Wastes in Containers	270.15(d); 264.177	Describe procedures that ensure incompatible wastes and materials are not placed in same container.	
F-5e	Management of Ignitable or Reactive Wastes in Tank Systems	270.16(j); 264.198	Describe operation procedures and how facility treats waste so it is no longer ignitable or how facility stores ignitable or reactive waste.	
F-5f	Management of Incompatible Wastes in Tank Systems	270.16(j); 264.199	Demonstrate that incompatible waste and materials are not stored in same tank.	
F-5g	Management of Ignitable or Reactive Wastes Placed in Waste Piles	270.18(g); 264.256	If waste is reactive or ignitable, describe how handling process will render waste pile nonreactive and/or nonignitable.	
F-5h	Management of Incompatible Wastes Placed in Waste Piles	270.18(h); 264.257	Document how hazardous waste piles of incompatible materials are separated to render them nonreactive.	
F-5i	Management of Ignitable or Reactive Wastes in Surface Impoundments	270.17(h); 264.229	If waste is reactive or ignitable, describe how handling process will render surface impoundments nonreactive and/or nonignitable.	
F-5j	Management of Incompatible Wastes in Surface Impoundments	270.17(h); 264.230	Document how hazardous surface impoundments of incompatible materials are separated to render them nonreactive.	
F-5k	Management of Ignitable or Reactive Wastes Placed in Landfills	270.21(f); 264.312	If waste is reactive or ignitable, describe how handling process will prevent reaction or ignition to landfills.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION F. PROCEDURES TO PREVENT HAZARDS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
F-5l	Management of Incompatible Wastes Placed in Landfills	270.21(g); 264.313	Document how hazardous landfills of incompatible materials are separated to render them nonreactive.	
F-5m	Management of Ignitable or Reactive Wastes Placed in Land Treatment Units	270.20(g); 264.281	If waste is reactive or ignitable, describe how handling process will render land treatment units nonreactive and/or nonignitable.	
F-5n	Management of Incompatible Wastes Placed in Land Treatment Units	270.20(h); 264.282	Document how land treatment unit piles of incompatible materials are separated to render them nonreactive.	
F-5o	Management of Incompatible Wastes Placed in Containment Buildings	270.14(a); 264.1101(a)(3)	Subsections include design, primary and secondary containment, barriers to prevent migration, leak detection, and facility logs.	

Notes:

^a Considerations in addition to the requirements presented in the regulations.^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION G. CONTINGENCY PLAN

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
G-1 Contingency Plan	270.14(b)(7)			
G-2 Emergency Coordinators	270.14(b)(7); 264.52(d); 264.55	There must at least be one primary emergency coordinator available at all times.		
G-3 Implementation	270.14(b)(7); 264.52(a); 264.56(d)	Emergency coordinator to determine that facility has had a release, fire, or explosion that could threaten human health or the environment outside facility.		
G-4 Emergency Actions	270.14(b)(7); 264.56			
G-4a Notification	270.14(b)(7); 264.56(a)	Describe the method for immediate notification of facility personnel and necessary state and local agencies.		
G-4b Identification of Hazardous Materials	270.14(b)(7); 264.56(b)	Observation, records or manifest, or chemical analysis may be used by emergency coordinator.		
G-4c Assessment	270.14(b)(7); 264.56(c),(d)	Direct and indirect effects must be considered.		
G-4d Control Procedures	270.14(b)(7); 264.52(a)	Contingency plan must describe actions facility personnel must take in response to fires, explosions, or any unplanned release of hazardous waste to air, soil, or surface water.		
G-4e Prevention of Recurrence of Spread of Fires, Explosions, or Releases	270.14(b)(7); 264.56(e)	Measures must include stopping processes and operations, collecting and containing release of waste, and removing or isolating containers.		
G-4e(1) Monitor for Leaks, Pressure Buildup, Gas Generation or Ruptures of Released Material	270.14(b)(7); 264.56(f)	This item applies if facility stops operations.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION G. CONTINGENCY PLAN

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
G-4f Storage, Treatment, and Disposal of Released Material	270.14(b)(7); 264.56(g)	After emergency, emergency coordinator must provide for treating, storing, and disposing of recovered waste.		
G-4g Incompatible Waste	270.14(b)(7); 264.56(h)(1)	Until cleanup is complete, assure that incompatible waste is not stored together.		
G-4h Post-Emergency Equipment Management	270.14(b)(7); 264.56(h)(2)	Decontamination is required for emergency equipment.		
G-4h(1) Notification of Federal, State and Local Authorities before Resuming Operations	270.14(b)(7); 264.56(i)	Federal or state authorities must be notified within 15 days of occurrence.		
G-4i Container Spills and Leakage	270.14(b)(7); 264.52; 264.71	Specify procedures to be used when responding to container spills and leakage.		
G-4j Tank Spills and Leakage		For a tank or containment system from which there has been a leak or spill:		
G-4j(1) Stopping Waste Addition	270.14(b)(7); 264.196(a)	Document that the owner/operator will immediately stop the flow of hazardous waste.		
G-4j(2) Removing Waste	270.14(b)(7); 264.196(b)	Owner/operator will, within 24 hours after leak detected, remove waste and allow inspection and repair of the tank system to be performed.		
G-4j(3) Containment of Visible Releases	270.14(b)(7); 264.196(c)	Specify that a visual inspection of a release will be conducted, demonstrate further mitigation of leak will be prevented, and visible contamination will be removed and disposed of properly.		
G-4j(4) Notification Reports	270.14(b)(7); 264.196(d)	Demonstrate that any release to the environment will be reported to regional administrator within 24 hours of detection.		
G-4j(5) Provisions of Secondary Containment, Repair, or Closure	270.14(b)(7); 264.196(e)	Provision of secondary containment repair, otherwise closure is required.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION G. CONTINGENCY PLAN

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
G4-k Surface Impoundment Spills and Leakage	270.14(b)(7); 264.227	Surface impoundments must be removed from service when:		
G4-k(1) Emergency Repairs	270.14(b)(7); 264.227	Describe procedures for removing surface impoundments from service.		
G4-k(1)(a) Stopping Waste Addition	270.14(b)(7); 264.227(b)(1)	Procedures for stopping waste addition to the impoundment.		
G4-k(1)(b) Containing Leaks	270.14(b)(7); 264.227(b)(2)	Procedures for containing leak.		
G4-k(1)(c) Stopping Leaks	270.14(b)(7); 264.227(b)(3)	Procedures for stopping leak.		
G4-k(1)(d) Preventing Catastrophic Failure	270.14(b)(7); 264.227(b)(4)	Procedures to stop or prevent catastrophic failure.		
G4-k(1)(e) Emptying the Impoundment	270.14(b)(7); 264.227(b)(5)	Procedures for emptying impoundment, if necessary.		
G4-k(2) Certification	270.14(b)(7); 264.226 (c); 264.227(d)(1)	Procedures for recertifying a dike's structural integrity if impoundment is removed from service due to actual or imminent failure.		
G4-k(3) Repairs as a Result of Sudden Drop	270.14(b)(7); 264.227(d)(2)	Procedures to follow if impoundment is removed from service due to sudden drop in liquid level of the following:		
G4-k(3)(a) Existing Portions of Surface Impoundment	270.14(b)(7); 264.227(d)(2)(i)	Installation of liner for any existing portion of impoundment.		
G4-k(3)(b) Other Portions of the Surface Impoundment	270.14(b)(7); 264.227(d)(2)(ii)	Certification by qualified engineer for other than existing portions of the impoundment.		
G4-l Containment Building Leaks	270.14(b)(7); 264.1101(c)(3)	Through active life of building if owner/operator detects condition that could lead to release of hazardous waste.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION G. CONTINGENCY PLAN

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
G-4l(1) Repair of Containment Building	270.14(b)(7); 264.1101(c)(3)	Within 7 days of detection, owner/operator must contact regional administrator. Enter record of discovery, remove contaminated portion of building from service, determine repair steps, and establish schedule for repair.		
G-4l(2) Certification Following Repair	270.14(b)(7); 264.1101(c)(3)(ii i)	Upon completion of repairs owner/operator must notify regional administrator.		
G-4m Drip Pad Spills and Leakage	270.14(b)(7); 264.573(m)	Throughout the active life of the drip pad, if a condition is detected that may have or has caused a release of hazardous waste, it must be repaired within a reasonably prompt period of time.		
G-4m(1) Stopping Waste Addition	270.14(b)(7); 264.573(m)(1)(ii)	Upon detection of leakage in the leak detection system, immediately remove the affected portion of the drip pad from service.		
G-4m(2) Determine Appropriate Cleanup and Repair	270.14(b)(7); 264.573(m)(1)(iii)	Establish a schedule for accomplishing the repairs.		
G-4m(3) Notification	270.14(b)(7); 264.573(m)(1)(iv)	Within 24 hours after discovery of the condition, notify the Regional Administrator or state director. Within 10 working days, provide written notice and a description of the repairs to be made to the drip pad.		
G-4m(4) Certification	270.14(b)(7); 264.573(m)(3)	Upon completing all repairs and clean up, provide certification signed by an independent, qualified registered PE.		
G-5 Emergency Equipment	270.14(b)(7); 264.52(e)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION G. CONTINGENCY PLAN				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
G-6 Arrangements with Local Authorities	270.14(b)(7); 264.37; 264.52(c)	Police and fire departments, hospitals, and emergency response teams must be notified by owner/operator. Document refusal to enter into a coordination agreement.		
G-7 Evacuation Plan for Facility Personnel	270.14(b)(7); 264.52(f)	Evacuation plans must include evacuation signals and primary and alternate evacuation routes.		
G-8 Required Report Procedures for Recordkeeping and Reporting to Federal Authority	270.14(b)(7); 264.56(j)	Owner/operator must note on operation record the time, date and details of incidents which require implementation of contingency plan.		
G-9 Location and Distribution of Contingency Plan	270.14(b)(7); 264.53	Copy of contingency plan must be maintained at facility and submitted to local authorities.		

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION H. PERSONNEL TRAINING				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
H-1	Outline of Introductory and Continuing Training Programs	270.14(b)(12); 264.16(a)(1)	Facility personnel must successfully complete classroom or on-the-job training which will allow them to responsibly perform in their positions.	
H-1a	Job Title/Job Description	270.14(b)(12); 264.16(d)1), (d)(2)	Owner or operator must maintain records of job titles, names of employees, job descriptions, and types and amounts of training given to employees.	
H-1b	Description of How Training will be Designed to Meet Actual Job Tasks	270.14(b)(12); 264.16(c),(d) (3)	Training must be conducted by a qualified person; there must also be an annual review of the training.	
H-1c	Training Director	270.14(b)(12); 264.16(a)(2)	Program must be directed by person trained in hazardous waste procedures.	
H-1d	Relevance of Training to Job Position	270.14(b)(12); 264.16(a)(2)	Training must include instruction on hazardous waste procedures relevant to each employee's position.	
H-1e	Training for Emergency Response	270.14(b)(12); 264.16(a)(3)	Personnel must minimally be familiar with emergency procedures, emergency equipment, and emergency systems.	
H-2	Maintenance of Training Records/Copy of Personnel Training Documents	270.14(b)(12); 264.16(b),(d) (4),(e)	Training records on current personnel must be kept until closure of facility. Training must be completed within 6 months after date of employment.	

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-1	Closure Plans	270.14(b)(13)		
I-1a	Closure Performance Standard	270.14(b)(13); 264.111	Describe how closure: minimizes the need for further maintenance; controls, minimizes, or eliminates the post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and complies with the closure requirements of Subpart G and unit-specific closure requirements.	
I-1b	Time and Activities Required for Partial Closure and Final Closure Activities	270.14(b)(13); 264.112(b)(1) through 264.112(b)(7)	Describe the time and all activities required for: partial closure, if applicable; final closure; and maximum extent of operation that will be active during life of facility.	
I-1c	Maximum Waste Inventory	270.14(b)(13); 264.112(b)(3)		
I-1d	Schedule for Closure	270.14(b)(13); 264.112(b)(6)		
I-1(d)(1)	Time Allowed for Closure	270.14(b)(13); 264.112(b)(2); 264.113(a) and (b)		
I-1d(1)(a)	Extension for Closure Time	270.14(b)(13); 264.113(a) and (b)		
I-1e	Closure Procedures	270.14(b)(13); 264.112; 264.114		
I-1e(1)	Inventory Removal	270.14(b)(13); 264.112(b)(3)	Discuss methods for removing, transporting, treating, storing, or disposing of all hazardous wastes and identify the type(s) of off-site hazardous waste management units to be used.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS					
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS					
Section and Requirement		Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-1e(2)	Disposal or Decontamination of Equipment, Structure, and Soils	270.14(b)(13); 264.112(b)(4); 264.114	Provide a detailed description of the steps needed to decontaminate or dispose of all facility equipment and structures. Demonstrate that any hazardous constituents (i.e., Appendix VII) left at the unit will not impact any environmental media in excess of Agency-established exposure levels and that direct contact will not pose a threat to human health and the environment.		
I-1e(3)	Closure of Disposal Units/Contingent Closures	270.14(b)(13)			
I-1e(3)(a)	Disposal Impoundments	270.14(b)(13); 264.228(a)(2)			
I-1e(3)(a)(i)	Elimination of Liquids	270.14(b)(13)			
I-1e(3)(a)(ii)	Waste Stabilization	270.14(b)(13); 264.228(a)(2) (ii)			
I-1e(3)(b)	Cover Design	270.14(b)(13); 264.228(a)(2) (iii);264.310 (a)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-1e(3)(c) Minimization of Liquid Migration	270.14(b)(13); 264.228(a)(2) (iii)(A); 264.310(a)(1)	Draft RCRA Guidance Document entitled <u>Landfill (Design--Liner Systems and Final Cover (1982)</u> , suggests the following design for landfill cover systems (from top to bottom): a vegetated top cover, with a minimum of 24 inches of topsoil; a middle drainage layer (at least one foot thick with a saturated conductivity of not less than 1×10^{-3} cm/sec) overlain by a geotextile filter fabric or graded granular filter; and a low permeability bottom layer consisting of two components: an upper component of at least a 20 mil synthetic membrane protected above and below by at least six inches of bedding material, a lower component of at least 24 inches of low permeability (maximum hydraulic conductivity of 1×10^{-7} cm/sec) soil emplaced in lifts not exceeding six inches. For cover designs different than EPA-recommended designs, provide engineering calculations showing the proposed cover will provide long-term minimization of liquid migration through the cover.		
I-1e(3)(d) Maintenance Needs	270.14(b)(13); 264.228(a)(2) (iii)(B); 264.310(a)(2)			
I-1e(3)(e) Drainage and Erosion	270.14(b)(13); 264.228(a)(2) (iii)(C); 264.310(a)(3)	The following information should be provided: data demonstrating that the proposed final slopes will not cause significant cover erosion; description of drainage materials and their permeabilities; engineering calculations demonstrating free drainage of precipitation off of and out of the cover; and estimation of the potential for drainage-layer clogging.		
I-1e(3)(f) Settlement and Subsidence	270.14(b)(13); 264.228(a)(2) (iii)(D); 264.310(a)(4)	Include the following information: potential foundation compression; potential soil liner compression; and potential waste consolidation and compression resulting from waste dewatering, biological oxidation and chemical conversion of solids to liquids.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-1e(3)(g) Cover Permeability	270.14(b)(13); 264.228(a)(2) (iii)(E); 264.310(a)(5)			
I-1e(3)(h) Freeze/Thaw Effects	270.14(b)(13); 264.228(a)(2) (iii); 264.310(a)	Identify the average depth of frost penetration and describe the effects of freeze/thaw cycles on the cover.		
I-1e(4) Closure of Containers	270.14(b)(13); 264.178; 264.112(b)(3); 270.14(b)(13)	Address the following: hazardous waste removal and disposal; container decontamination and disposal; site decontamination and disposal including linings, soil, and washes; maximum inventory.		
I-1e(5) Closure of Tanks	270.14(b)(13); 264.197; 264.112(b)(3)	The description should address the following: waste removal from tanks and equipment; decontamination of all components; verification of decontamination; disposal of wastes and residues; and maximum inventory.		
I-1e(6) Closure of Waste Piles	270.14(b)(13); 270.18(h); 264.258	The description must address the following: procedure and criteria for determining whether or not decontamination has been successful; and sampling and analytical techniques.		
I-1e(7) Closure of Surface Impoundments	270.14(b)(13); 270.17(f); 264.228(a)(1), (2), and (b)	Surface impoundments without liners or with liners that do not meet the requirements must also provide contingent plans for closure in place and a contingent post-closure plan, except for impoundments requesting a liner exemption in accordance with D-4b.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-1e(8) Closure of Incinerators	270.14(b)(13); 264.351	Describe how, at closure, all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) will be removed from the incinerator, associated ductwork, piping, air pollution control equipment, sumps, and any other structures or operating equipment such as pumps, valves, etc., that have come into contact with the hazardous waste. Alternatively, describe how the incinerator and associated units and equipment will be dismantled and disposed of as a hazardous waste.		
I-1e(9) Closure of Landfills	270.14(b)(13); 270.21(e); 264.310(a)	Provide detailed plans and engineering report that describes the final cover components in detail. Cover installation and construction quality assurance procedures should be thoroughly described.		
I-1e(10) Closure of Land Treatment Facilities	270.14(b)(13); 264.280(a); 270.20(f)			
I-1e(10)(a) Continuance of Treatment	270.14(b)(13); 264.280(a)(1) through (7)			
I-1e(10)(b) Vegetative Cover	270.14(b)(13); 270.20(f); 264.280(a)(8)			
I-1e(11) Closure of Miscellaneous Units	270.14(b)(13); 270.23(a)(2)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-1e(12) Closure of Boilers and Industrial Furnaces	270.14(b)(13); 266.102(a)(2) (vii)	Describe how, at closure, all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) will be removed from the BIF unit, associated ductwork, piping, air pollution control equipment, sumps and any other structures or operating equipment such as pumps, valves, etc., that have come into contact with hazardous wastes. Alternatively, describe how the BIF and associated equipment will be dismantled and disposed of. If any wastes, waste residues, contaminated components, subsoils, structures or equipment remain after closure, provide plans for closing the BIF unit as a landfill and provide a post-closure care plan.		
I-1e(13) Closure of Containment Buildings	270.14(b)(13); 264.1102	Show that at closure all hazardous waste, hazardous waste residues, contaminated containment system, contaminated subsoils, and all structures and equipment contaminated with waste and leachate will be removed. If any wastes, waste residues, contaminated components, subsoils, structures or equipment remain after closure, provide plans for closing the containment building as a landfill and provide a post-closure care plan.		
I-2 Post-Closure Plans	270.14(b)(13)			
I-2a Inspection Plan	270.14(b)(13); 264.118(a); 264.197(b); 264.197(c)(2); 264.226(d)(2); 264.228(b); 264.228(c)(1) (ii); 264.258 (b); 264.258 (c)(1)(ii); 264.303(c); 264.310(b)	Rationale for determining the length of time between inspections should be provided.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-2b	Monitoring Plan	270.14(b)(13); 264.118(b)(1); 264.197(b); 264.197(c)(2); 264.226(d)(2); 264.228(b); 264.228(c)(1)(ii); 264.258(b); 264.258(c)(1)(ii); 264.303(c); 264.310(b)		
I-2c	Maintenance Plan	270.14(b)(13); 264.118(b)(2); 264.197(b); 264.197(c)(2); 264.228(b); 264.228(c)(1)(ii); 264.258(b); 264.258(c)(1)(ii); 264.310(b)	Describe the preventative and corrective maintenance procedures, equipment procedures, equipment requirements and material needs.	
I-2d	Land Treatment	270.14(b)(13); 264.280(c)	Describe the operation, inspection, and maintenance programs to be used at the closed facility.	
I-2e	Post-Closure Care for Miscellaneous Units	270.14(b)(13); 270.23(a)(3); 264.603		
I-2f	Post-Closure Security	270.14(b)(13); 264.117(b) and (c)	Demonstrate that for property where hazardous wastes remain after partial or final closure, post-closure use must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the facility's monitoring system.	
I-2g	Post-Closure Contact	270.14(b)(13); 264.118(b)(3)		
I-3	Notices Required for Disposal Facilities	270.14(b)(13)		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-3a	Certification of Closure	270.14(b)(13); 264.115; 264.280		
I-3b	Survey Plat	270.14(b)(13); 264.116		
I-3c	Post-Closure Certification	270.14(b)(13); 264.120		
I-3d	Post-Closure Notices	270.14(b)(13); 270.14(b)(14); 264.119		
I-4	Closure Cost Estimate	270.14(b)(15); 264.142	Estimate must equal final cost estimate. Estimate must be based on third party closing facility and may use on-site disposal if capacity will exist over life of facility. Estimate must be adjusted for annual inflation as stated in 264.142(b). Estimates may not assume zero cost for hazardous waste handling, and may not incorporate salvage value, facility structures/equipment, land, or other facility assets as offsets.	
I-5	Financial Assurance for Closure	270.14(b)(15); 264.143; 264.151		
I-5a	Closure Trust Fund	270.14(b)(15); 264.143(a); 264.151(a)(1)	Provide copy of fund agreement.	
I-5b	Surety Bond	270.14(b)(15); 264.143(b), (c); 264.151 (b),(c)		
I-5b(1)	Surety Bond Guaranteeing Payment into a Closure Trust Fund	270.14(b)(15); 264.143(b); 264.151(b)	Must provide bond or standby trust agreement. Bond must guarantee owner/operator will fund standby trust fund or provide financial assurance equal to penal sum.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-5b(2) Surety Bond Guaranteeing Performance of Closure	270.14(b)(15); 264.143(c); 264.151(c)	Guarantee owner/operator will perform closure required as worded in 246.151(c) and Subpart G.		
I-5(c) Closure Letter of Credit	270.14(b)(15); 264.143(d); 264.151(d)	Requires letter of credit for 1 year equal to amount of closure.		
I-5(d) Closure Insurance	270.14(b)(15); 264.143(e); 264.151(e)	Provide copy of certificate of insurance, wording requirement found in 264.151(e).		
I-5(e) Financial Test and Corporate Guarantee for Closure	270.14(b)(15); 264.143(f); 264.151(f),(h)	Signed letter by owner/operator or chief financial officer as specified in 264.151(f),(h) of applicant financial statement. If a parent corporation is guaranteeing closure care, corporate guarantee must accompany.		
I-5(f) Use of Multiple Financial Mechanism	270.14(b)(15); 264.143(g)	Financial assurance instruments must meet requirements stated in 264.143 (a),(b),(c),(d) or (e) that include trust funds, surety bonds, letter of credit, and insurance, respectively.		
I-5(g) Use of Multiple Financial Mechanism for Multiple Facilities	270.14(b)(15); 264.143(h)	Provide financial assurance mechanism showing amount of funds assured.		
I-6 Post-Closure Cost Estimate	270.14(b)(16); 264.144	Estimate must be based on third party closing facility and may use on-site disposal if capacity will exist over life of facility. Estimate must be adjusted for annual inflation as stated in 264.142(b).		
I-7 Financial Assurance Mechanism for Post Closure Care	270.14(b)(16); 264.145; 264.151			
I-7a Post-Closure Trust Fund	270.14(b)(16); 264.145(a); 264.151(a)(1)	Provide copy of post-closure fund agreement. Wording requirements outlined in 264.151(a)(1).		
I-7b Surety Bond	270.14(b)(16); 264.145(b),(c); 264.151(b),(c)	264.145(b),(c) spells out requests for owner/ operator for adjusting estimates, inflation, and reporting to regional administrator. 264.151(b),(c) outlines wording for bond agreement.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-7b(1) Surety Bond Guaranteeing Payment into a Post-Closure Trust Fund	270.14(b)(16); 264.145(b); 264.151(b)	Must provide bond or standby trust agreement before beginning final closure of the facility. Bond must guarantee owner/operator will fund a standby trust fund or provide financial assurance equal to penal sum.		
I-7b(2) Surety Bond Guaranteeing Performance of Closure	270.14(b)(16); 264.145(c); 264.151(c)	Guarantee owner/operator will perform closure required as stated in 246.151(c) and Subpart H.		
I-7(c) Post-Closure Letter of Credit	270.14(b)(16); 264.145(d); 264.151(d)	Requires letter of credit for 1 year equal to amount of post-closure cost.		
I-7(d) Post-Closure Insurance	270.14(b)(16); 264.145(e); 264.151(e)	Provide copy of certificate of insurance, wording requirement found in 264.151(e).		
I-7(e) Financial Test and Corporate Guarantee for Post-Closure Care	270.14(b)(16); 264.145(f); 264.151(f),(h)	Signed letter by owner/operator or chief financial officer as specified in 264.151(f),(h) of applicant financial statement. If parent corporation is guaranteeing post-closure care, corporate guarantee must accompany.		
I-7(f) Use of Multiple Financial Mechanism	270.14(b)(16); 264.145(g)	Provide copy of financial assurance mechanisms. Combined financial assurance must be at least equal to post-closure cost estimate.		
I-7(g) Use of Multiple Financial Mechanism for Multiple Facilities	270.14(b)(16); 264.145(h)	Provide copy of financial assurance mechanisms for more than one facility. Amount must be no less than sum of funds that would be available if separate mechanism had been established and maintained for each facility.		
I-8 Liability Requirements	270.14(b)(17); 264.147			
I-8a Coverage for Sudden Accidental Occurrences	270.14(b)(17); 264.147(a)	Coverage must be maintained for sudden accidental occurrences in the amount of \$1 million per occurrence with an annual agreement of at least \$2 million.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-8a(1) Endorsement of Certification	270.14(b)(17); 264.147(a)(1)	Submit original Hazardous Waste Facility Liability Endorsement wording pursuant to 264.151(i), or Certificate of Liability wording pursuant to 264.151(j).		
I-8a(2) Financial Test and Corporate Guarantee for Liability Coverage	270.14(b)(17); 264.147(a)(2), (f),(g); 264.151(f),(g)	Requires signed letter by owner or chief financial officer worded as outlined in 264.151(g) outlining applicant financial statement. 264.151(g) used if applicant is using financial test to cover cost for closure or post closure. Alternatively, owner/operator may submit corporate guarantee specified in 264.151(h)(2).		
I-8a(3) Use of Multiple Financial Mechanism	270.14(b)(17); 264.147(a)(3)	Submit items demonstrating liability coverage specified in I-8a(1) and I-8a(2). Amount of coverage must total at least minimum amount required by 264.147(a).		
I-8b Coverage for Nonsudden Accidental Occurrences	270.14(b)(17); 264.147(b)	For high risk storage facilities, surface impoundments, land disposal, land treatment facilities, liability coverage must be maintained in the amount of at least \$3 million per occurrence. Annual aggregate at least \$6 million.		
I-8b(1) Endorsement or Certification	270.14(b)(17); 264.147(b)(1)	Submit signed duplicate original of Hazardous Waste Facility Liability Endorsement.		
I-8b(2) Financial Test or Corporate Guarantee for Liability Coverage	270.14(b)(17); 264.147(b)(2); 264.151(f),(g)	Requires signed letter by owner or chief financial officer worded as outlined in 264.151(g) outlining applicant financial statement. 264.151(g) used if applicant is using financial test to cover cost for closure or post closure. Alternatively, owner/operator may submit corporate guarantee specified in 264.151(h)(2).		
I-8b(3) Use of Multiple Insurance Mechanism	270.14(b)(17); 264.147(b)(3)	Submit items demonstrating liability coverage specified in I-8a(1) and I-8a(2). Amount of coverage must total at least minimum amount required by 264.147(b).		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION I. CLOSURE POST-CLOSURE PLANS AND FINANCIAL REQUIREMENTS				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
I-8c	Requests for Variance	270.14(b)(17); 264.147(c)	Request for adjusted level of required liability must be supported by information which demonstrates 264.147(a) or (b) are not consistent with degree and duration of risk associated with treatment, storage, or disposal at facility or group of facilities.	
I-9	Use of State Required Mechanisms	270.14(b)(18)		
I-9a	Use of State Required Mechanisms	270.14(b)(18); 264.149	When state has regulations equivalent or greater liability requirements for financial assurance for closure post-closure submit copy of state-required financial mechanism.	
I-9b	State Assumption of Responsibility	270.14(b)(18); 264.150	If state assumes legal responsibility for compliance with closure, post-closure, or liability requirements there must be a letter submitted from state specifying assumption of responsibilities and amounts of liability.	

Notes:

^a Considerations in addition to the requirements presented in the regulations.

^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.

^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS					
SECTION J. SOLID WASTE MANAGEMENT UNITS					
	Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
J-1	Characterize the Solid Waste Management Unit (SWMU)	270.14(d)(1)	Describe methodology used to determine that no existing or former SWMUs exist at facility if applicable.		
J-2	Releases	270.14(d)(2)	Provide following information concerning releases: date of release; type, quantity, and nature of release; groundwater monitoring and other analytical data; physical evidence of stressed vegetation; historical evidence of releases; any state, local, or federal enforcement action that may address releases; any public citizen complaints that indicate a release; and any other information showing the migration of the release. Describe methodology used to determine that releases from SWMUs are not present.		

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION K. OTHER FEDERAL LAWS				
Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See attached Comment Number ^c
K-1	Other Federal Laws	270.14(b)(20), 270.3	Demonstrate compliance with requirements of applicable Federal laws such as the Wild and Scenic Rivers Act, National Historic Preservation Act of 1966, Endangered Species Act, Coastal Zone Management Act, and Fish and Wildlife Coordination Act.	

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS				
SECTION L. PART B CERTIFICATION				
Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
L-1 Part B Certification	270.11			

Notes:

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CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION M. SUBPART AA PROCESS VENTS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
M-1 Definition of Process Vent	270.14(a); 264.1030; 264.1031	A process vent is any open-ended pipe or stack that is vented to atmosphere either directly, through a vacuum-producing system, or through a tank.		
M-2 Applicability—Process Vents Associated with the Following Six Operations that Manage Hazardous Waste with Organic Concentrations of at Least 10 Parts per Million by Weight if these Operations are Conducted in; a Unit Subject to the Permitting Requirements of 270; a Unit (including a Hazardous Waste Recycling Unit) that is Not Exempt from Permitting Under 262.34(a) and is Located at a Hazardous Waste Management Facility Otherwise Subject to Permitting Requirements; and a Unit that is Exempt from Permitting Under 262.34(a)	270.14(a); 264.1030(b); 264.1031	Concentrations should be determined by a time-weighted average annually or when waste or process changes.		
M-2a Distillation—a Batch or Continuous Operation Which Separates One or More Feed Stream(s) into Two or More Exit Streams, Each Exit Stream Having Component Concentrations Different from Those in the Feed Stream(s)	270.24(b)(3); 264.1030(b); 264.1031	Include process description.		
M-2b Fractionation—a Distillation Operation or Method Used to Separate a Mixture of Several Volatile Components of Different Boiling Points in Successive Stages	270.24(b)(3); 264.1030(b); 264.1031	Include process description.		
M-2c Thin-Film Evaporation—a Distillation Operation that Employs a Heating Surface Consisting of a Large Diameter Tube that May be Either Straight or Tapered, Horizontal or Vertical	270.24(b)(3); 264.1030(b); 264.1031	Include process description.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION M. SUBPART AA PROCESS VENTS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
M-2d Solvent Extraction—an Operation or Method of Separation in Which a Solid or Solution Contacts a Liquid Solvent (The Two Being Mutually Insoluble) to Preferentially Dissolve and Transfer One or More Components into the Solvent	270.24(b)(3); 264.1030(b); 264.1031	Include process description.		
M-2e Air Stripping—a Desorption Operation Employed to Transfer One or More Volatile Components from a Liquid Mixture into a Gas (Air) Either with or Without the Application of Heat to the Liquid	270.24(b)(3); 264.1030(b); 264.1031	Include process description.		
M-2f Stream Stripping—a Distillation Operation in Which Vaporization of the Volatile Constituents of a Liquid Mixture Takes Place by the Introduction of Steam Directly into the Charge.	270.24(b)(3); 264.1030(b); 264.1031	Include process description.		
M-3a Reduce Total Organic Emission below 1.4 Kilogram per Hour (3 Pounds per Hour) and 2.8 Million Grams per Year (3.1 Tons per Year), <u>or</u>	270.24(b); 264.1032(a) (1),(c)	Engineering calculations or performance tests may be used to determine vent emissions and emissions reductions or total organic compound concentrations achieved by add-on control devices.		
M-3b Reduce Total Organic Emissions of 95 Percent by Weight with the Use of a Control Device	270.24(b); 264.1032(a) (2),(b)	Engineering calculations or performance tests may be used to determine vent emissions and emissions reductions or total organic compound concentrations achieved by add-on control devices.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION M. SUBPART AA PROCESS VENTS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
M-3c Reduce Emissions for Various Control Devices with Closed-vent Systems under the Following Operational Conditions:	270.24(b); 264.1032(a - b); 264.1033 (b - j)	Closed-vent systems are optional devices, but shall comply with regulations if they are used.		
M-3c(1) Control Device Involving Vapor Recovery (Condenser or Adsorber) Shall Recover at Least 95 Percent by Weight of the Organic Vapors	270.24(b); 264.1032(a) (1),(b)	A less than 95 percent recovery is permissible if control devices meet emission limits set in 264.1032(a)(1).		
M-3c(2) Enclosed Combustion Device (A Vapor Incinerator, Boiler, or Process Heater) Shall Recover at Least 95 Percent by Weight of Organic Emissions	270.24(d); 264.1033(c)	The device shall achieve 20 parts per million by weight or 1/2 second residence time at 760 EC.		
M-3c(3) A Flare Shall Operate under the Following Four Conditions: (1) No Visible Emissions, (2) a Flame Present at all Times, (3) an Acceptable Net Heating Value, and (4) Appropriate Exit Velocity	270.24(d); 264.1033(d)			
M-4 Inspection Readings Shall Be Conducted at Least Daily. Vent Stream Flow Information Shall be Provided at Least Hourly.	270.24(d); 264.1033(f) (1),(3)			
M-4a Continuous Monitoring for the Following Control Devices:	270.24(d); 264.1033(f)(2)			
M-4a(1) Thermal Vapor Incinerator (One Temperature Sensor).	270.24(d); 264.1033(f)(2) (i)	Sensor shall have accuracy of ± 1 percent EC or ± 0.5 EC, whichever is greater.		
M-4a(2) Catalytic Vapor Incinerator (Two Temperature Sensor)	270.24(d); 264.1033(f)(2) (i)	Sensor shall have accuracy of ± 1 percent EC or ± 0.5 EC, whichever is greater.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION M. SUBPART AA PROCESS VENTS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
M-4a(3) Flare (Heat Sensing Device)	264.1033(f)(2)(iii)			
M-4a(4) Boiler or Process Heater with Heater Input Capacity Equal or Greater than 44 Megawatts (Recorder Which Indicates Good Combustion Practices)	270.24(d); 264.1033(f)(2)(v)			
M-4a(5) Condenser (Device with Recorder to Measure the Concentration of Organic Compounds in the Condenser Exhaust Vent Stream or Temperature Monitoring Device Equipped with Recorder to Measure Temperature in the Condenser Exhaust Vent Stream)	270.24(d); 264.1033(f)(2)(vi)	Sensor shall have accuracy of ± 1 percent EC or ± 0.5 EC, whichever is greater.		
M-4a(6) Carbon Adsorption System (Device to Measure Organic Vapors or a Recorder that Verifies Predetermined Regeneration Cycle)	270.24(d); 264.1033(f)(2)(vii)			
M-4b Alternate Monitoring of Control Device	270.24(c); 264.1033(i)	Describe measurement of applicable monitoring parameters.		
M-4c Inspection of the Following Control Devices:	270.24(d); 264.1033(g - h)			
M-4c(1) Regenerable Carbon Adsorption System	270.24(d); 264.1033(g)	Carbon replacement schedule must be acceptable.		
M-4c(2) Nonregenerable Carbon Adsorption System	270.24(d); 264.1033(h)	Carbon shall be replaced when breakthrough is observed or on an acceptable schedule.		
M-5 Basic Design and Operation				

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION M. SUBPART AA PROCESS VENTS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
M-5a The Closed-Vent System Shall be Designed to Operate According to Either of the Following:	270.24(d); 264.1033(k)			
M-5a(1) With No Detectable Emissions	270.24(d); 264.1033(k)(1)	Emissions shall be less than 500 parts per million above background.		
M-5a(2) At a Pressure below Atmospheric Pressure	270.24(d); 264.1033(k)(2)	System shall be equipped with at least one pressure gauge or other measurement device that can be read from a readily accessible location to verify negative pressure is being maintained in system during operation.		
M-5b Owner/operator Shall Monitor and Inspect Each System	270.24(d); 264.1033(1)	The monitoring and inspection shall be done: (1) by date the system is subject to regulation, (2) annually, and (3) other times requested by the U.S. Environmental Protection Agency regional administrator. Various inspection and monitoring requirements apply depending upon the type of closed-vent system employed. All detected defects shall be repaired according to the schedule prescribed in 264.1033(l)(3).		
M-5c Closed-Vent System Shall be Operated at all Times When Emissions May be Vented to Them.	270.24(d); 264.1033(m)			
M-5d Carbon Adsorption System Used to Control Air Pollutant Emissions	270.24(d); 264.1033(n)	Owner/operator must document that all carbon that is a hazardous waste and removed from the control device is managed in one of these approved manners: 264.1033(n)(1), (2), or (3).		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION M. SUBPART AA PROCESS VENTS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
M-6 Any Components of a Closed-Vent System that are Designated as Unsafe to Monitor are Exempt from the Monitoring Requirements of 1033(l)(1)(i)(B) if Certain Conditions are Met.	270.24(d); 264.1033(o)	Applies to system if its components are unsafe to monitor and it adheres to written plan that requires monitoring using the procedures in 264.1033(l)(1)(ii)(B) as frequently as practicable during safe-to-monitor times.		
M-7a Owner/operator Complies with Record Keeping Requirements	270.24(d); 264.1033; 264.1035	Depending on the type of control devices and closed vent systems used, various records must be maintained in the facility operating record.		
M-7b Semiannual Report is Submitted According to Subpart AA Requirements	270.14(a); 264.1036	A semiannual report is only required if a control device operates outside the design specifications.		
M-7c Implementation Schedule is Provided	270.24(a); 264.1033(a)(2)	A schedule shall be provided when facilities cannot install a closed-vent system and control device to comply with Part 264 on date facility is subject to requirements.		
M-7d Performance Test Plan is Provided	270.24(c); 264.1035(b)(3)	A performance test plan shall be provided where owner/operator applies for permission to use control device other than thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, and chooses to use test data to determine organic removal efficiency achieved by control device.		

Notes:

^a Considerations in addition to the requirements presented in the regulations.

^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.

^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION N. SUBPART BB EQUIPMENT LEAKS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
N-1a Applicability	270.14(a); 270.25; 264.1050(b),(d)	Except as otherwise specified, this subpart applies to equipment that contains or contacts hazardous waste with organic concentrations of at least 10 percent by weight that are managed in one of the following: if these operations are conducted in; a unit subject to the permitting requirements of 270; a unit (including a hazardous waste recycling unit) that is not exempt from permitting under 262.34(a) and is located at a hazardous waste management facility otherwise subject to permitting requirements; and a unit that is exempt from permitting under 262.34(a) such as a 90-day tank or container.		
N-1b Definition of Equipment	270.14(a); 270.25; 264.1031; 264.1051	Examples include: valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange.		
N-1c Equipment in a Vacuum or Equipment that Contains or Contacts Hazardous Waste with an Organic Concentration of at Least 10 Percent by Weight for a Period of Less than 300 Hours per Calendar Year is Excluded from Requirements at 264.1052 to 264.1060.	270.14(a); 270.25; 264.1050(f)	Equipment shall be identified in a log in facility's operating record as required by 264.1064(g) in order to qualify for exclusion.		
N-2a Monthly Monitoring for Leaks	270.25(d); 264.1052(a) (1)			
N-2b Visual Inspection for Pump Seal Leakage on a Weekly Basis	270.25(d); 264.1052(a)(2)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION N. SUBPART BB EQUIPMENT LEAKS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
N-2c Leak Detection	270.25(d); 264.1052(b); 264.1063	Leak detected if: (1) leak detection instrument reads 10,000 parts per million (ppm) or greater, or (2) there are indications of liquid dripping from the pump seal.		
N-2d Leak Repair as Soon as Practicable	270.25(d); 264.1052(c); 264.1059	Repairs are to be made within 15 calendar days after detection. Repair extensions are allowed under conditions specified in 264.1059.		
N-2e Specific Exceptions to these Standards	270.25(d); 264.1052(d - f)	Exceptions to these standards are dual mechanical seal systems or no detectable emissions.		
N-3a Barrier Fluid Pressure Greater than the Compressor Stuffing Box Pressure	270.25(d); 264.1053(b) (1)			
N-3b Barrier Fluid System Connected by a Closed-Vent System to a Control Device as Described in Subpart AA	270.25(d); 264.1053(b) (2)			
N-3c No Detectable Atmospheric Emissions of Hazardous Contaminants from the Barrier System	270.25(d); 264.1053(b) (3)			
N-3d Sensors Checked Daily or an Audible Alarm Checked Monthly	270.25(d); 264.1053(d - c)			
N-3e Leak Detection	270.25(d); 264.1053(f)	A leak is detected if sensor indicates failure of: (1) seal system, or (2) barrier fluid system.		
N-3f Leak Repair as Soon as Practicable	270.25(d); 264.1053(g) (1); 264.1059	Repairs are to be made within 15 calendar days after detection. Repair extensions are allowed under conditions specified in 264.1059.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION N. SUBPART BB EQUIPMENT LEAKS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
N-3g Specific Exceptions to these Standards	270.25(d); 264.1053(h - i)	Exceptions to these standards are certain closed vent systems or no detectable emissions.		
N-4a Except During Pressure Releases, No Pressure Relief Device Shall Release Detectable Emissions	270.25(d); 264.1054(a)	Emissions shall be less than 500 ppm above background levels.		
N-4b Within 5 Calendar Days after a Pressure Release, No Detectable Emissions Shall Emanate from Pressure Released Device	270.25(d); 264.1054(b)	Emissions shall be less than 500 ppm above background levels.		
N-4c Specific Exceptions to These Standards	270.25(d); 264.1054(c)	Exceptions to these standards are certain closed vent systems.		
N-5a Each Sampling Connecting System Shall Be Equipped with a Closed-Purge, Closed Loop, or Closed-Vent System. Closed-Vent Systems and Control Devices are also Subject to 264.1033	270.25(d); 264.1055(a - b); 264.1060	Each closed-purge, closed-loop, or closed-vent system shall either: (1) return purged process fluid directly to process line, (2) collect and recycle purged process liquid, or (3) be designed and operated to capture and transport all purged process fluid to a waste management unit or control device that satisfies applicable requirements.		
N-5b Exemption for Qualified Sampling Systems	270.25(d); 264.1055(c)	In situ sampling systems and sampling systems without purges are exempt from requirements of 264.1055(a),(b).		
N-6a Open-Ended Valve or Line	270.25(d); 264.1056(a), (c)	A double block or bleed system must comply with the open-ended valve or line requirements.		
N-6b Second Valve	270.25(d); 264.1056(b)	A second valve shall be operated such that primary valve shall be closed before second valve is opened.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION N. SUBPART BB EQUIPMENT LEAKS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
N-7 Monitoring Schedule Based on Detection of Leaks and Predetermined Schedule	270.25(d); 264.1057(a - e)	A reading of 10,000 ppm denotes a detected leak.		
N-7d Specific Exceptions to the Monitoring Schedule	270.25(d); 264.0157(f - h); 264.1061; 264.1062	Exceptions to schedule include unsafe-to-monitor valves, no detectable emissions, and difficult-to-monitor valves.		
N-8a Monitoring	270.25(d); 264.1058(a); 264.1063(b)	Monitoring is required within 5 days after leak is found by sight, sound, smell, or other detection method.		
N-8b Leak Detection	270.25(d); 264.1058(b)	A leak is detected if a leak detection instrument reads 10,000 ppm or greater.		
N-8c Leak Repair as Soon as Practicable	270.25(d); 264.1058(c); 264.1059	Repairs are to be made within 15 calendar days after detection. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. Repair extensions are allowed under conditions specified in 264.1059.		
N-8d Any Connector that is Inaccessible or is Ceramic or Ceramic-Lined is Exempt from the Monitoring Requirements of 264.1058(a) and 264.1064	270.25(d); 264.1058(e)	Examples of ceramic-lined connectors include porcelain, glass, or glass-lined connectors.		
N-9 Specific Allowances for Delay of Repair for Various Types of Equipment	270.25(d); 264.1059			
N-10 When Closed-Vent Systems and Control Devices are Used, they Must Comply with the Requirements in Subpart AA	270.25(e); 264.1033; 264.1060			
N-11 An Owner/Operator may Elect to Comply with this Alternative Monitoring Program	270.25(e); 264.1061	No greater than 2 percent of the valves are allowed to leak per monitoring period.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION N. SUBPART BB EQUIPMENT LEAKS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
N-12 An Owner/Operator may Elect to Comply with this Alternative Work Practice	270.25(e); 264.1062	Relief of monitoring frequency is allowed if less than 2 percent of the valves are leaking.		
N-13 Owner Complies with Recordkeeping Requirements	270.25(a); 264.1064	Depending on the type of requirement, various records must be maintained in the facility operating record.		
N-13a Semiannual Report	270.25(a); 264.1065	A semiannual report is only required if leaks from equipment have gone unrepaired or a control device operates outside the design specifications.		
N-13b Implementation Schedule	270.25(b)	An implementation schedule shall be provided if facility cannot install closed-vent system and control device to comply with provisions of Part 264, Subpart BB on the effective date that facility becomes subject to provisions of Parts 264 and 265.		
N-13c Performance Test Plan	270.25(c)	A performance test plan shall be provided if the owner/operator applies for permission to use a control device for other than a thermal vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system and chooses to use test data to determine the organic removal efficiency achieved by the control device.		

Notes:

^a Considerations in addition to the requirements presented in the regulations.

^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.

^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-1 Standards Apply to All Facilities That Treat, Store, or Dispose of Hazardous Waste in Tanks, Surface Impoundments, or Containers Subject to 264, Subparts I, J, or K, Except as Provided Otherwise	270.14(a); 270.27; 264.1080 (a) - (d)	Exclusions from 264.1080(a) are listed at 264.1080(b) (e.g., a container that has a design capacity less than or equal to 0.1 cubic meters [m ³]).		
O-2 Following is a List of Units that are Exempt from the 264.1084-264.1087 Standards:	270.14(a); 270.27; 264.1082(c)			
O-2a A Tank, Surface Impoundment, or Container for Which All Hazardous Waste Entering the Unit Has an Average Volatile Organic Concentration at the Point of Waste Origination of less than 500 Parts per Million by Weight (ppmw)	270.14(a); 270.27; 264.1082(c)(1)	Waste determination procedures are specified at 264.1083.		
O-2b A Tank, Surface Impoundment, or Container for Which the Organic Content of all the Hazardous Waste Entering the Waste Management Unit has been Reduced by an Organic Destruction or Removal Process that Achieves Specified Criteria	270.14(a); 270.27; 264.1082(c)(2)	Waste determination procedures are specified at 265.1084(b)(2)-(b)(9).		
O-2c A Tank Used for Biological Treatment of Hazardous Waste that Destroys or Degrades the Organics Contained in the Hazardous Waste such that the Requirements of 264.1082(c)(2)(iv) are Met	270.14(a); 270.27; 264.1082(c)(3)	Waste determination procedures are specified at 264.1083(b) and 264.1083(a).		
O-2d A Tank, Surface Impoundment or Container for Which all Hazardous Waste Placed in the Unit Meets Applicable Organic Concentration Limits or has been Treated by Appropriate Treatment Technology	270.14(a); 270.27; 264.1082(c)(4)	Waste determination procedures are specified at Part 268.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-2e A Tank Located Inside an Enclosure Vented to a Control Device that is Used for Bulk Feed of Hazardous Waste to a Waste Incinerator that Meets Specified Criteria	270.14(a); 270.27; 264.1082(c)(5)	Design and operation of the control device and enclosure shall satisfy Part 61, Subpart FF; 52.741, Appendix B; and other conditions as specified.		
O-3 Several Waste Determination Procedures are Explained in Detail and Must be Followed in Order to Demonstrate the Various Subpart CC Exemptions and/or Control Requirements	270.14(a); 270.27; 264.1083; 265.1084	In general, an owner or operator need <u>not</u> undergo waste determination procedures unless they are pursuing an exemption from the Subpart CC regulations.		
O-4 Tanks that Satisfy the Conditions at 264.1084(b)(1)(i-iii) Can Use Tank Level 1 or Tank Level 2 Controls. Tanks that do not Satisfy Conditions Shall Use Tank Level 2 Controls	270.14(a); 270.27; 264.1084(b)(1), (2)			
O-5a The Conditions at 264.108(b)(1)(i-iii) Provide that Hazardous Waste in the Tank Shall:	270.14(a); 270.27; 264.1084(b)(1)			
O-5a(1) Have Maximum Organic Vapor Pressure Which is less than Maximum Organic Vapor Pressure Limit for Tank's Design Capacity Category	270.14(a); 270.27; 264.1084(b)(1)(i)			
O-5a(2) Not be Heated to Temperature Greater than Temperature at Which Maximum Organic Vapor Pressure of Waste is Determined for Purposes of Compliance	270.14(a); 270.27; 264.1084(b)(1)(ii)			
O-5a(3) Not be Treated Using a Waste Stabilization Process, as Defined in 265.1081	270.14(a); 270.27; 264.1084(b)(1)(iii)	A waste stabilization process includes mixing hazardous waste with binders or other materials, and curing resulting hazardous waste and binder mixture.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-5b Maximum Organic Vapor Pressure Determination	270.14(a); 270.27; 264.1084(c) (1)	Must be determined before first time waste placed in tank, and retested whenever changes could cause it to increase above the maximum vapor pressure limit [264.1084(b)(1)(i)].		
O-5b(1) Tank Level 1. Owner/Operator Shall Equip Tanks with Fixed Roof and Closure Devices as Needed	270.14(a); 270.27; 264.1084(c) (2), (3)	Fixed roof/closure devices shall form continuous barrier over entire waste in tank; contain no visible open spaces between roof section joints or between interface of roof edge and tank wall; contain openings with closure devices or closed-vent system; and be made of suitable materials.		
O-5b(2) Tank Level 2. Owner/Operator Shall Use One of the Following Tanks:	270.14(a); 270.27; 264.1084(d)			
O-5b(2)(i) Fixed Roof Tank Equipped with Internal Floating Roof	270.27(a)(1); 264.1084(d)(1) (e)	Internal floating roof shall be designed to float on liquid surface, except when supported by leg supports; be equipped with continuous seal between tank wall and floating roof edge; and meet other design specifications.		
O-5b(2)(ii) Tank Equipped with an External Floating Roof	270.27(a)(1); 264.1084(d)(2) , (f)	External floating roof shall be designed to float on all liquid surface, except when supported by leg supports; be equipped with two continuous seals; and meet other design specifications.		
O-5b(3) Tank Vented Through Closed-Vent System to a Control Device	270.14(a); 270.27; 264.1084(d)(3) , (g)	Fixed roof/closure devices shall form continuous barrier over entire liquid surface; be made of suitable materials; and satisfy 264.1087 standards.		
O-5c Pressure Tank	270.14(a); 270.27; 264.1084(d)(4) , (h)	Tank shall be designed not to bend to atmosphere as result of compression of vapor headspace in tank, and be equipped with closure devices as needed.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-5d Tank Located Inside an Enclosure that is Vented Through a Closed-Vent System to an Enclosed Combustion Control Device	270.14(a); 270.27; 264.1084(d)(5), (1)	Tank shall be located in enclosure that is vented through closed vent system to enclosed combustion device, and enclosure shall be equipped with safety devices as needed.		
O-5e Tank Level 1. Owner/Operator Shall:	270.14(a); 270.27; 264.1084(c)(1),(3)			
O-5e(1) Determine Maximum Organic Vapor Pressure for Hazardous Waste Initially and Whenever Changes could Cause the Vapor Pressure to Increase Above the Maximum Organic Vapor Pressure Limit	270.14(a); 270.27; 264.1084(c)(1)	Maximum organic vapor pressure shall be determined using 264.1083(c) procedures.		
O-5e(2) Ensure that, Whenever Hazardous Waste is in Tank, the Fixed Roof is Installed with Each Closure Device Secured in Closed Position		Exceptions are listed at 264.1084(c)(3)(i-iii).		
O-5e(3) Inspect the Air Emission Control Equipment	270.14(a); 270.27; 264.1084(c)(4)			
O-5f Tank Level 2. Owner/Operators Shall Adhere to the Following Operating Procedures for Each Unit Type:	270.14(a); 270.27; 264.1084(e)(i)			
O-5f(1) Fixed Roof Tank Equipped with Internal Floating Roof	270.14(a); 270.27; 264.1084(e)(2),(3)	When floating roof is resting on leg supports, filling, emptying, or refilling shall be continuous and completed as soon as practical; when roof is floating, automatic bleeder vents shall be set closed; and prior to filling, openings in roof shall be secured. Inspect the floating roof.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
O-5f(2) Tank Equipped with an External Floating Roof	270.14(a); 270.27; 264.1084(f) (2),(3)	When floating roof is resting on leg supports, filling, emptying, or refilling shall be continuous and completed as soon as practical; when closure device is open for access, equipment and devices shall be closed and secured as specified; and seals shall provide a continuous and complete cover as specified. Inspect the floating roof.		
O-5f(3) Tank Vented Through Closed-Vent System to a Control Device	270.14(a); 270.27; 264.1084(g) (2), (3)	When hazardous waste is in tank, fixed roof shall be installed with closure devices secured in closed position and vapor headspace underneath fixed roof vented to control device, except as specified. Inspect and monitor the air emission control equipment.		
O-5f(4) Pressure Tank	270.14(a); 270.27; 264.1084(h) (2), (3)	When hazardous waste is in tank, it shall be operated as closed system that does not vent to atmosphere, except to avoid an unsafe condition.		
O-5f(5) Tank Located Inside an Enclosure that is Vented Through a Closed-Vent System to an Enclosed Combustion Control Device	270.27(a)(3), 264.1084(i)	Enclosure shall be operated in accordance with 52.741, Appendix B, and comply with applicable closed-vent requirements. Safety devices may be operated as needed. Inspect and monitor the system and control device.		
O-5f(6) Shall be Conducted Using Continuous Hard-Piping or Another Closed System that Does Not Allow Exposure of Hazardous Waste to Environment	270.14(a); 270.27; 264.1084(j)(1)	Requirements do not apply under the conditions specified at 264.1084(j)(2).		
O-6a Owner/Operators Shall Install Either of the Following Controls:	270.14(a); 270.27; 264.1085(b)(d)			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-6a(1) Floating Membrane Cover	270.27(a)(4); 264.1085 (b)(1), (c)(1)	Floating membrane cover shall float on liquid surface and form continuous barrier over entire liquid; be made of synthetic membrane material; contain no visible open spaces; and be equipped with closure devices and cover drains as needed.		
O-6a(2) Cover That Is Vented Through a Closed-Vent System to a Control Device	270.14(a); 270.27; 264.1085 (b)(2) and (d)(2)	Cover/closure devices shall form continuous barrier over entire liquid surface; be equipped with closure device; be made of suitable material; and be designed in compliance with 264.1087.		
O-6b Owner/Operators Shall Adhere to the Following Operating Procedures for Each Control Type:	270.14(a); 270.27; 264.1085 (c), (d)			
O-6b(1) Floating Membrane Cover	270.14(a); 270.27; 264.1085(c) (2), (3)	When hazardous waste is in surface impoundment, floating membrane cover shall float on liquid, and each closure device shall be secured in closed position, except as specified. Inspect the cover.		
O-6b(2) Cover that is Vented Through a Closed-Vent System to a Control Device	270.14(a); 270.27; 264.1085(d) (2), (3)	When hazardous waste is in surface impoundment, cover shall be installed with each closure device secured in closed position and vapor headspace underneath the cover vented to control device, except as specified. Closed-vent system and control device shall be operated in accordance with 264.1087. Inspect and monitor the control device.		
O-7 Shall be Conducted Using Continuous Hard-Piping or Another Closed System	270.14(a); 270.27; 264.1085(c) (1)	Requirements do not apply under conditions specified at 264.1085(e)(2).		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-8a Container Level 1 Standards Apply to:	270.14(a); 270.27; 264.1086(b)(1)			
O-8a(1) Container with Design Capacity Greater than 0.1 m ³ and less than or Equal to 0.46 m ³	270.14(a); 270.27; 264.1086(b)(1) (i)			
O-8a(2) Container with Design Capacity Greater than 0.46 m ³ that is not in Light Material Service	270.14(a); 270.27; 264.1086(b)(1) (ii)			
O-8ab Container Level 2 Standards Apply to Container with a Design Capacity Greater than 0.46 m ³ that is in Light Material Service	270.14(a); 270.27; 264.1086(b)(1) (iii)			
O-8c Container Level 3 Standards Apply to Container with Design Capacity Greater than 0.1 m ³ that is Used for Stabilization	270.14(a); 270.27; 264.1086(b)(2)	Level 3 standards apply at those times during waste stabilization process when hazardous waste in container is exposed to atmosphere.		
O-9 Identify Each Container Area Subject to Subpart CC	270.27(a)(2)			
O-9a Container Level 1. A Container Using Level 1 Controls is Defined as One of the Following:	270.27(a)(2); 264.1086(c) (1)			
O-9a(1) Container that Meets Department of Transportation Regulations on Packaging	270.27(a)(2); 264.1086(c) (1)(i),(f)	Container shall meet Part 178 or Part 179 and be managed in accordance with Parts 107, 172, 173, and 180.		
O-9a(2) Container Equipped with Cover and Closure Devices	270.27(a)(2); 264.1086(c) (1)(ii),(2)	Container shall be equipped with covers and closure devices, as needed.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
O-9a(3) Open-Top Container Equipped with Organic-Vapor Suppressing Barrier	270.27(a)(2); 264.1086(c) (1)(iii),(2)	Container shall be equipped with covers and closure devices, as needed.		
O-9b Container Level 2. A Container Using Level 2 Controls is Defined as One of the Following:	270.27(a)(2); 264.1086 (d)(1)(f),(g)			
O-9b(1) Container that Needs Department of Transportation (DOT) Regulations on Packaging	270.27(a)(2); 264.1086(d)(1) (i),(f)	Containers shall meet Part 178 or Part 179, and be managed in accordance with Parts 107, 172, 173, and 180.		
O-9b(2) Container that Operates with No Detectable Organic Emissions	270.27(a)(2); 264.1086(d)(1) (ii),(g)	Owner/operator shall follow the procedures at 264.1086(g) and 265.1084(d) to determine no detectable organic emissions.		
O-9b(3) Container that has been Demonstrated Within the Preceding 12 Months to be Vapor-Tight	270.27(a)(2); 264.1086(d)(1) (iii) and (h)	Owner/operator shall follow procedures at 264.1086(h) and Part 60, Appendix A, Method 27 to demonstrate container is vapor-tight.		
O-9c Container Level 3. A Container Using Level 3 Controls is Defined as One of the Following:	270.27(a)(2); 264.1086(e) (1), (2)			
O-9c(1) Container that is Vented Directly Through a Closed-Vent System to a Control Device	270.27(a)(2); 264.1086(e) (1)(i)	The closed-vent system and control device shall be designed in accordance with 264.1087. Safety devices may be installed as needed.		
O-9c(2) Container that is Vented Inside an Enclosure Which is Exhausted Through a Closed-Vent System to a Control Device	270.27(a)(2); 270.27(a)(3); 264.1086(e) (1)(ii)	The container/enclosure must be designed in accordance with 52.741, Appendix B and 264.1087. Safety devices may be installed as needed.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
O-10a Container Level 1. Owner/Operators Shall Install Covers and Closure Devices for the Container and Secure and Maintain Each Closure Device in Closed Position, Except as Specified	270.14(a); 270.27; 264.1086(c) (3), (4)	The closure device or cover may be opened for the purpose of adding or removing hazardous waste or for maintenance or to avoid unsafe conditions.		
O-10b Container Level 2. Owner/Operator Shall Install All Covers and Closure Devices for the Container and Maintain and Secure Each Closure Device in Closed Position, Except as Specified	270.14(a); 270.27; 264.1086(d)(2) , (3)	Transfer of hazardous waste in or out of container shall be conducted in such a manner as to minimize exposure to atmosphere, as practical. The closure device or cover may be opened for the purpose of adding or removing hazardous waste or for maintenance or to avoid unsafe conditions.		
O-10c Container Level 3. Owner/Operators Shall Operate the System in Accordance with 52.741, Appendix B; 264.1087; and 265.1081, as Needed	270.14(a); 270.27; 264.1086(e) (3),(4), (5)			
O-11a Standards Apply to Each Closed-Vent System and Control Device Used to Control Air Emissions under Part 264; Subpart CC	270.14(a); 270.27; 264.1087(a)			
O-11(b) Closed-Vent Systems Shall:	270.27(a)(5); 264.1087(b)			
O-11b(1) Route Gases, Vapors, and Fumes to Control Device	270.27(a); 264.1087(b)(1)			
O-11b(2) Be Designed and Operated in Accordance with 264.1033(k)	270.27(a); 264.1087(b)(2)	The Subpart AA standards for closed-vent systems must be satisfied.		
O-11b(3) Meet the Requirements for Bypass Devices, if Applicable	270.27(a); 264.1087(b)(3)	Each bypass device shall be equipped with either a flow indicator or a seal or locking device.		

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-12a	The Control Device Shall be One of the Following:	270.27(a)(5); 264.1087(c)(1)		
O-12a(1)	A Control Device Designed and Operated to Reduce Total Organic Content on Inlet Vapor Stream Vented to the Control Device by at Least 95 Percent by Weight	270.27(a)(5); 264.1087(c)(1)(i)	Owner/operator shall demonstrate compliance using either performance test or design analysis, except as specified.	
O-12a(2)	An Enclosed Combustion Device	270.27(a)(5); 264.1087(c)(1)(ii)	Owner/operator shall demonstrate compliance using either performance test or design analysis, except as specified. Control device shall be designed and operated in accordance with 264.1033(c).	
O-12a(3)	A Flare	270.27(a)(5); 264.1087(c)(1)(iii)	Owner/operator shall demonstrate compliance using either performance test or design analysis, except as specified.	
O-12b	Each Closed-Vent System and Control Device Shall Comply with the Operating Requirements of 264.1087(c)(2)	270.27(a)(5); 264.1087(c)(2)	Planned routine maintenance of control device shall not exceed 240 hours per year; system malfunctions shall be corrected as soon as practicable; and system shall be operated such that gases, vapors, or fumes are not actively vented to control device during planned maintenance or system malfunction, except as specified.	
O-12c	A Carbon Adsorption System	270.27(a)(5); 264.1087(c)(3)	Carbon replacement and removal shall follow prescribed requirements in 264.1033(g), (h), and (n).	
O-12d	Each Control Device Shall be Operated and Maintained in Accordance with 264.1033(j), Except for Certain Devices Identified (e.g., Flare)	270.27(a)(5); 264.1087(c)(4)	264.1033(j) requires the owner/operator to prepare documentation describing the control device's operation and to identify the process parameter(s) that indicate its proper operation and maintenance.	

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-12e The Owner/Operator Shall Demonstrate that a Control Device Achieves the Performance Requirements Using a Performance Test or Design Analysis, Except for Specific Devices Identified (e.g., flare)	270.27(a)(5); 264.1087(c)(5)	For performance test, owner/operator shall use the test specified at 264.103(c). For design analysis, owner/operator shall use an analysis that meets requirements specified at 264.1035(b)(4)(iii). In addition, the U.S. Environmental Protection Agency (EPA) prescribes unit-specific performance demonstration requirements for certain unit types at 264.1087(c)(5).		
O-12f If Design Analysis is Not Sufficient, then a Performance Test is Required	270.27(a)(5); 264.1087(c)(6)	The EPA regional administrator shall determine if a performance test is required to demonstrate control device's performance.		
O-12h Inspect and Monitor the Control Device	270.27(a)(5); 264.1087(c)(7)	Control devices shall be inspected and monitored at least once a day.		
O-13 Each Tank, Surface Impoundment and Container Shall be Inspected, Monitored, and Repaired in Accordance with the 264 Subpart CC Requirements	270.27; 264.1088	Inspection, monitoring and repair requirements specific to each unit are located in the standards sections of the regulation 264.1084 through 264.1087. Owner/operator shall develop and implement written plan and schedule to perform inspections and monitoring required. The plan and schedule shall be incorporated into facility's inspection plan.		
O-14 Each Owner/Operator Shall Comply with the Recordkeeping Requirements Specified at 264.1089	270.27; 264.1089	Except as specified, records shall be maintained in facility's operating record for a minimum of 3 years. Various records are required depending on the type of unit and control device.		
O-14a Each of the Following Owner/Operators Shall Comply with the Reporting Requirements at 264.1090:	270.27; 264.1090			

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS

SECTION O. SUBPART CC AIR EMISSION STANDARDS

Section and Requirement	Federal Regulation	Review Consideration^a	Location in Application^b	See Attached Comment Number^c
O-14a(1) Each Owner/Operator Managing Hazardous Waste in a Tank, Surface Impoundment, or Container Exempted from Using Air Emission Controls under 264.1082(c)	270.27; 264.1090(a)	Owner/operator shall report to EPA each noncompliance identified under 264.1082(c).		
O-14a(2) Each Owner/operator Using Air Emission Controls on a Tank in Accordance with 264.1084(c)	270.27; 264.1090(b)	Owner/operator shall report to EPA each noncompliance identified under 264.1084(B).		
O-14a(3) Each Owner/operator Using a Control Device in Accordance with 264.1087	270.27; 264.1090 (c),(d)	Owner/operator shall submit semiannual written report to EPA, except as specified.		
O-14b Each Owner/Operator shall Provide an Emission Monitoring Plan	270.27(a)(6)	Applies to Method 21 and control device monitoring methods.		
O-14c Subpart CC Implementation Plan	270.27(a)(7)	Required when facility cannot comply with Subpart CC by date of permit issuance.		

Notes:

^a Considerations in addition to the requirements presented in the regulations.

^b For each requirement, this column must indicate one of the following: NA for not applicable, IM for information missing, or the exact location of the information in the application.

^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.

CHECKLIST FOR REVIEW OF FEDERAL RCRA PERMIT APPLICATIONS					
SECTION P. EXPOSURE INFORMATION					
	Section and Requirement	Federal Regulation	Review Consideration ^a	Location in Application ^b	See Attached Comment Number ^c
P	Information on the Potential for the Public to be Exposed to Releases. At a Minimum, this must include: <ul style="list-style-type: none"> C reasonably foreseeable potential releases C potential pathways of human exposure C potential magnitude and nature of exposure 	270.10(j)	The federal requirement is for surface impoundments and land disposal units.		

Notes:

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^c If application is deficient in an area, prepare a comment describing the deficiency, attach it to the checklist, and reference the comment in this column.