Class VI Permit Application Completeness Checklist

Instructions: Mark the box to the left of each item to indicate whether the information is present in the permit application; document the location of the information in the far-right column. Note also that some information is optional or may not be required for all applicants; these elements are denoted with an asterisk (*). EPA intends that the quality of the information submitted by the permit applicant does not need to be addressed in the completeness checklist because it will be considered as part of the technical evaluation. Additionally, Executive Orders and other Federal Laws (such as Environmental Justice requirements, National Historic Preservation Act (NHPA), and Endangered Species Act (ESA)) should be contemplated by the permit applicant and permitting authority early in the permitting processes but are not considered as part of the completeness evaluation.

The statutory provisions and EPA regulations described in this document contain legally binding requirements. This document does not substitute for those provisions or regulations, nor is it a regulation itself. Thus, it does not impose legally binding requirements on EPA, States, or the regulated community, and may not apply to a particular situation based upon the circumstances. EPA and State decisionmakers retain the discretion to adopt approaches on a case-by-case basis that differ from this checklist where appropriate. Any decisions regarding a particular permit will be made based on the statute and regulations.

Therefore, interested parties are free to raise questions and objections about the substance of this checklist and the appropriateness of the application of this checklist to a particular situation.

~	Required Item	Location in Application	
GENER	GENERAL INFORMATION		
	Signatories to permit applications required in 40 CFR 144.32(a)	Permit application materials that are submitted to the	
		GSDT by applicants with a signed electronic signature	
		agreement (ESA) have met the signatory requirements	
		for Class VI applications.	
	<u>Information required in 40 CFR 144.31 (e)(1)-(6)</u> [40 CFR 146.82(a)(1)]	GSDT Module/Folder:	
	A listing of the activities conducted by the applicant which require RCRA, UIC, NPDES, or PSD permits. [40	File Name:	
	CFR 144.31(e)(1)]	Page Number:	
		Notes:	
	Name, mailing address, and location of the facility. [40 CFR 144.31(e)(2)]	GSDT Module/Folder:	
		File Name:	
		Page Number:	
		Notes:	
	Up to four SIC codes. [40 CFR 144.31(e)(3)]	GSDT Module/Folder:	
		File Name:	
		Page Number:	
		Notes:	
	The operator's name, address, telephone number, ownership status, and status as Federal, State, private,	GSDT Module/Folder:	
	public, or other entity. [40 CFR 144.31(e)(4)]	File Name:	
		Page Number:	
		Notes:	

~	Required Item	Location in Application
	Whether the facility is located on Indian lands. [40 CFR 144.31(e)(5)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	A listing of all permits or construction approvals received or applied for under the following programs: [40	GSDT Module/Folder:
	CFR 144.31(e)(6)]	File Name:
	(i) Hazardous Waste Management program under RCRA.	Page Number:
	(ii) UIC Program.	Notes:
	(iii) NPDES.	
	(iv) PSD Program.	
	(v) CAA Nonattainment Program.	
	(vi) NESHAPS Preconstruction Approval under the CAA.	
	(vii) Ocean Dumping Permits under MPRSA.	
	(viii) Section 404 Dredge and Fill Permits.	
	(ix) Other Relevant Environmental Permits, including State permits.	
	Map of the Area [40 CFR 146.82(a)(2)]	GSDT Module/Folder:
	A map showing the injection well and the AoR; it must also show the number or name and location of all:	File Name:
	Injection wells,	Page Number:
	Producing wells,	Notes:
	Abandoned wells,	
	Plugged wells or dry holes,	
	Deep stratigraphic boreholes,	
	State- or EPA-approved subsurface cleanup sites,	
	Surface bodies of water,	
	Springs,	
	Mines (surface and subsurface),	
	Quarries,	
	Water wells,	
	Other pertinent surface features,	
	State, Tribal, and Territory boundaries, and	
	Roads.	
	A list of contacts for those States, Tribes, and Territories within the AoR [40 CFR 146.82(a)(20)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:

~	Required Item	Location in Application	
GEOLO	GEOLOGIC NARRATIVE/SITE CHARACTERIZATION INFORMATION		
1	The permit application will likely include a narrative description of the geologic structures, injection and confining zones, and fluid and solid geochemistry to meet the requirements of 40 CFR 146.82(a)(3, 5, and 6) and 146.83. The geologic narrative may be supported by maps, cross sections, and tabular data.		
	Regional Geologic Structure and Hydrogeologic Properties [40 CFR 146.82(a)(3)]	·	
	The description of the geologic structure and hydrogeologic properties of the proposed storage site and overlying formations must include the items below:		
	Maps and Cross Sections of the AoR [40 CFR 146.82(a)(3)(i)]	GSDT Module/Folder:	
	The maps and cross sections may be accompanied by a brief narrative description interpreting the figures	File Name:	
	and providing an overview of key features important to the project.	Page Number:	
		Notes:	
	Information on Faults and Fractures [40 CFR 146.82(a)(3)(ii)]	GSDT Module/Folder:	
	This may be a narrative description of the location, orientation, and properties of known or suspected faults	File Name:	
	and fractures and a discussion supporting a determination that they would not interfere with containment. It	Page Number:	
	may be accompanied by maps and cross sections and be supported by analyses of core samples, the results	Notes:	
	of geophysical surveys, pore pressure data, etc.		
	Data on the Injection Zone(s) [40 CFR 146.82(a)(3)(iii)]	GSDT Module/Folder:	
	This narrative may describe plans to collect or the results of geologic cores, outcrop data, seismic surveys,	File Name:	
	well logs, lithologic descriptions, and other field data used to characterize the injection zone(s), including	Page Number:	
	geology/facies changes. The application must address the following types of data on the injection zone(s):	Notes:	
	Depth,		
	Areal extent,		
	Thickness,		
	Mineralogy,		
	Porosity,		
	Permeability, and		
	Capillary pressure.		
	Data on the Confining Zone(s) [40 CFR 146.82(a)(3)(iii)]	GSDT Module/Folder:	
	This narrative may describe plans to collect or the results of geologic cores, outcrop data, seismic surveys,	File Name:	
	well logs, lithologic descriptions, and other field data used to characterize the confining zone(s), including	Page Number:	
	geology/facies changes. The application must address the following types of data on the confining zone(s):	Notes:	
	Depth,		
	Areal extent,		
	Thickness,		
	Mineralogy,		
	Porosity,		
	Permeability, and		
	Capillary pressure.		

~	Required Item	Location in Application
	Geomechanical and Petrophysical Information about the Confining Zone(s) [40 CFR 146.82(a)(3)(iv)]	GSDT Module/Folder:
	A narrative description of the confining zone(s) may describe the testing performed (or planned) and	File Name:
	available results in a tabular and/or graphical form; it may include maps and present seismic or other	Page Number:
	geophysical data, core data, or well logs. The application must address the following about the confining	Notes:
	zone(s):	
	Fractures.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Stress.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Ductility.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Rock strength.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	In situ fluid pressures.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Information on Seismic History [40 CFR 146.82(a)(3)(v)]	GSDT Module/Folder:
	A narrative description of the presence and depth of seismic sources and a determination that seismicity	File Name:
	would not interfere with containment that may be accompanied by tables and/or maps of seismic events,	Page Number:
	sources, and depths.	Notes:
	Geologic and Topographic Maps and Cross Sections [40 CFR 146.82(a)(3)(vi)]	GSDT Module/Folder:
	These maps and cross sections of regional geology, hydrogeology, and local geologic structure may be	File Name:
	accompanied by a narrative description or interpretations of logs or core data.	Page Number:
		Notes:
	Hydrologic Information/Maps and Cross Sections of USDWs [40 CFR 146.82(a)(5)]	GSDT Module/Folder:
	The maps and stratigraphic cross sections of the vertical and lateral limits of all USDWs may be accompanied	File Name:
	by a narrative interpretation of the figures. The maps/cross sections must show:	Page Number:
		Notes:

~	Required Item	Location in Application
	Water wells and springs within the AoR.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Their positions relative to the injection zone(s).	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	The direction of water movement, where known.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Baseline Geochemical Data [40 CFR 146.82(a)(6)]	GSDT Module/Folder:
	The narrative description of available geochemical data on fluid- and solid-phase geochemistry of all	File Name:
	subsurface formations (including USDWs) in the AoR may describe: results or planned sampling/testing, the	Page Number:
	parameters analyzed, and any geochemical modeling that was performed, along with data sources, data	Notes:
	quality or gaps, and sampling/testing methods. It may be accompanied by tabular or graphical data,	
	statistics, and maps.	
	Demonstration of Site Suitability [40 CFR 146.83]	GSDT Module/Folder:
	This narrative demonstration may be accompanied by maps, cross sections, tables of relevant geological	File Name:
	data, or descriptions of model inputs/results. It must describe:	Page Number:
	The suitability of the injection zone [40 CFR 146.83(a)(1)], and	Notes:
	The suitability of the confining zone [40 CFR 146.83(a)(2)].	
	(*) It may also describe additional confining zone(s) [40 CFR 146.83(b)]; a description of additional confining	
	zones is not required of all projects.	
PLANN	ED WELL OPERATIONS	
	Proposed average and maximum daily rate and volume and/or mass and total anticipated volume and/or	GSDT Module/Folder:
	mass of the CO ₂ stream. [40 CFR 146.82(a)(7)(i)]	File Name:
	A narrative or tabular description that may be accompanied by calculations.	Page Number:
		Notes:
	Proposed average and maximum injection pressure. [40 CFR 146.82(a)(7)(ii)]	GSDT Module/Folder:
	A narrative or tabular description that may be accompanied by calculations.	File Name:
		Page Number:
		Notes:
	<u>The source(s) of the CO₂.</u> [40 CFR 146.82(a)(7)(iii)]	GSDT Module/Folder:
	A narrative description of the CO₂ source.	File Name:
		Page Number:
		Notes:

~	Required Item	Location in Application
	An analysis of the chemical and physical characteristics of the CO ₂ stream. [40 CFR 146.82(a)(7)(iv)]	GSDT Module/Folder:
	A narrative description that may be accompanied by tables of parameters or analytical reports.	File Name:
		Page Number:
		Notes:
AREA C	F REVIEW (AoR) AND CORRECTIVE ACTION PLAN	
	The Method for Delineating the AoR [40 CFR 146.82(a)(13), 146.84(b)(1)]	GSDT Module/Folder:
	A narrative description of the AoR delineation model used, which may include assumptions made, any	File Name:
	available outputs/results, and the inputs on which the model is based. It may be accompanied by tables,	Page Number:
	figures and graphics, or raw data in a tabular format. Some input data files may be uploaded directly to the GSDT.	Notes:
	AoR Reevaluation Schedule and Criteria, Including:	GSDT Module/Folder:
	A description of the minimum fixed frequency, not to exceed 5 years, for AoR reevaluations. [40 CFR	File Name:
	146.84(b)(2)(i)];	Page Number:
	The monitoring and operational conditions that would warrant a reevaluation of the AoR prior to the	Notes:
	next scheduled reevaluation. [40 CFR 146.84(b)(2)(ii)]; and	
	How monitoring and operational data will be used to inform an AoR reevaluation. [40 CFR	
	146.84(b)(2)(iii)]	
	Corrective Action Information [146.84(b)(2)(iv)]	GSDT Module/Folder:
	A narrative discussion of how corrective action was/will be conducted. If phased corrective action is planned,	File Name:
	the application must describe the following:	Page Number:
		Notes:
	How the phasing will be determined.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	How corrective action will be adjusted if there are changes in the AoR.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	How site access for future corrective action will be guaranteed.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	<u>Tabulation of Wells in the AoR</u> [40 CFR 146.82(a)(4); 40 CFR 146.84(c)(2)]	GSDT Module/Folder:
	The AoR and Corrective Action Plan must include a table listing wells within the AoR that penetrate the	File Name:
	injection or confining zones or a statement there are no wells that penetrate the confining zone within the	Page Number:
	AoR. Other penetrations of the confining zone(s), such as underground mines, also must be identified. If a	Notes:
	table is submitted, it must include the following information:	

~	Required Item	Location in Application
	Well type.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Description of the well's construction.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Date drilled.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Location.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Depth.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Record of plugging and/or completion.	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
TESTIN	G AND MONITORING PLAN	
	<u>Testing and Monitoring Plan</u> [40 CFR 146.82(a)(15); 146.90]	GSDT Module/Folder:
	The Testing and Monitoring Plan will be a narrative description of planned injection-phase testing activities	File Name:
	that is accompanied by maps, tables, illustrations, or step-by-step procedures that describe the following:	Page Number:
		Notes:
	CO ₂ Stream Analysis [40 CFR 146.90(a)]	GSDT Module/Folder:
	Narrative description that may describe analytical parameters, sampling methods, sampling locations, and	File Name:
	frequencies.	Page Number:
		Notes:
	Continuous Recording of Operational Parameters [40 CFR 146.90(b)]	GSDT Module/Folder:
	Narrative description of devices to continuously monitor and record injection pressure, rate, and volume;	File Name:
	tubing-casing annulus pressure; and annulus fluid volume added. May be depicted on well schematics.	Page Number:
		Notes:

~	Required Item	Location in Application
	Corrosion Monitoring [40 CFR 146.90(c)]	GSDT Module/Folder:
	Narrative description of corrosion monitoring methods that may describe sampling methods/locations or	File Name:
	testing frequency.	Page Number:
		Notes:
	Above Confining Zone Monitoring [40 CFR 146.90(d)]	GSDT Module/Folder:
	Narrative description of planned water quality monitoring that may describe well locations; analytical	File Name:
	methods and parameters; sampling locations and methods, formations/depths, and frequencies. The	Page Number:
	description may be accompanied by maps, monitoring well schematics, or tables of analytical parameters	Notes:
	and methods.	
	External Mechanical Integrity Testing [40 CFR 146.90(e)]	GSDT Module/Folder:
	Narrative (sometimes step-by-step) description of mechanical integrity tests (MITs) and their planned	File Name:
	frequency.	Page Number:
		Notes:
	Pressure Fall-Off Testing [40 CFR 146.90(f)]	GSDT Module/Folder:
	Narrative (sometimes step-by-step) description of pressure fall-off tests and their planned frequency.	File Name:
		Page Number:
		Notes:
	Direct CO ₂ Plume and Pressure Front Tracking [40 CFR 146.90(g)(1)]	GSDT Module/Folder:
	Narrative description of planned direct methods to track the CO ₂ plume and pressure front that may include	File Name:
	well locations; analytical methods and parameters; sampling locations and formations/depths; and	Page Number:
	frequencies. The description may be accompanied by maps, monitoring well schematics, or tables of	Notes:
	analytical parameters and methods.	
	Indirect CO ₂ Plume and Pressure Front Tracking [40 CFR 146.90(g)(2)]	GSDT Module/Folder:
	Narrative description of planned indirect methods to track the CO ₂ plume and pressure front; it may	File Name:
	describe: well locations; monitoring equipment; or geophysical survey extent/resolution. The description may	Page Number:
	be accompanied by maps, monitoring well or equipment schematics, or tables.	Notes:
	* Surface Air Monitoring and/or Soil Gas Monitoring [40 CFR 146.90(h)]	GSDT Module/Folder:
	This type of monitoring is not required for all projects; if it is included, it would be a narrative description of	File Name:
	planned methods detect CO₂ in the soil or atmosphere (including monitoring locations, equipment, and	Page Number:
	frequencies) that may be accompanied by maps or illustrations.	Notes:
	* Other Monitoring [40 CFR 146.90(i)]	GSDT Module/Folder:
	Additional monitoring is not required for all projects; if it is included, it would be a narrative description of	File Name:
	the types of monitoring (e.g., seismic), including: methods, equipment, locations, and frequencies that may	Page Number:
	be accompanied by maps, illustrations, or tables.	Notes:
	Quality Assurance and Surveillance Plan [40 CFR 146.90(k)]	GSDT Module/Folder:
	Narrative description of planned quality assurance procedures for all testing and monitoring activities.	File Name:
		Page Number:
		Notes:

~	Required Item	Location in Application
INJECT	TON WELL PLUGGING PLAN	
	Well Plugging Plan [40 CFR 146.82(a)(16); 146.92(b)]	GSDT Module/Folder:
	The Well Plugging Plan may be a narrative (sometimes step-by-step) description of plugging procedures for	File Name:
	the injection well. It may be accompanied by schematics and tables. The plan must include the following	Page Number:
	information:	Notes:
	Tests or measures for determining bottomhole reservoir pressure. [40 CFR 146.92(b)(1)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	External mechanical integrity testing methods. [40 CFR 146.92(b)(2)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	The type and number of plugs to be used. [40 CFR 146.92(b)(3)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	The placement of each plug, including the elevation of the top and bottom of each plug. [40 CFR	GSDT Module/Folder:
	146.92(b)(4)]	File Name:
		Page Number:
		Notes:
	The type, grade, and quantity of material to be used in plugging. [40 CFR 146.92(b)(5)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	The method of placement of the plugs. [40 CFR 146.92(b)(6)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
POST-I	NJECTION SITE CARE (PISC) AND SITE CLOSURE PLAN	
	PISC and Site Closure Plan [40 CFR 146.82(a)(17); 146.93(a)(1)]	GSDT Module/Folder:
	The plan will be a narrative discussion, accompanied by maps, cross sections, tables, or model outputs that	File Name:
	must include the following information:	Page Number:
		Notes:
	The differential between pre-injection and predicted post-injection pressures in the injection zone(s).	GSDT Module/Folder:
	[40 CFR 146.93(a)(2)(i)]	File Name:
		Page Number:
		Notes:

~	Required Item	Location in Application
	The predicted position of the CO ₂ plume and associated pressure front at site closure. [40 CFR	GSDT Module/Folder:
	146.93(a)(2)(ii)]	File Name:
		Page Number:
		Notes:
	A description of post-injection monitoring locations, methods, and proposed frequencies. [40 CFR	GSDT Module/Folder:
	146.93(a)(2)(iii)] This may include well locations; analytical methods and parameters; and sampling	File Name:
	locations, formations/depths, and frequencies.	Page Number:
		Notes:
	A proposed schedule for submitting post-injection site care monitoring results. [40 CFR 146.93(a)(2)(iv)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	The duration of the post-injection site care timeframe. [40 CFR 146.93(a)(2)(v)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	* Alternative Post-Injection Site Care Timeframe [40 CFR 146.82(a)(18); 146.93(c)]	GSDT Module/Folder:
	If the applicant proposes an alternative to the 50-year default PISC timeframe, the demonstration may be	File Name:
	part of the PISC and Site Closure Plan or be submitted as a separate document. The request must include or	Page Number:
	reference the following:	Notes:
	The results of computational modeling of the AoR. [40 CFR 146.93(c)(1)(i)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	The predicted timeframe for pressure decline within the injection zone and any other zones to pre-	GSDT Module/Folder:
	injection pressures. [40 CFR 146.93(c)(1)(ii)]	File Name:
		Page Number:
		Notes:
	The predicted rate of CO ₂ plume migration within the injection zone and the predicted timeframe for	GSDT Module/Folder:
	the cessation of migration. [40 CFR 146.93(c)(1)(iii)]	File Name:
		Page Number:
		Notes:
	A description of the site-specific processes that will result in CO ₂ trapping. [40 CFR 146.93(c)(1)(iv)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:

✓	Required Item	Location in Application
	The predicted rate of CO₂ trapping. [40 CFR 146.93(c)(1)(v)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	The results of laboratory analyses, research studies, and/or field or site-specific studies to verify the	GSDT Module/Folder:
	above information. [40 CFR 146.93(c)(1)(vi)]	File Name:
		Page Number:
		Notes:
	A characterization of the confining zone(s), including a demonstration that it is free of faults and	GSDT Module/Folder:
	fractures and is sufficiently thick, and will impede fluid movement. [40 CFR 146.93(c)(1)(vii)]	File Name:
		Page Number:
		Notes:
	The presence of potential conduits for fluid movement. [40 CFR 146.93(c)(1)(viii)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	A description of the well's construction and an assessment of the quality of plugs of all abandoned wells	GSDT Module/Folder:
	in the AoR. [40 CFR 146.93(c)(1)(ix)]	File Name:
		Page Number:
		Notes:
	The distance between the injection zone and the nearest USDWs. [40 CFR 146.93(c)(1)(x)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:

~	Required Item	Location in Application
EMER	GENCY AND REMEDIAL RESPONSE PLAN	
	Emergency and Remedial Response Plan [40 CFR 146.82(a)(19); 146.94(a)]	GSDT Module/Folder:
	The Emergency and Remedial Response Plan will be a narrative description of local resources and	File Name:
	infrastructure, potential emergency events and response actions, personnel, and equipment to address	Page Number:
	USDW endangerment. It may be accompanied by maps, illustrations, and tables.	Notes:
INJECT	TION WELL CONSTRUCTION PLAN	
	Description of the Casing and Cement [40 CFR 146.82(a)(11, 12); 146.86(b)]	GSDT Module/Folder:
	Well schematics (either planned or as-built) that show the surface casing and at least one long string casing.	File Name:
	The schematics may be accompanied by a narrative step-by-step process for installing casing strings,	Page Number:
	description of centralizers, cementing procedures, cement and cement additives. The application may also	Notes:
	include a narrative description of how the casing and cement will be compatible with fluids with which they	
	may come into contact and meet or exceed API/ASTM standards. The application must address the following	
	information (which may be presented in tables):	
	Depth to the injection zone(s). [40 CFR 146.86(b)(1)(i)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Injection pressure, external pressure, internal pressure, and axial loading. [40 CFR 146.86(b)(1)(ii)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Hole size. [40 CFR 146.86(b)(1)(iii)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Size and grade of all casing strings. [40 CFR 146.86(b)(1)(iv)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Corrosiveness of the CO ₂ stream and formation fluids. [40 CFR 146.86(b)(1)(v)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Down-hole temperatures. [40 CFR 146.86(b)(1)(vi)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:

~	Required Item	Location in Application
	Lithology of the injection and confining zone(s). [40 CFR 146.86(b)(1)(vii)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Type or grade of cement and cement additives. [40 CFR 146.86(b)(1)(viii)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Quantity, chemical composition, and temperature of the CO ₂ stream. [40 CFR 146.86(b)(1)(ix)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Description of the Tubing and Packer [40 CFR 146.86(c)]	GSDT Module/Folder:
	The tubing and packer may be depicted on the well schematics described above, and the information below	File Name:
	may be summarized in tables. The application may also include a narrative description of how the tubing and	Page Number:
	packer materials will be compatible with fluids with which they may come into contact and meet or exceed	Notes:
	API/ASTM standards. The application must include the following information:	
	Depth of setting. [40 CFR 146.86(c)(3)(i)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Characteristics of the CO ₂ stream and formation fluids. [40 CFR 146.86(c)(3)(ii)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Maximum proposed injection pressure. [40 CFR 146.86(c)(3)(iii)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Maximum proposed annular pressure. [40 CFR 146.86(c)(3)(iv)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:
	Proposed injection rate and volume and/or mass of the CO ₂ stream. [40 CFR 146.86(c)(3)(v)]	GSDT Module/Folder:
		File Name:
		Page Number:
		Notes:

~	Required Item	Location in Application			
	Size of tubing and casing. [40 CFR 146.86(c)(3)(vi)]	GSDT Module/Folder:			
		File Name:			
		Page Number:			
		Notes:			
	Tubing tensile, burst, and collapse strengths. [40 CFR 146.86(c)(3)(vii)]	GSDT Module/Folder:			
		File Name:			
		Page Number:			
		Notes:			
	Continuous Recording Devices and Automatic Shutoff Devices [40 CFR 146.88(e)]	GSDT Module/Folder:			
	The well schematics should show continuous recording devices and automatic shutoff devices to monitor:	File Name:			
	injection pressure; the rate, volume and/or mass, and temperature of the CO2 stream; and the pressure on	Page Number:			
	the annulus between the tubing and the long string casing and annulus fluid volume.	Notes:			
PRE-OP	PERATIONAL TESTING				
	Pre-Operational Testing Plan [40 CFR 146.82(a)(8); 146.87]	GSDT Module/Folder:			
	A narrative plan that describes the testing that the applicant has performed or plans to perform to	File Name:			
	characterize the well and all relevant geologic formations. The plan may include step-by-step procedures and	Page Number:			
	be accompanied by tables or graphics. At a minimum, the logs and tests must address the information and	Notes:			
	testing required at 146.87 (a) through (e), including: logs, surveys and tests to determine or verify				
	information about relevant geologic formations; tests to verify internal and external mechanical integrity;				
	reports/analysis of injection zone and confining zone cores and formation fluid samples; and				
	characterization of the injection zone(s).				
FINANC	CIAL RESPONSIBILITY DEMONSTRATION				
Propos	ed Financial Responsibility Demonstration [40 CFR 146.82(a)(14); 146.85(a)]				
The app	plication must include a cost estimate for performing covered activities; it may be accompanied by a third-party	estimate. Cost estimates for the following activities			
must be	must be included:				
	Corrective action. [40 CFR 146.85(a)(2)(i)]	GSDT Module/Folder:			
		File Name:			
		Page Number:			
		Notes:			
	Injection well plugging. [40 CFR 146.85(a)(2)(ii)]	GSDT Module/Folder:			
	T GG G L V X X X	File Name:			
		Page Number:			
		Notes:			
	PISC and site closure. [40 CFR 146.85(a)(2)(iii)]	GSDT Module/Folder:			
	C	File Name:			
		Page Number:			
		Notes:			
·					

~	Required Item	Location in Application		
	Emergency and remedial response. [40 CFR 146.85(a)(2)(iv)]	GSDT Module/Folder:		
		File Name:		
		Page Number:		
		Notes:		
	Proposed Financial Instrument(s) [40 CFR 146.85(a)(1)]	GSDT Module/Folder:		
	The application will include a narrative description (or draft language) of one or more financial instruments.	File Name:		
		Page Number:		
		Notes:		
PROPO	SED STIMULATION PLAN			
	* Proposed Stimulation Program [40 CFR 146.82(a)(9)]	GSDT Module/Folder:		
	The stimulation plan should include a narrative description of stimulation fluids to be used and a	File Name:		
	determination that stimulation will not interfere with containment.	Page Number:		
		Notes:		
INJECT	ION DEPTH WAIVER REQUEST			
* Inject	tion Depth Waiver Request [40 CFR 146.95]			
-	the applicant requests a waiver of the requirement to inject below the lowermost USDW, they must submit a separate narrative report, accompanied by maps, cross ections, tables, or schematics. The supplemental report must include (or reference) the following:			
	Information about the suitability of the injection zones. [40 CFR 146.95(a)(1)]	GSDT Module/Folder:		
		File Name:		
		Page Number:		
		Notes:		
	Information about confinement. [40 CFR 146.95(a)(2)]	GSDT Module/Folder:		
		File Name:		
		Page Number:		
		Notes:		
	Demonstration, using computational modeling, that USDWs will not be endangered. [40 CFR	GSDT Module/Folder:		
	146.95(a)(3)]	File Name:		
		Page Number:		
		Notes:		
	Information on well design and construction. [40 CFR 146.95(a)(4)]	GSDT Module/Folder:		
		File Name:		
		Page Number:		
		Notes:		
_	Planned testing and monitoring. [40 CFR 146.95(a)(5)]	GSDT Module/Folder:		
		File Name:		
		Page Number:		
		Notes:		

~	Required Item	Location in Application
	The location of all public water supplies affected, reasonably likely to be affected, or served by USDWs	GSDT Module/Folder:
	in the AoR. [40 CFR 146.95(a)(6)]	File Name:
		Page Number:
		Notes: