

Table 3.1 Specific setback distances for wells from pollution or contamination sources.

Feature requiring setback	Minimum horizontal distance
Storage area for commercial fertilizers or chemicals	300'
Demolition landfill	300'
Wastewater treatment plant or lagoon that serves commercial facilities, subdivisions, or mobile home parks	300'
Above ground or underground storage tank <sup>1, 2</sup>	300'
Tank distribution lines for liquid petroleum, petroleum products, or chemicals <sup>1, 2</sup>	300'
Earthen, concrete, or other manure storage structures or lagoons	300'
Land application areas for domestic or animal waste	300'
Animal composting facilities	300'
Unplugged abandoned wells	100'
Subsurface wastewater disposal field, grave, residential lagoon, privy, lift station, or pressurized sewer line	100'
Animal Feeding Operation (AFO) <sup>4</sup>	100'
An animal composting facility constructed with a concrete floor cell design covered with a roof	100'
Dry litter storage within a building	100'
Other areas with contaminants that may leach into the groundwater	100'
Septic tank or wastewater holding tank	50'
Pit or cistern	50'
Existing operating well	50'
Non-pressurized buried sewer line	25'
Solid waste disposal area, sanitary landfill, special waste landfill, utility waste landfill, waste stabilization pond (lagoon), or hazardous waste treatment, storage, or disposal facility <sup>3</sup>	1000'

1. Any well that cannot meet setback distances for petroleum distribution site shall meet the well construction requirements for a High Yield Bedrock well pursuant to 10 CSR 23-3.030(3).
2. Petroleum or petroleum products that are not liquid at standard temperatures and pressures are exempt from these setback requirements.
3. A safe distance cannot be determined. Any well that intercepts leachates from a waste landfill or waste stabilization pond (lagoon) shall be plugged unless it is approved by the Department for use as a monitoring well.
4. Has the same meaning as defined in 10 CSR 20-6.300.

Table 3.2 Minimum standards for steel casing.

Nominal Pipe (Inches)	Outside Diameter (Inches)	Wall Thickness	
		(Inches)	(Weight/Foot)
6	6 <sup>5</sup> / <sub>8</sub>	0.188	13
8	8 <sup>5</sup> / <sub>8</sub>	0.188	17
10	10 <sup>3</sup> / <sub>4</sub>	0.188	21
12	12 <sup>3</sup> / <sub>4</sub>	0.188	25
14	14	0.188	28
16	16	0.188	32

Table 3.3 Minimum Cure Times for Grout

Grout Type	Minimum Cure Time (hours)
Hi early cement	12
Portland Type I cement	72
Chipped Bentonite	4
High Solids Bentonite Slurry	*

\*Follow manufacturer's guidelines. Cure time will vary based on additives.

Table 3.4 Minimum standards for plastic casing.

Nominal Pipe (Inches)	Outside Diameter (Inches)	Standard Dimension Ratio (SDR)	Schedule (SCH)
6	6 <sup>5</sup> / <sub>8</sub>	26	40

Table 3.5 Maximum Gravity Grouting Depths

Borehole Size (inches)	Outside Diameter of Casing (inches)	Annular Space (inches)	Gravity Feed Depth (feet)
8 <sup>5</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	1	100
8 <sup>3</sup> / <sub>4</sub>	6 <sup>5</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>16</sub>	106
8 <sup>7</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>8</sub>	112
9	6 <sup>5</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>16</sub>	119
9 <sup>1</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>4</sub>	125
9 <sup>1</sup> / <sub>4</sub>	6 <sup>5</sup> / <sub>8</sub>	1 <sup>5</sup> / <sub>16</sub>	131
9 <sup>3</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>8</sub>	137
9 <sup>1</sup> / <sub>2</sub>	6 <sup>5</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	144
9 <sup>5</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	3	150
9 <sup>3</sup> / <sub>4</sub>	6 <sup>5</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>8</sub>	156
9 <sup>7</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>4</sub>	162
10	6 <sup>5</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>8</sub>	169
10 <sup>1</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>	175
10 <sup>1</sup> / <sub>4</sub>	6 <sup>5</sup> / <sub>8</sub>	3 <sup>5</sup> / <sub>8</sub>	181
10 <sup>3</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>4</sub>	187
10 <sup>1</sup> / <sub>2</sub>	6 <sup>5</sup> / <sub>8</sub>	3 <sup>7</sup> / <sub>8</sub>	193
10 <sup>5</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	4	200

Table 3.6 Minimum steel casing requirements for high yield bedrock wells and high yield unconsolidated wells two hundred feet (200') or more in depth.

Nominal Pipe (inches)	Outside Diameter (inches)	Wall Thickness (inches)	Weight per foot (lbs.)
6	6 <sup>5</sup> / <sub>8</sub>	0.280	19
8	8 <sup>5</sup> / <sub>8</sub>	0.322	29
10	10 <sup>3</sup> / <sub>4</sub>	0.365	40
12	12 <sup>3</sup> / <sub>4</sub>	0.375	50
14	14	0.375	55
16	16	0.375	63
18	18	0.375	71
20	20	0.375	79
22	22	0.500	115
24	24	0.500	125
26	26	0.500	136
28	28	0.500	147
30	30	0.500	158
32	32	0.500	168
34	34	0.500	179
36	36	0.500	190

Table 3.8 Minimum liner specifications.

Material	Wall thickness (inches)	Standard Dimension Ratio (SDR)	Schedule (SCH)
Steel	0.188	-	-
Plastic (PVC or ABS only) <sup>1</sup>	-	26	40

<sup>1</sup> Shall meet ASTM standards.

Table 3.9 Minimum number of bags of grout to achieve an annular grout seal of thirty feet (30') for lining water wells.

Type of Grout	Borehole Diameter (inches)					
	4½"			5"		
	6	8	10	6	8	10
<b>CEMENT</b>						
Portland Type I	2.2	6.1	11.2	1.5	5.5	10.5
Portland Type II	2.2	6.1	11.2	1.5	5.5	10.5
<b>BENTONITE</b>						
<b>Pellets</b>						
½" Baroid Pellets	3.5	9.7	17.8	2.5	8.7	16.7
3/8" Baroid Pellets	3.7	10.3	18.7	2.6	9.2	17.6
¼" Baroid Pellets	3.7	10.2	18.6	2.6	9.1	17.5
Wyo-bend Tablets	3.9	10.8	19.7	2.7	9.6	18.5
Volclay ½"	3.9	10.9	19.9	2.7	9.7	18.7
Volclay 3/8"	4.1	11.3	20.6	2.8	10.1	19.3
Volclay ¼"	4.2	11.6	21.2	2.9	10.4	20.0



Table 3.10 All Drilling Areas (Bedrock Water Wells). Minimum Number of Bags of Grout Required in Annular Space (Ann.) or Open Hole (O.H.) for Sealing Casing with a Minimum Grout Seal of Thirty Feet (30').

CASING OUTER DIAMETER 6 5/8" (6" NOMINAL) – APPLIES TO ALL DRILLING AREAS														
Type of Grout	Borehole Diameter (inches)													
	8 5/8		8 3/4		9		9 1/2		10		10 5/8		12 5/8	
	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.
<b>CEMENT</b>														
Portland Type I	4.3	10.4	4.6	10.7	5.2	11.3	6.5	12.6	7.8	14.0	9.6	15.8	16.2	22.3
Portland Type III	4.3	10.4	4.6	10.7	5.2	11.3	6.5	12.6	7.8	14.0	9.6	15.8	16.2	22.3
<b>BENTONITE</b>														
<b>Pellets</b>														
1/2" Baroid Pellets	6.8	16.6	7.3	17.1	8.3	18.0	10.3	20.1	12.5	22.3	15.4	25.2	25.7	35.5
3/8" Baroid Pellets	7.2	17.5	7.7	18.0	8.7	19.0	10.9	21.2	13.2	23.5	16.2	26.5	27.1	37.4
1/4" Baroid Pellets	7.1	17.4	7.6	17.9	8.7	18.9	10.8	21.1	13.1	23.4	16.1	26.4	27.0	37.3
Wyo-Bend Tablets	7.5	18.4	8.1	18.9	9.2	20.0	11.4	22.3	13.9	24.7	17.0	27.9	28.5	39.3
Volclay 1/2"	7.6	18.6	8.2	19.1	9.3	20.2	11.6	22.6	14.0	25.0	17.2	28.2	28.9	39.8
Volclay 3/8"	7.9	19.2	8.4	19.7	9.6	20.9	12.0	23.3	14.5	25.8	17.8	29.1	29.8	41.1
Volclay 1/4"	8.1	19.8	8.7	20.4	9.9	21.6	12.3	24.0	14.9	26.6	18.4	30.0	30.8	42.4
<b>Chips</b>														
Baroid HolePlug	7.2	17.7	7.8	18.2	8.8	19.2	11.0	21.4	13.3	23.7	16.4	26.8	27.4	37.8
Wyo-Bend Coarse	6.1	14.8	6.5	15.2	7.4	16.1	9.2	18.0	11.2	19.9	13.7	22.5	23.0	31.7
Wyo-Bend Medium	6.3	15.3	6.7	15.7	7.6	16.7	9.5	18.6	11.5	20.6	14.2	23.2	23.8	32.8
Volclay Coarse	6.7	16.4	7.2	16.8	8.2	17.8	10.2	19.9	12.3	22.0	15.2	24.8	25.4	35.1
Volclay Medium	6.9	16.8	7.4	17.3	8.4	18.3	10.5	20.4	12.7	22.6	15.6	25.5	26.1	36.0
<b>Granular</b>														
Benseal	6.3	15.3	6.7	15.8	7.7	16.7	9.6	18.6	11.6	20.6	14.2	23.3	23.8	32.9
Wyo-bend No. 8	6.1	14.8	6.5	15.2	7.4	16.1	9.2	18.0	11.2	19.9	13.7	22.5	23.0	31.7
Wyo-bend No. 16	6.1	14.8	6.5	15.2	7.4	16.1	9.2	18.0	11.2	19.9	13.7	22.5	23.0	31.7
<b>Slurry</b>														
Baroid	1.5	3.6	1.6	3.7	1.8	3.9	2.3	4.4	2.7	4.9	3.4	5.5	5.6	7.7
Hi-yield	1.1	2.7	1.2	2.8	1.3	2.9	1.7	3.3	2.0	3.6	2.5	4.1	4.2	5.8
Wyo-bend	1.6	3.8	1.7	3.9	1.9	4.2	2.4	4.6	2.9	5.1	3.6	5.8	5.9	8.2
Volclay	1.4	3.5	1.5	3.6	1.7	3.8	2.2	4.2	2.6	4.6	3.2	5.3	5.4	7.4

Table 3.11 All Drilling Areas (Unconsolidated Water Wells). Minimum Number of Bags of Grout Required in Annular Space (Ann.) or Open Hole (O.H.) for Sealing Casing with a Minimum Upper Grout Seal of Twenty Feet (20').

CASING OUTER DIAMETER 6 5/8" (6" NOMINAL) – APPLIES TO ALL DRILLING AREAS

Type of Grout	Borehole Diameter (inches)													
	10 5/8		12 5/8		14 5/8		16		18		20		24	
	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.
<b>CEMENT</b>														
Portland Type I	6.4	10.5	10.8	14.9	15.9	20.0	19.8	23.9	26.1	30.2	33.2	37.3	49.6	53.7
Portland Type III	6.4	10.5	10.8	14.9	15.9	20.0	19.8	23.9	26.1	30.2	33.2	37.3	49.6	53.7
<b>BENTONITE</b>														
<b>Pellets</b>														
1/2" Baroid Pellets	10.3	16.8	17.2	23.7	25.3	31.8	31.5	38.0	41.6	48.1	52.9	59.4	79.0	85.6
3/8" Baroid Pellets	10.8	17.7	18.1	25.0	26.6	33.5	33.2	40.1	43.8	50.7	55.7	62.6	83.3	90.2
1/4" Baroid Pellets	10.8	17.6	18.0	24.9	26.5	33.4	33.0	39.9	43.6	50.5	55.5	62.3	82.9	89.8
Wyo-Bend Tablets	11.4	18.6	19.0	26.3	28.0	35.2	34.9	42.1	46.1	53.3	58.6	65.8	87.6	94.8
Volclay 1/2"	11.5	18.8	19.3	26.6	28.3	35.7	35.3	42.7	46.7	54.0	59.3	66.7	88.7	96.0
Volclay 3/8"	11.9	19.4	19.9	27.4	29.2	36.8	36.4	44.0	48.1	55.7	61.2	68.8	91.4	99.0
Volclay 1/4"	12.2	20.0	20.5	28.3	30.2	38.0	37.6	45.4	49.7	57.5	63.2	71.0	94.4	102.2
<b>Chips</b>														
Baroid HolePlug	10.9	17.9	18.3	25.2	26.9	33.9	33.6	40.5	44.3	51.3	56.3	63.3	84.2	91.1
Wyo-Bend Coarse	9.2	15.0	15.3	21.2	22.6	28.4	28.1	34.0	37.2	43.0	47.3	53.1	70.6	76.4
Wyo-Bend Medium	9.5	15.5	15.9	21.9	23.3	29.4	29.1	35.1	38.4	44.4	48.8	54.9	73.0	79.0
Volclay Coarse	10.1	16.6	17.0	23.4	24.9	31.4	31.1	37.5	41.1	47.5	52.2	58.7	78.0	84.5
Volclay Medium	10.4	17.0	17.4	24.0	25.6	32.3	32.0	38.6	42.2	48.8	53.7	60.3	80.2	86.8
<b>Granular</b>														
Benseal	9.5	15.5	15.9	21.9	23.4	29.4	29.2	35.2	38.5	44.6	49.0	55.0	73.2	79.2
Wyo-bend No. 8	9.2	15.0	15.3	21.2	22.6	28.4	28.1	34.0	37.2	43.0	47.3	53.1	70.6	76.4
Wyo-bend No. 16	9.2	15.0	15.3	21.2	22.6	28.4	28.1	34.0	37.2	43.0	47.3	53.1	70.6	76.4
<b>Slurry</b>														
Baroid	2.2	3.7	3.7	5.2	5.5	6.9	6.9	8.3	9.1	10.5	11.5	13.0	17.2	18.7
Hi-yield	1.7	2.7	2.8	3.9	4.1	5.2	5.1	6.2	6.8	7.8	8.6	9.7	12.9	13.9
Wyo-bend	2.4	3.9	4.0	5.5	5.8	7.3	7.3	8.8	9.6	11.1	12.2	13.7	18.2	19.7
Volclay	2.1	3.5	3.6	4.9	5.3	6.6	6.6	7.9	8.7	10.0	11.0	12.4	16.5	17.8

Table 3.12 Drilling Areas 3 and 4 (Bedrock or Shallow Bedrock Wells Method 1 Using Five and One-half Inch (5 ½”) Casing Diameter). Minimum Number of Bags of Grout Required in Annular Space (Ann.) or Open Hole (O.H.) for Sealing Casing with a Minimum Grout Seal of Thirty Feet (30’).

CASING OUTER DIAMETER 5 ½” (5” NOMINAL) – APPLIES TO DRILLING AREAS 3 AND 4 ONLY

Type of Grout	Borehole Diameter (inches)					
	9 ½		10		10 ⅝	
	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.
<b>CEMENT</b>						
Portland Type I	8.4	12.6	9.8	14.0	11.6	15.8
Portland Type III	8.4	12.6	9.8	14.0	11.6	15.8
<b>BENTONITE</b>						
<b>Pellets</b>						
½” Baroid Pellets	13.4	20.1	15.5	22.3	18.4	25.2
⅝” Baroid Pellets	14.1	21.2	16.4	23.5	19.4	26.5
¼” Baroid Pellets	14.0	21.1	16.3	23.4	19.3	26.4
Wyo-Bend Tablets	14.8	22.3	17.2	24.7	20.4	27.9
Volclay ½”	15.0	22.6	17.4	25.0	20.7	28.2
Volclay ⅝”	15.5	23.3	18.0	25.8	21.3	29.1
Volclay ¼”	16.0	24.0	18.6	26.6	22.0	30.1
<b>Chips</b>						
Baroid Hole Plug	14.2	21.4	16.6	23.7	19.6	26.8
Wyo-Bend Coarse	11.9	18.0	13.9	19.9	16.5	22.5
Wyo-Bend Medium	12.3	18.6	14.3	20.6	17.0	23.2
Volclay Coarse	13.2	19.9	15.3	22.0	18.2	24.9
Volclay Medium	13.6	20.4	15.8	22.6	18.7	25.5
<b>Granular</b>						
Benseal	12.4	18.6	14.4	20.6	17.1	23.3
Wyo-bend No. 8	11.9	18.0	13.9	19.9	16.5	22.5
Wyo-bend No. 16	11.9	18.0	13.9	19.9	16.5	22.5
<b>Slurry</b>						
Baroid	2.9	4.4	3.4	4.9	4.0	5.5
Hi-yield	2.2	3.3	2.5	3.6	3.0	4.1
Wyo-Bend	3.1	4.6	3.6	5.1	4.3	5.8
Volclay	2.8	4.2	3.2	4.6	3.8	5.3

Table 3.13 Drilling Areas 3 and 4 (Unconsolidated or Shallow Bedrock Water Wells Method 2 Using Five and One-half Inch (5 ½”) Casing Diameter). Minimum Number of Bags of Grout Required in the Annular Space (Ann.) or Open Hole (O.H.) for Sealing Casing for with a Minimum Upper Grout Seal of Twenty (20’).

CASING OUTER DIAMETER 5 ½” (5” NOMINAL) – APPLIES TO DRILLING AREAS 3 AND 4 ONLY.

Type of Grout	Borehole Diameter (inches)													
	10 5/8		12 5/8		14 5/8		16		18		20		24	
	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.	Ann.	O.H.
<b>CEMENT</b>														
Portland Type I	7.7	10.5	12.1	14.9	17.1	20.0	20.0	23.9	27.4	30.2	34.5	37.3	50.9	53.7
Portland Type III	7.7	10.5	12.1	14.9	17.1	20.0	20.0	23.9	27.4	30.2	34.5	37.3	50.9	53.7
<b>BENTONITE</b>														
<b>Pellets</b>														
½” Baroid Pellets	12.3	16.8	19.2	23.7	27.3	31.8	31.5	38.0	43.6	48.1	54.9	59.4	81.1	85.6
⅜” Baroid Pellets	13.0	17.7	20.2	25.0	28.8	33.5	33.2	40.1	46.0	50.7	57.9	62.6	85.4	90.2
¼” Baroid Pellets	12.9	17.6	20.1	24.9	28.6	33.4	33.1	39.9	45.8	50.5	57.6	62.3	85.0	89.8
Wyo-Bend Tablets	13.6	18.6	21.3	26.3	30.2	35.2	34.9	42.1	48.3	53.3	60.8	65.8	89.8	94.8
Volclay ½”	13.8	18.8	21.5	26.6	30.6	35.7	35.4	42.7	49.0	54.0	61.6	66.7	91.0	96.0
Volclay ⅜”	14.2	19.4	22.2	27.4	31.6	36.8	36.5	44.0	50.5	55.7	63.6	68.8	93.8	99.0
Volclay ¼”	14.7	20.0	22.9	28.3	32.6	38.0	37.6	45.4	52.1	57.5	65.6	71.0	96.8	102
<b>Chips</b>														
Baroid HolePlug	13.1	17.9	20.5	25.2	29.1	33.9	33.6	40.5	46.5	51.3	58.5	63.3	86.4	91.1
Wyo-Bend Coarse	11.0	15.0	17.2	21.2	24.4	28.4	28.1	34.0	39.0	43.0	49.1	53.1	72.4	76.4
Wyo-Bend Medium	11.3	15.5	17.7	21.9	25.2	29.4	29.1	35.1	40.3	44.4	50.7	54.9	74.8	79.0
Volclay Coarse	12.1	16.6	19.0	23.4	27.0	31.4	31.1	37.5	43.1	47.5	54.2	58.7	80.0	84.5
Volclay Medium	12.5	17.0	19.5	24.0	27.7	32.3	32.0	38.6	44.3	48.8	55.7	60.3	82.2	86.8
<b>Granular</b>														
Benseal	11.4	15.5	17.8	21.9	25.3	29.4	29.2	35.2	40.4	44.6	50.8	55.0	75.0	79.2
Wyo-bend No. 8	11.0	15.0	17.2	21.2	24.4	28.4	28.1	34.0	39.0	43.0	49.1	53.1	72.4	76.4
Wyo-bend No. 16	11.0	15.0	17.2	21.2	24.4	28.4	28.1	34.0	39.0	43.0	49.1	53.1	72.4	76.4
<b>Slurry</b>														
Baroid	2.7	3.7	4.2	5.2	6.0	6.9	6.9	8.3	9.5	10.5	12.0	13.0	17.7	18.7
Hi-yield	2.0	2.7	3.1	3.9	4.4	5.2	5.1	6.2	7.1	7.8	8.9	9.7	13.2	13.9
Wyo-bend	2.8	3.9	4.4	5.5	6.3	7.3	7.3	8.8	10.1	11.1	12.7	13.7	18.7	19.7
Volclay	2.6	3.5	4.0	4.9	5.7	6.6	6.6	7.9	9.1	10.0	11.5	12.4	16.9	17.8

Table 3.14 Drill Area 5 (Unconsolidated Water Wells Using Four and One-half Inch (4 ½”) Casing Diameter). Minimum Number of Bags of Grout Required in Annular Space (Ann.) or Open Hole (O.H.) for Sealing Casing with a Minimum Upper Grout Seal of Twenty Feet (20’).

CASING OUTER DIAMETER 4 ½” (4” NOMINAL) – APPLIES TO DRILLING AREA 5 ONLY

Type of Grout	Borehole Diameter (inches)			
	8 ½		9	
	Ann.	O.H.	Ann.	O.H.
<b>CEMENT</b>				
Portland Type I	4.8	6.7	5.7	7.6
Portland Type III	4.8	6.7	5.7	7.6
<b>BENTONITE</b>				
<b>Pellets</b>				
½” Baroid Pellets	7.7	10.7	9.0	12.0
⅜” Baroid Pellets	8.1	11.3	9.5	12.7
¼” Baroid Pellets	8.1	11.3	9.5	12.6
Wyo-Bend Tablets	8.6	11.9	10.0	13.3
Volclay ½”	8.7	12.0	10.1	13.5
Volclay ⅜”	8.9	12.4	10.4	13.9
Volclay ¼”	9.2	12.8	10.8	14.4
<b>Chips</b>				
Baroid Hole Plug	8.2	11.4	9.6	12.8
Wyo-Bend Coarse	6.9	9.6	8.1	10.7
Wyo-Bend Medium	7.1	9.9	8.3	11.1
Volclay Coarse	7.6	10.6	8.9	11.9
Volclay Medium	7.8	10.9	9.2	12.2
<b>Granular</b>				
Benseal	7.2	9.9	8.4	11.1
Wyo-bend No. 8	6.9	9.6	8.1	10.7
Wyo-bend No. 16	6.9	9.6	8.1	10.7
<b>Slurry</b>				
Baroid	1.7	2.3	2.0	2.6
Hi-yield	1.3	1.7	1.5	2.0
Wyo-Bend	1.8	2.5	2.1	2.8
Volclay	1.6	2.2	1.9	2.5

Table 3.15. Known contaminants of Drill Area 13 by source.

Source	Known Contaminants <sup>1</sup>
U.S. Army	2,4,6-TNT, 2,4-DNT, 2,6-DNT, dinitrobenzene (1,3-DNB), nitrobenzene (NB), ortho-nitrotoluene (o-NT), meta-nitrotoluene (m-NT), para-nitrotoluene (p-NT)
Department of Energy Main Site	2,4,6-TNT, 2,4-DNT, 2,6-DNT, dinitrobenzene (1,3-DNB), nitrobenzene (NB), nitrate, uranium, and trichloroethylene (TCE)
Department of Energy Quarry	uranium and 2,4-DNT

<sup>1</sup>May also include other contaminants pursuant to 10 CSR 60-4.