

Client: Westinghouse Electric Company
 Location: Hematite, MO
 Project: Hematite Remedial Investigation
 Date Started: 07/01/04
 Date Finished: 08/04/04
 Geologist: J. Bostwick
 Drilling Contractor: Geotechnology

Boring: BR-7-RB

Drilling Method: Rotary
 Surf. Elev.: 476.48
 Northing: 864152.42
 Easting: 829600.86
 Total Depth of Boring: 265.0 feet
 Top of Casing: 478.74
 Total Depth of Well: 265.3 feet

Elevation (ft)	Depth (ft)	Core Recovery (Pen/Rec)	RQD	Fracture Frequency	Lithology	Lithology Description	Well Construction	Well Construction Desc.
150								
325		10.0/10.0	100	0				
155								
320								
160		10.0/10.0	100	0				
315								
165						DOLOMITE: gray, very hard, sandy crystalline, turbid		
310						DOLOMITE: gray, very hard, fine-grained, w/occasional black/gray shale laminae		
170		10.0/10.0	97	0		DOLOMITE: gray, very hard, sandy, pitted, crystalline		
305								
175								
300								
180		10.0/10.0	94	0		DOLOMITE: gray, very hard, silty, w/wavy green shale laminae		
295								
185						DOLOMITE: gray, very hard, fine-grained sandy, pitted		High Solids Bentonite Grout (Tremied)
290								
190		10.0/10.0	98	0		DOLOMITE: gray, very hard, sandy, crystalline, pitted		
285								
195								
280								
200								



Westinghouse

Westinghouse Electric Company
 Hematite Facility
 3300 State Road P
 Festus, MO 63028



SAIC
 8421 St. John Industrial Drive
 St. Louis, Missouri

Client: Westinghouse Electric Company
 Project: Hematite Remedial Investigation
 Location: Hematite, MO
 Borehole: BR-7-RB
 Sheet: 4 of 6

Client: Westinghouse Electric Company
 Location: Hematite, MO
 Project: Hematite Remedial Investigation
 Date Started: 07/01/04
 Date Finished: 08/04/04
 Geologist: J. Bostwick
 Drilling Contractor: Geotechnology

Boring: BR-7-RB

Drilling Method: Rotary
 Surf. Elev.: 476.48
 Northing: 864152.42
 Easting: 829600.86
 Total Depth of Boring: 265.0 feet
 Top of Casing: 478.74
 Total Depth of Well: 265.3 feet

Elevation (ft)	Depth (ft)	Core Recovery (Pen/Rec)	RQD	Fracture Frequency	Lithology	Lithology Description	Well Construction	Well Construction Desc.
200								
275	10.0/10.0	89	0					
205						DOLOMITE: gray, very hard, sandy, turbid		High Solids Bentonite Grout (Tremied)
270						DOLOMITE: gray, very hard, w/wavy green shale laminae		
210	10.0/10.0	96	0			DOLOMITE: gray, very hard, silty, w/occasional black shale laminae green shale 222.2-222.3'		
265								
215								
260								
220	10.0/10.0	90	0					0.25" Bentonite Pellets
255						DOLOMITE: gray, very hard, cherty		Secondary Filter Pack (100 Mesh)
225								2" Sch. 80 PVC Screen, 0.010" Slot
250						SANDSTONE: buff, medium-grained, crystalline		Primary Filter Pack
230	10.0/10.0	72	1			DOLOMITE: gray, very hard, turbid, w/wavy green shale laminae		2" Sch. 80 PVC Screen, 0.010" Slot
245								
235								
240						DOLOMITE: gray, very hard, sandy, pitted, cherty, crystalline		
240	10.0/10.0	77	1					
235								
245						DOLOMITE: gray, very hard, sandy		
230								
250						DOLOMITE: gray, very hard, sandy, pitted, slightly friable to friable		



Westinghouse

Westinghouse Electric Company
 Hematite Facility
 3300 State Road P
 Festus, MO 63028



SAIC
 8421 St. John Industrial Drive
 St. Louis, Missouri

Client: Westinghouse Electric Company
 Project: Hematite Remedial Investigation
 Location: Hematite, MO
 Borehole: BR-7-RB
 Sheet: 5 of 6

Client: Westinghouse Electric Company
 Location: Hematite, MO
 Project: Hematite Remedial Investigation
 Date Started: 07/01/04
 Date Finished: 08/04/04
 Geologist: J. Bostwick
 Drilling Contractor: Geotechnology

Boring: BR-7-RB

Drilling Method: Rotary
 Surf. Elev.: 476.48
 Northing: 864152.42
 Easting: 829600.86
 Total Depth of Boring: 265.0 feet
 Top of Casing: 478.74
 Total Depth of Well: 265.3 feet

Elevation (ft)	Depth (ft)	Core Recovery (Pen/Rec)	RQD	Fracture Frequency	Lithology	Lithology Description	Well Construction	Well Construction Desc.
250								
225		10.0/10.0	74					
255						DOLOMITE: gray, very hard, sandy		
220								
260								
215						DOLOMITE: gray, very hard, silty to sandy, pitted, w/chert bands		
265								
210						Bottom of Hole 265.0	Bottom of Well 265.3'	
270								
205								
275								
200								
280								
195								
285								
190								
290								
185								
295								
180								
300								



Westinghouse

Westinghouse Electric Company
 Hematite Facility
 3300 State Road P
 Festus, MO 63028



SAIC
 8421 St. John Industrial Drive
 St. Louis, Missouri

Client: Westinghouse Electric Company
 Project: Hematite Remedial Investigation
 Location: Hematite, MO
 Borehole: BR-7-RB
 Sheet: 6 of 6

Client: Westinghouse Electric Company
 Location: Hematite, MO
 Project: Hematite Remedial Investigation
 Date Started: 05/25/04
 Date Finished: 06/21/04
 Geologist: Todd Calhoun
 Drilling Contractor: Geotechnology

Boring: BR-8-RB

Drilling Method: Rotary
 Surf. Elev.: 418.58
 Northing: 864793.07
 Easting: 828603.60
 Total Depth of Boring: 152.8 feet
 Top of Casing: 421.72
 Total Depth of Well: 153.0 feet

Elevation (ft)	Depth (ft)	Core Recovery (Pen/Rec)	RQD	Fracture Frequency	Lithology	Lithology Description	Well Construction	Well Construction Desc.
420	0				DGA			Protective Casing (4") 2.0' x 2.0' x 0.05' Concrete Pad
415	5				SILTY CLAY	brown, plastic, damp, w/sand lenses		Sch 80 PVC (2") Riser
410	10				SANDY GRAVEL	brown, moist to wet, compact, well graded, sub-angular to angular up to 1"		6" Steel Isolation Casing
405	15							Portland Cement
400	20							High Solids Bentonite Grout (Tremied)
395	25				DOLOMITE	hard to very hard, fine grained, crystalline, tan to gray, thin to thick bedded slightly weathered 24.6-26.7' broken fracture 26.3-27.0' rough bedding planes 31.4-31.7' vertical fracture 33.3-34.1'		
390	30	4.8/4.7	74	2				
385	35	5.0/5.0	74	1	DOLOMITE	gray, very hard, medium grained, sandy, gray, crystalline w/shale streaks		
380	40	5.0/5.0	64	1	DOLOMITE	light gray, very hard, fine grained, crystalline broken zone 40.3-40.4'		
375	45	1.0/1.0	70	1				
370	50	5.0/5.0	80	1	DOLOMITE	gray, very hard, medium grained, crystalline, sandy and turbid DOLOMITE: light brown, hard, micritic, slightly weathered		



Westinghouse

Westinghouse Electric Company
 Hematite Facility
 3300 State Road P
 Festus, MO 63028



SAIC
 8421 St. John Industrial Drive
 St. Louis, Missouri

Client: Westinghouse Electric Company
 Project: Hematite Remedial Investigation
 Location: Hematite, MO
 Borehole: BR-8-RB
 Sheet: 1 of 4

Client: Westinghouse Electric Company
 Location: Hematite, MO
 Project: Hematite Remedial Investigation
 Date Started: 05/25/04
 Date Finished: 06/21/04
 Geologist: Todd Calhoun
 Drilling Contractor: Geotechnology

Boring: BR-8-RB

Drilling Method: Rotary
 Surf. Elev.: 418.58
 Northing: 864793.07
 Easting: 828603.60
 Total Depth of Boring: 152.8 feet
 Top of Casing: 421.72
 Total Depth of Well: 153.0 feet

Elevation (ft)	Depth (ft)	Core Recovery (Pen/Rec)	RQD	Fracture Frequency	Lithology	Lithology Description	Well Construction	Well Construction Desc.
50						w/soft shale lenses 49.4-50.0' vertical fracture 48.1-48.5 weathering along bedding planes to 52.8'		
365	4.6	4.6	70	2				6" Steel Isolation Casing
55						DOLOMITE: dark gray, hard to very hard, fine grained, sandy w/shale stringers and partings		
360	3.2	3.2	88	0		DOLOMITE: dark gray, hard to very hard, fine-grained, sandy w/shale stringers and parting		
60						DOLOMITE: gray, very hard, fine to medium grained, crystalline, sandy, porphyritic/vuggy 57.6-58.4' wavy shale stringers 59.2-61.3' broken fractured zone 62.6-62.8' turbid sandy zone 63.2-64.0' fractured shale lense 65.2-65.3' wavy sandy lenses/laminae 68.5-69.1'		
355	3.6	3.6	89	0				
65								
350	5.0	5.0	54	0				
70								
345	1.0	1.0	80	1				
75						DOLOMITE: gray, very hard, sandy, vuggy, crystalline		
340	5.0	5.0	78	1				
80						DOLOMITE: gray, very hard, micritic w/shale stringers vertical fracture 71.7-72.0' DOLOMITE: gray, very hard, sandy, crystalline, porphyritic		High Solids Bentonite Grout (Tremied)
335	5.0	5.0	90	0				
85						DOLOMITE: gray, very hard, micritic w/crystal filled vugs 79.9-80.2' DOLOMITE: gray, very hard, fine-grained, sandy w/shale stringers		
330	5.0	5.0	99	0				
90						DOLOMITE: tan to light gray, very hard, micritic, w/shale stringers green shale 95.6-95.7'		
325	5.0	5.0	100	0				
95						DOLOMITE: gray, very hard, crystalline, cherty, vuggy, sandy broken zone 100.3-100.4' vertical fracture 101.3-101.6'		
320	5.0	5.0	80	1				
100								



Westinghouse Electric Company
 Hematite Facility
 3300 State Road P
 Festus, MO 63028



SAIC
 8421 St. John Industrial Drive
 St. Louis, Missouri

Client: Westinghouse Electric Company
 Project: Hematite Remedial Investigation
 Location: Hematite, MO
 Borehole: BR-8-RB
 Sheet: 2 of 4