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INJECTION WELL PLUGGING PLAN
40 CFR 146.92(b)

South Texas Sequestration Project (Kleberg Hub)

1.0 Facility Information

Facility name: South Texas Sequestration Project (Kleberg Hub)
Well Name: Becerra_CCS_01_01

Facility contact: [redacted], Project Manager
5 Greenway Plaza, Suite 110 Houston, TX 77046
[redacted]

Well location: Kleberg County, Texas
[redacted] (NAD 27)

1PointFive Sequestration, LLC (1PointFive) will conduct injection well plugging and abandonment according to the procedures below.

Upon the end of life for the Becerra_CCS_01_01, this injection well will be plugged and abandoned in accordance with applicable regulatory requirements including 40 CFR Subpart H – Criteria and Standards Applicable to Class VI Wells. The plugging procedure and materials will be designed to prevent any unwanted fluid movement, resist the corrosive aspects of carbon dioxide (CO_2) with water mixtures, and protect any underground sources of drinking water (USDWs).

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2.0 Planned Tests or Measures to Determine Bottom-Hole Reservoir Pressure

1. Bottomhole pressure measurements will be taken using the installed downhole gauges. In case the gauges are not functioning properly, the operator will run pressure gauges during the P&A process of the well.

2. After injection has ceased, the well will be flushed with a kill fluid. A minimum of [redacted] tubing volumes will be injected without exceeding the fracture pressure. The injection packer and the tubing will be removed.

3. An active pulsed neutron log and/or casing inspection tool will be run and the well will be pressure tested to ensure integrity both inside and outside the casing prior to plugging.

4. If a loss of mechanical integrity is discovered, the well will be repaired before proceeding further with the plugging operations.

5. All casing in this well will have been cemented to the surface at the time of construction and will not be retrievable at abandonment.

6. [redacted]

7. Heavy gel mud [redacted] ppg will be left between cement plugs.

8. All the casing strings will be cut off at least [redacted] ft below the surface and plow line.

9. A blanking plate with the required permit information will be welded on top of the cutoff casing.

The procedures set forth above are preliminary and subject to change based on actual well conditions and other technical considerations to be determined at the time of well plugging. Any necessary revisions to the well plugging plan to address any new information collected during logging, testing, and completion of the well will be made after these activities have been completed. The final plugging plan will be submitted to the Underground Injection Control (UIC) Program Director.

3.0 Planned External Mechanical Integrity Test(s)

1PointFive will conduct at least one of the tests listed below to verify external mechanical integrity prior to plugging the injection well as required by 40 CFR 146.92(a).

[redacted]

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4.0 Information on Plugs

1PointFive will use the materials and methods noted in Table PLG-1 to plug the injection well. The volume and depth of the plug or plugs will depend on the final geology and downhole conditions of the well as assessed during construction. The cement(s) formulated for plugging will be compatible with the carbon dioxide stream. The cement formulation and required certification documents will be submitted to the agency with the well plugging plan. The owner or operator will report the wet density and will retain duplicate samples of the cement used for each plug.

Table PLG-1—Information on Cement Plugs

Plug No	Type Slurry	ID (inches)	Placement Method	Depths top (ft)	Depths bottom (ft)	Density (ppg)	Sacks	Excess	Yield ft3/sx
[redacted]									

- All plug depths will be adjusted after the well is drilled and completed.
- The plugging procedure will be updated as required by EPA and Texas regulators.
- Formation tops will be adjusted after running open hole electric logs.

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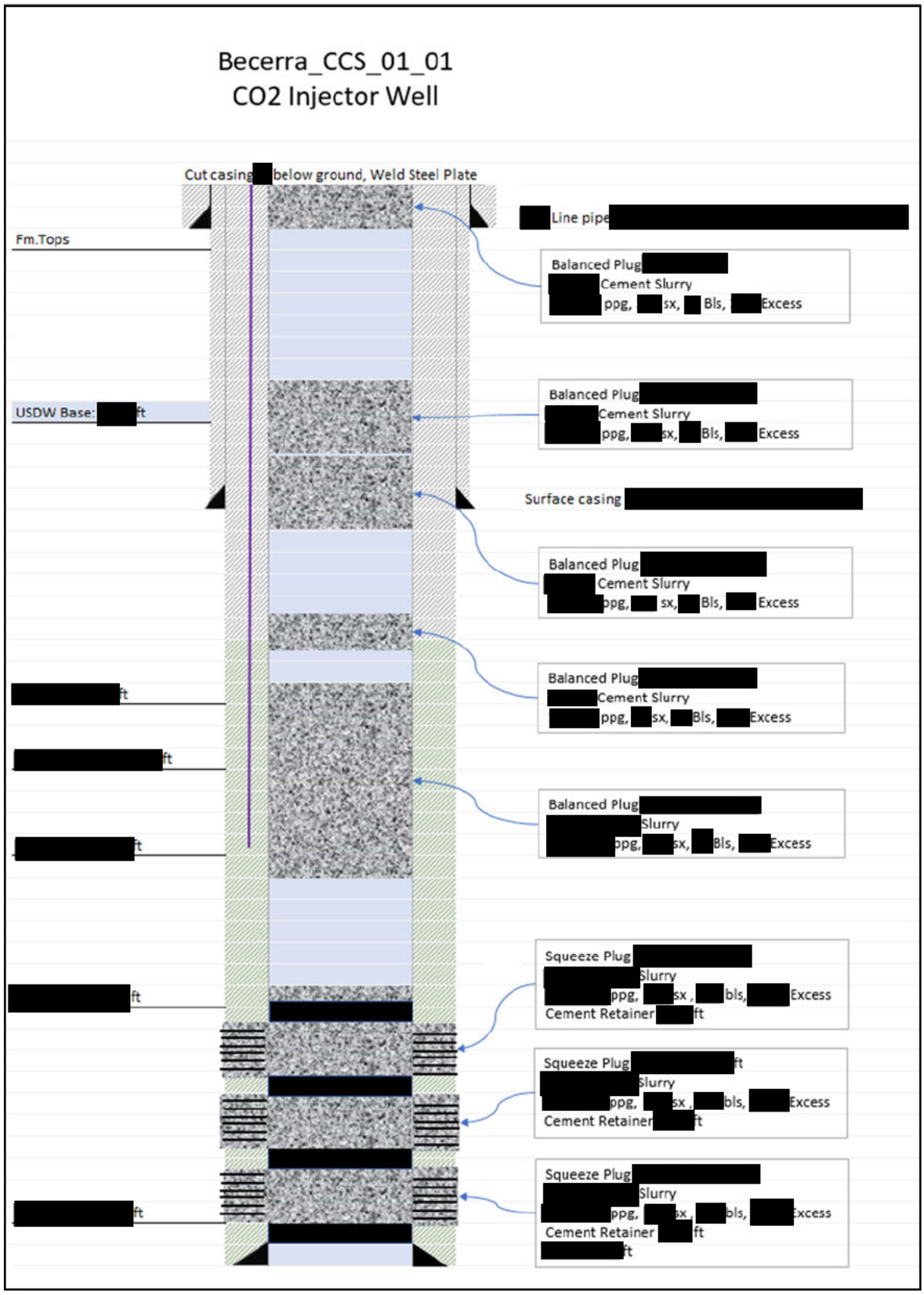

Figure PLG-1—Becerra_CCS_01_01 Injection Well Plugging Schematic

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OMB No. 2040-0042 Approval Expires 11/30/2014

United States Environmental Protection Agency
Washington, DC 20460

EPA

PLUGGING AND ABANDONMENT PLAN

Name and Address of Facility	Name and Address of Owner/Operator
Morgan County Class VI UIC Well #1 (cased well completion, 1,500 ft lateral) [address not yet available]	FutureGen Alliance, Inc. 73 Central Park Plaza East, Jacksonville, IL 62650

Locate Well and Outline Unit on Section Plat - 640 Acres

N / W / E / S — X

State	County	Permit Number
Illinois	Morgan	not yet issued

Surface Location Description

SE 1/4 of SE 1/4 of SW 1/4 of SE 1/4 of Section 26 Township 16N Range 9W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location ____ ft. frm (N/S) ____ Line of quarter section and ____ ft. from (E/W) ____ Line of quarter section.

TYPE OF AUTHORIZATION
- [x] Individual Permit
- [ ] Area Permit
- [ ] Rule

Number of Wells 1

Lease Name

WELL ACTIVITY
- [ ] CLASS I
- [ ] CLASS II
  - [ ] Brine Disposal
  - [ ] Enhanced Recovery
  - [ ] Hydrocarbon Storage
- [ ] CLASS III

Well Number

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT (LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE
24"	140.0	140'	140'	30"
16"	84.0	570'	570'	20"
10 3/4"	51.0	3,150'	3150'	14 3/4"
7"	29.0	6,004'	6,004'	9 1/2"

METHOD OF EMPLACEMENT OF CEMENT PLUGS
- [x] The Balance Method
- [ ] The Dump Bailer Method
- [ ] The Two-Plug Method
- [ ] Other

CEMENTING TO PLUG AND ABANDON DATA:	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inche	7"	7"	7"	7"	7"	7"	
Depth to Bottom of Tubing or Drill Pipe (ft	6,004	3,900	3,100	1,800	1,500	700	
Sacks of Cement To Be Used (each plug)	451	149	0	53	0	124	
Slurry Volume To Be Pumped (cu. ft.)	505	167	271	63	167	146	
Calculated Top of Plug (ft.)	3,900	3,100	1,800	1,500	700	0 (GL)	
Measured Top of Plug (if tagged ft.)	3,900	3,100	1,800	1,500	700	0 (GL)	
Slurry Wt. (Lb./Gal.)	15.82	15.82	8.6	15.6	8.6	15.6	
Type Cement or Other Material (Class III)	EverCrete	EverCrete	6% Gel	Class A	6% Gel	Class A	

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (if any)

From	To	From	To
(7" perforated casing) 3,950 ft MD	6,004 ft MD		

Estimated Cost to Plug Wells

Plug #1 Set through a cement retainer set at 3,900 ft MD
$600,000.00

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)	Signature	Date Signed
Kenneth K. Humphreys, Chief Executive Officer	Kenneth K. Humphreys	03/03/2014

EPA Form 7520-14 (Rev. 12-11)

Figure PLG-2—Sample EPA Plugging and Abandonment Form

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5.0 Narrative Description of Plugging Procedures for Injection Well

5.1 Notifications, Permits, and Inspections

In compliance with 40 CFR 146.92(c), 1PointFive will notify the regulatory agency at least 60 days before plugging the well and provide an updated Injection Well Plugging Plan, if applicable.

5.2 Plugging Procedures

1. Move rig onto Becerra_CCS_01_01 site and rig up (RU).

2. Conduct and document a safety meeting.

3. Record the bottomhole pressure (BHP) from the downhole gauge and calculate kill fluid density.

4. Test the pump and line to [redacted] psi. Fill the tubing and flush the well at least [redacted] time the tubing volume with kill fluid with the density determined using the bottomhole pressure measurement. It may be necessary to bleed off occasionally to remove all air from the system. Monitor the tubing pressure and the annular pressure continuously.

5. Test casing annulus to [redacted] psi and monitor it for [redacted] minutes. If the pressure decreases more than [redacted]% in [redacted] minutes, bleed the pressure, check surface lines and connections, and repeat the test. Then release the pressure.

   Note: If a failure in the long string casing is identified, the operator will prepare a plan to repair the well before plugging and abandonment.

6. If both the casing and tubing are dead, then nipple up the blowout preventers (BOPs).

7. Pull out of the hole and lay down tubing, packer, cable, and sensors.

   Contingency: [redacted]

8. Pick up the work string and trip in hole (TIH) with the bit to condition the wellbore.

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9. [redacted]

10. [redacted]

11. TIH with the work string with a cement retainer to the top of [redacted] Circulate the well, set the retainer, and perform an injectivity test. Rig up equipment for cementing operations.

12. [redacted]

13. [redacted]

14. [redacted]

15. [redacted]

16. [redacted]

17. [redacted]

18. [redacted]

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19. [redacted]

20. [redacted]

21. [redacted]

22. Lay down the work string. Rig down all equipment and move out. Cut the casing at [redacted] ft below the ground. Clean the cellar to where a plate can be welded with the required well information.

The procedures described above are subject to modification during execution as necessary to ensure a successful plugging operation. Any significant modifications due to unforeseen circumstances will be described in the plugging report.

The proposed plugging and abandonment procedures and schematics for [redacted] are included in Appendix A.

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Appendix A: Monitoring and USDW Well Plugging Plans

[redacted]

Table PLG-2—Information on Cement Plugs for [redacted]

Plug No	Type Slurry	ID (inches)	Placement Method	Depths top (ft)	Depths bottom (ft)	Density (ppg)	Sacks	Excess	Yield ft3/sx
[redacted]									

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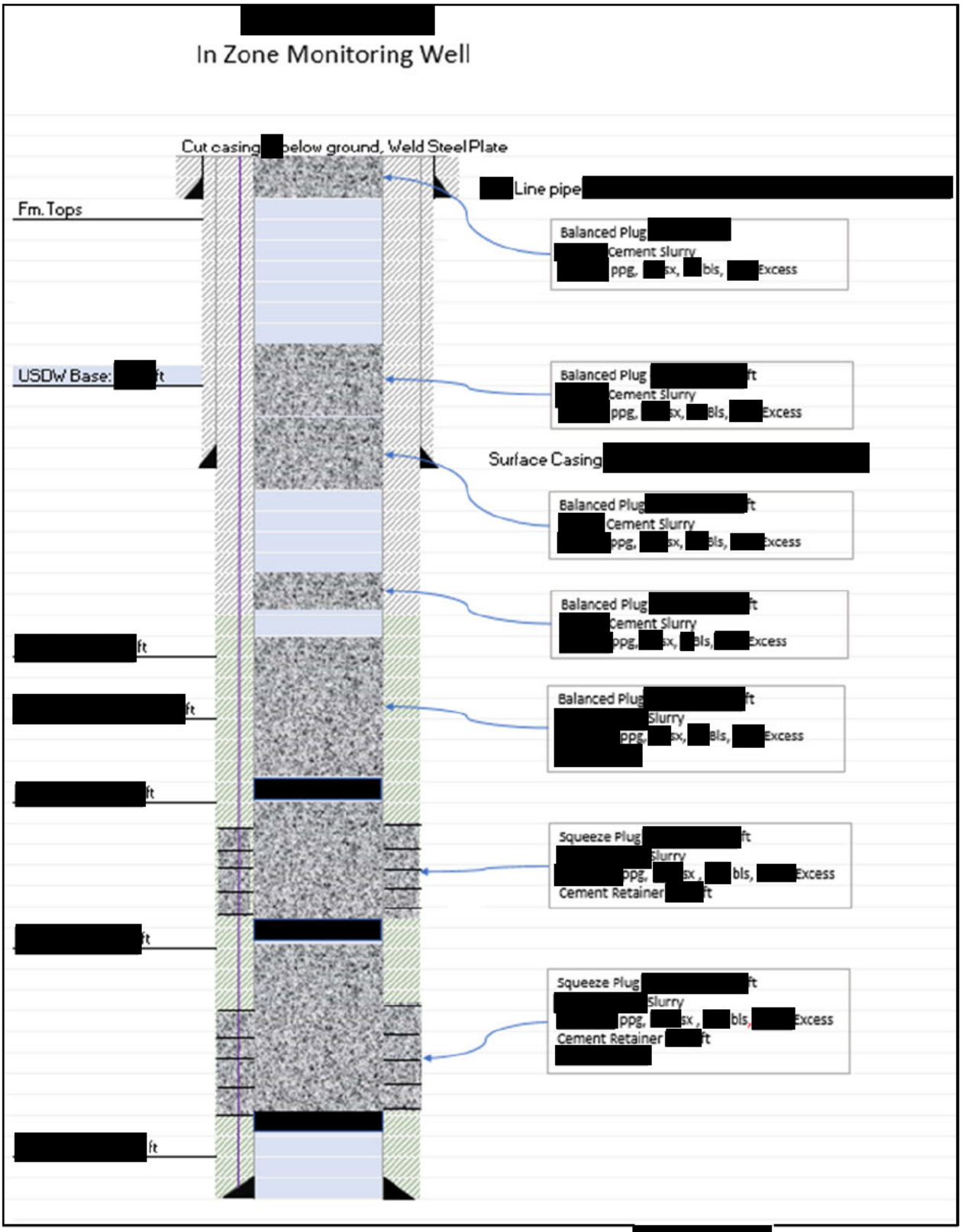

Figure PLG-3—Plugging Design and Schematic for

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Plugging Procedure

1. Move rig onto [redacted] site and rig up (RU).

2. Conduct and document a safety meeting.

3. Record the bottomhole pressure (BHP) from the downhole gauge and calculate kill fluid density.

4. Test the pump and line to [redacted] psi. Fill the tubing and flush the well at least [redacted] time the tubing volume with kill fluid with the density determined using the bottomhole pressure measurement. It may be necessary to bleed off occasionally to remove all air from the system. Monitor the tubing pressure and the annular pressure continuously.

5. Test casing annulus to [redacted] psi and monitor it for [redacted] minutes. If the pressure decreases more than [redacted]% in [redacted] minutes, bleed the pressure, check surface lines and connections, and repeat the test. Then release the pressure.

> **Note**: If a failure in the long string casing is identified, the operator will prepare a plan to repair the well before plugging and abandonment.

6. If both the casing and tubing are dead, then nipple up the blowout preventers (BOPs).

7. Pull out of the hole and lay down tubing, packer, cable, and sensors.

Contingency: [redacted]

8. Pick up the work string and trip in hole (TIH) with the bit to condition the wellbore.

9. [redacted]

10. [redacted]

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11. TIH with the work string with a cement retainer to the top of [redacted] Circulate the well, set the retainer, and perform an injectivity test. Rig up equipment for cementing operations.

12. [redacted]

13. [redacted]

14. [redacted]

15. [redacted]

16. [redacted]

17. [redacted]

18. [redacted]

19. [redacted]

20. Lay down the work string. Rig down all equipment and move out. Cut the casing at [redacted] ft below the ground. Clean the cellar to where a plate can be welded with the required well information.

The procedures described above are subject to modification during execution as necessary to ensure a successful plugging operation. Any significant modifications due to unforeseen circumstances will be described in the plugging report.

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[redacted]

Table PLG-3—Information on Cement Plugs for [redacted]

Plug No	Type Slurry	ID (inches)	Placement Method	Depths top (ft)	Depths bottom (ft)	Density (ppg)	Sacks	Excess	Yield ft3/sx
[redacted]									

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Figure PLG-4—Plugging Design and Schematic for [redacted]

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Plugging Procedure

1. Move in rig onto [redacted] site and rig up (RU).

2. Conduct and document a safety meeting.

3. Record the bottomhole pressure (BHP) from the downhole gauge and calculate kill fluid density.

4. Test the pump and line to [redacted] psi. Fill the tubing and flush the well at least [redacted] time the tubing volume with kill fluid with the density determined using the bottomhole pressure measurement. It may be necessary to bleed off occasionally to remove all air from the system. Monitor the tubing pressure and the annular pressure continuously.

5. Test casing annulus to [redacted] psi and monitor it for [redacted] minutes. If the pressure decreases more than [redacted]% in [redacted] minutes, bleed the pressure, check surface lines and connections, and repeat the test. Then release the pressure.

> **Note**: If a failure in the long string casing is identified, the operator will prepare a plan to repair the well before plugging and abandonment.

6. If both the casing and tubing are dead, then nipple up the blowout preventers (BOPs).

7. Pull out of the hole and lay down tubing, packer, cable, and sensors.

Contingency: [redacted]

8. Pick up the work string and trip in hole (TIH) with the bit to condition the wellbore.

9. [redacted]

10. [redacted]

11. TIH with the work string with a cement retainer to the top of [redacted] Circulate the well, set the retainer, and perform an injectivity test. Rig up equipment for cementing operations.

12. [redacted]

13. [redacted]

14. [redacted]

15. [redacted]

16. [redacted]

17. [redacted]

18. [redacted]

19. [redacted]

20. Lay down the work string. Rig down all equipment and move out. Cut the casing at [redacted] ft below the ground. Clean the cellar to where a plate can be welded with the required well information.

The procedures described above are subject to modification during execution as necessary to ensure a successful plugging operation. Any significant modifications due to unforeseen circumstances will be described in the plugging report.

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[redacted]

Table PLG-4—Information on Cement Plugs for [redacted]

Plug No	Type Slurry	ID (inches)	Placement Method	Depths top (ft)	Depths bottom (ft)	Density (ppg)	Sacks	Excess	Yield ft3/sx
[redacted]									

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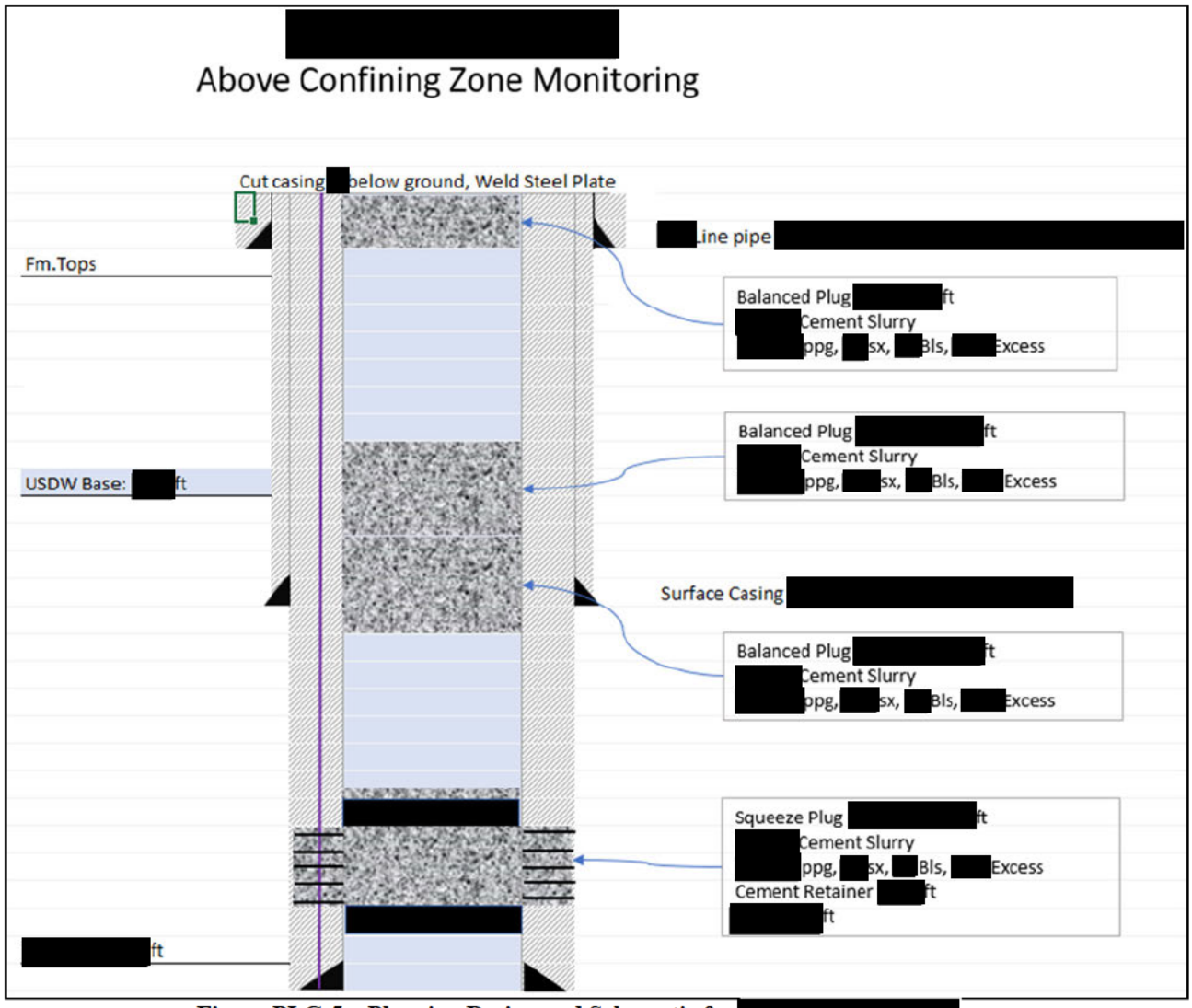

Figure PLG-5—Plugging Design and Schematic for

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Plugging Procedure

1. Move in rig onto [redacted] site and rig up (RU).

2. Conduct and document a safety meeting.

3. Record the bottomhole pressure (BHP) from the downhole gauge and calculate kill fluid density.

4. Test the pump and line to [redacted] psi.

5. Test casing annulus to [redacted] psi and monitor it for [redacted] minutes. If the pressure decreases more than [redacted]% in [redacted] minutes, bleed the pressure, check surface lines and connections, and repeat the test. Then release the pressure.

   Note: If a failure in the long string casing is identified, the operator will prepare a plan to repair the well before plugging and abandonment.

6. If both the casing and tubing are dead, then nipple up the blowout preventers (BOPs).

7. Pull out of the hole and lay down tubing, packer, cable, and sensors.

   Contingency: [redacted]

8. Pick up the work string and trip in hole (TIH) with the bit to condition the wellbore.

9. Set a CIBP at 5,600 ft.

10. TIH with the work string with a cement retainer to the top of [redacted] Circulate the well, set the retainer, and perform an injectivity test. Rig up equipment for cementing operations.

11. [redacted]

12. [redacted]

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13. [redacted]

14. [redacted]

15. Lay down the work string. Rig down all equipment and move out. Cut the casing at [redacted] ft below the ground. Clean the cellar to where a plate can be welded with the required well information.

The procedures described above are subject to modification during execution as necessary to ensure a successful plugging operation. Any significant modifications due to unforeseen circumstances will be described in the plugging report.

[redacted]

Table PLG-5—Information on Cement Plugs for [redacted]

Plug No	Type Slurry	ID (inches)	Placement Method	Depths top (ft)	Depths bottom (ft)	Density (ppg)	Sacks	Excess	Yield ft3/sx
[redacted]									

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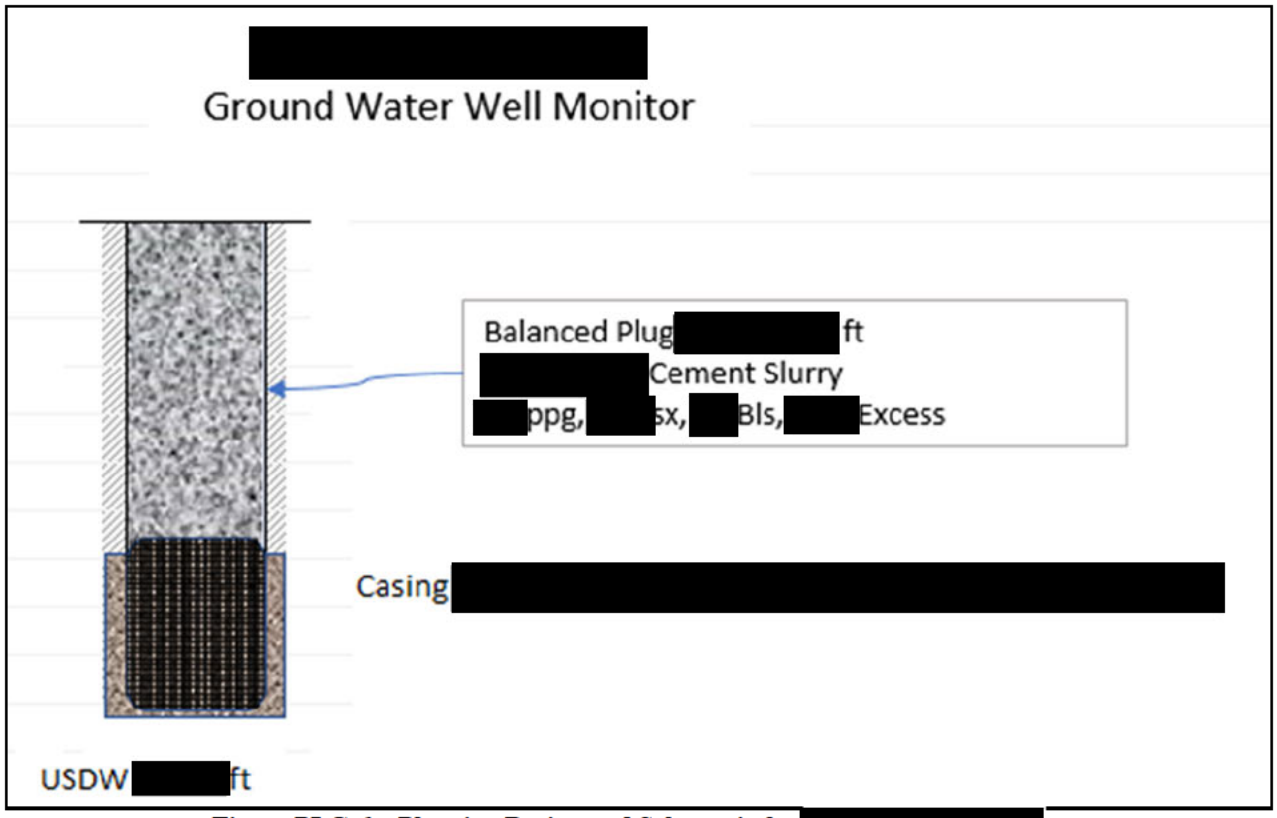

Figure PLG-6—Plugging Design and Schematic for [redacted]

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Plugging Procedure

1. Move in rig onto [redacted] site and rig up (RU).
2. Conduct and document a safety meeting.
3. Record the surface pressure.
4. Test the pump and line to [redacted] psi.
5. Kill well if necessary.
6. Pull out of hole and lay down tubing and ESP.
7. TIH with the work string to [redacted] ft.
8. [redacted]
9. Lay down the work string. Rig down all equipment and move out. Cut the casing at [redacted] ft below the ground. Clean the cellar to where a plate can be welded with the required well information.

The procedures described above are subject to modification during execution as necessary to ensure a successful plugging operation. Any significant modifications due to unforeseen circumstances will be described in the plugging report.

[redacted]

Table PLG-6—Information on Cement Plugs for [redacted]

Plug No	Type Slurry	ID (inches)	Placement Method	Depths top (ft)	Depths bottom (ft)	Density (ppg)	Sacks	Excess	Yield ft3/sx
[redacted]									

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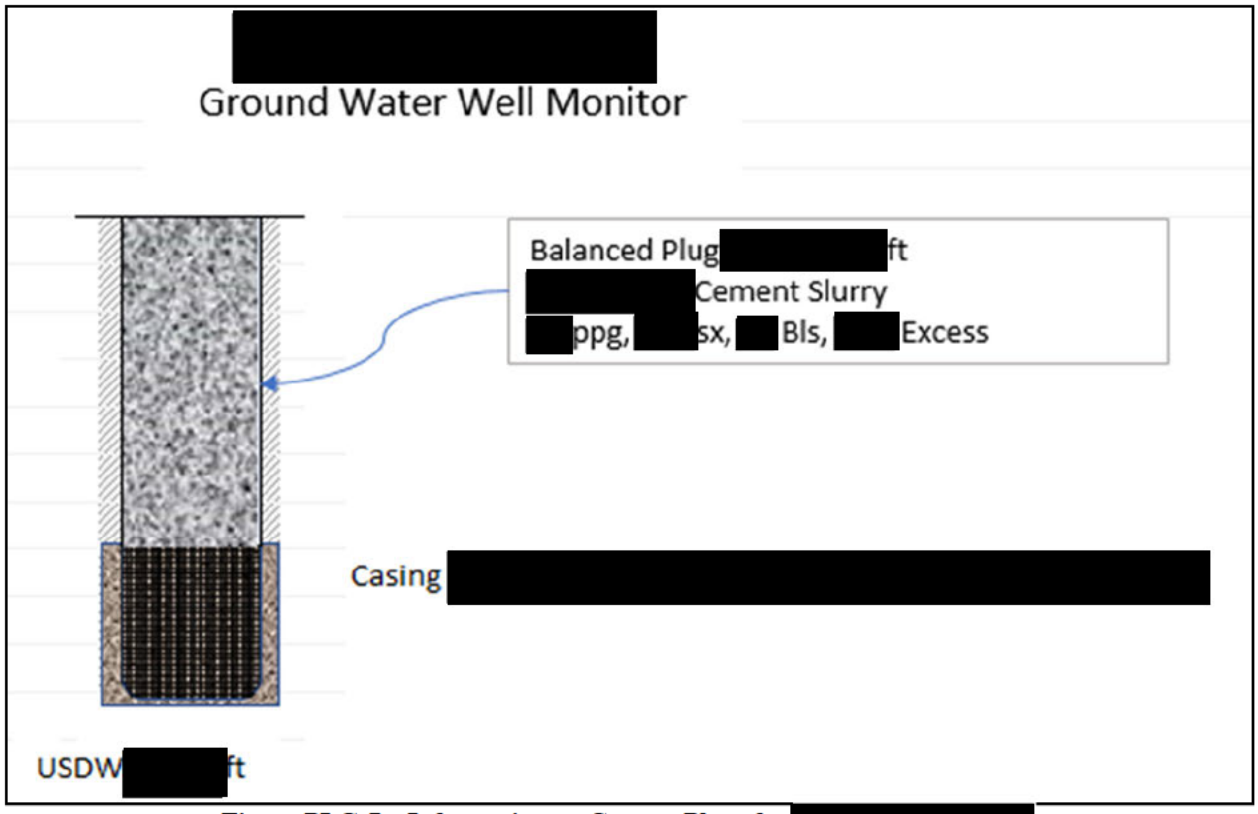

Figure PLG-7—Information on Cement Plugs for

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Plugging Procedure

1. Move in rig onto [redacted] site and rig up (RU).
2. Conduct and document a safety meeting.
3. Record the surface pressure.
4. Test the pump and line to [redacted] psi.
5. Kill well if necessary.
6. Pull out of hole and lay down tubing and ESP.
7. TIH with the work string to [redacted] ft.
8. [redacted]
9. Lay down the work string. Rig down all equipment and move out. Cut the casing at [redacted] ft below the ground. Clean the cellar to where a plate can be welded with the required well information.

The procedures described above are subject to modification during execution as necessary to ensure a successful plugging operation. Any significant modifications due to unforeseen circumstances will be described in the plugging report.

[redacted]

Table PLG-7—Information on Cement Plugs for [redacted]

Plug No	Type Slurry	ID (inches)	Placement Method	Depths top (ft)	Depths bottom (ft)	Density (ppg)	Sacks	Excess	Yield ft3/sx
[redacted]									

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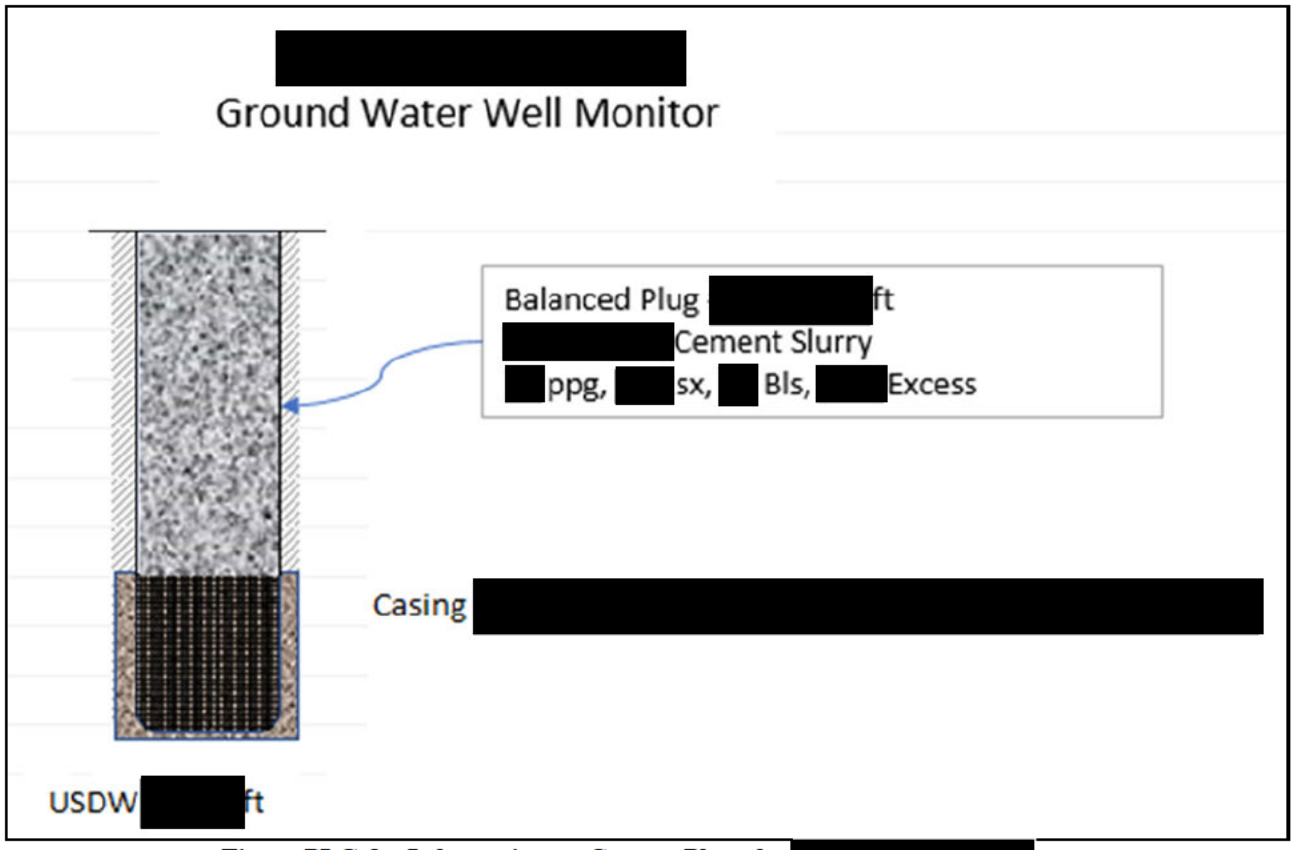

Figure PLG-8—Information on Cement Plugs for [redacted]

Plan revision number: 0
Plan revision date: 11/30/23

Plugging Procedure

1. Move in rig onto [redacted] site and rig up (RU).
2. Conduct and document a safety meeting.
3. Record the surface pressure.
4. Test the pump and line to [redacted] psi.
5. Kill well if necessary.
6. Pull out of hole and lay down tubing and ESP.
7. TIH with the work string to [redacted] ft.
8. [redacted]
9. Lay down the work string. Rig down all equipment and move out. Cut the casing at [redacted] ft below the ground. Clean the cellar to where a plate can be welded with the required well information.

The procedures described above are subject to modification during execution as necessary to ensure a successful plugging operation. Any significant modifications due to unforeseen circumstances will be described in the plugging report.

[redacted]

Table PLG-8—Information on Cement Plugs for [redacted]

Plug No	Type Slurry	ID (inches)	Placement Method	Depths top (ft)	Depths bottom (ft)	Density (ppg)	Sacks	Excess	Yield ft3/sx
[redacted]									

Plan revision number: 0

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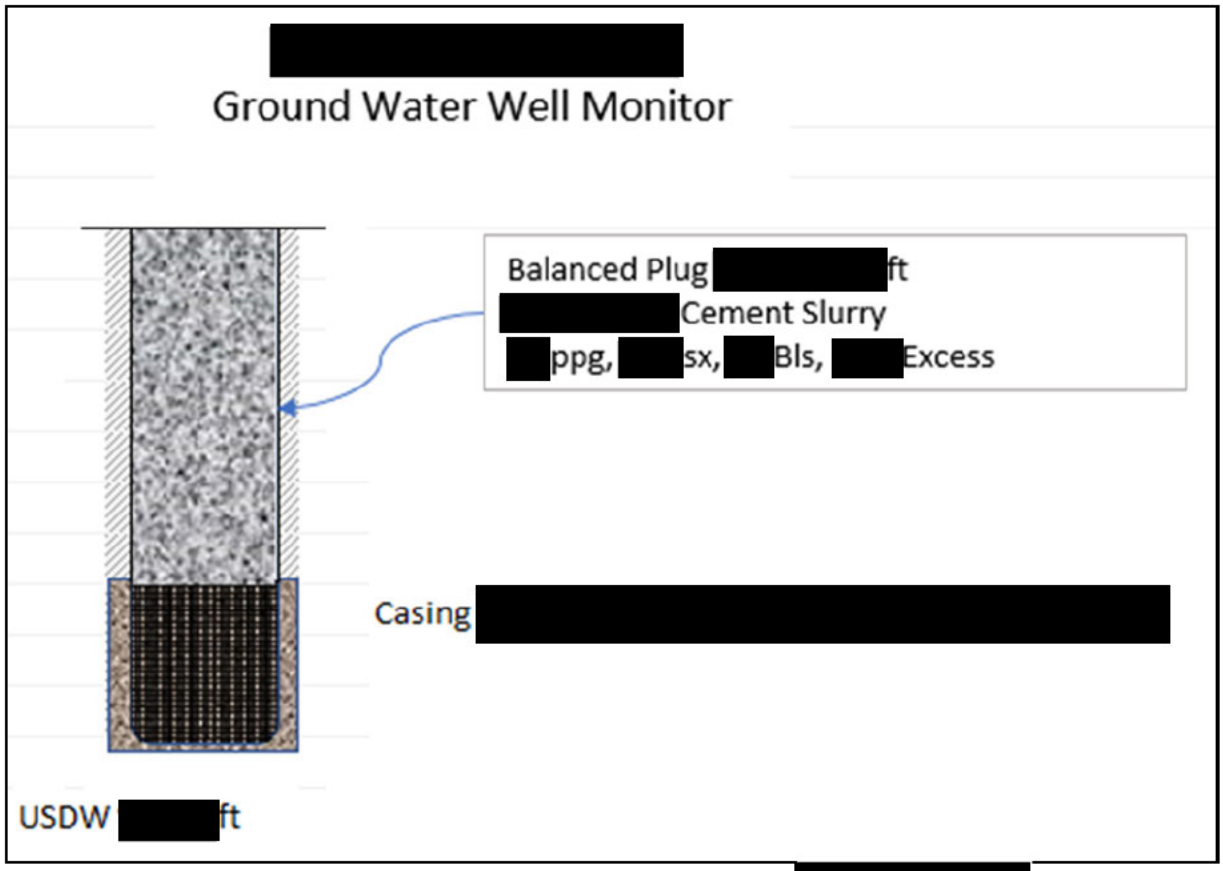

Figure PLG-9—Information on Cement Plugs for [redacted]

Plan revision number: 0
Plan revision date: 11/30/23

Plugging Procedure

1. Move in rig onto [redacted] site and rig up (RU).
2. Conduct and document a safety meeting.
3. Record the surface pressure.
4. Test the pump and line to [redacted] psi.
5. Kill well if necessary.
6. Pull out of hole and lay down tubing and ESP.
7. TIH with the work string to [redacted] ft.
8. [redacted]
9. Lay down the work string. Rig down all equipment and move out. Cut the casing at [redacted] ft below the ground. Clean the cellar to where a plate can be welded with the required well information.

The procedures described above are subject to modification during execution as necessary to ensure a successful plugging operation. Any significant modifications due to unforeseen circumstances will be described in the plugging report.