

Westinghouse Electric Company Hematite Facility

Well Inspection Report



Well Number: BR1-JC	Date Installed: 6/6/2002	Project Number: SAHEM00136
Coordinates (MO State Plane NAD83): Northing/Easting		Elevation (TOC):
N 864374.559	E 826534.913	441.87
Total Depth (feet BTOC): 109.79	Riser Height (feet above pad): 2.67	Water Level (feet BTOC): 28.93
Well Construction Material: PVC	Well Casing Diameter (inches): 1	Screen Length (feet): 10.0
Hydrostratigraphic Zone: Jefferson City – Cotter Dolomite	Inspected By: R. Tubbs	Date Inspected: 8/20/2004

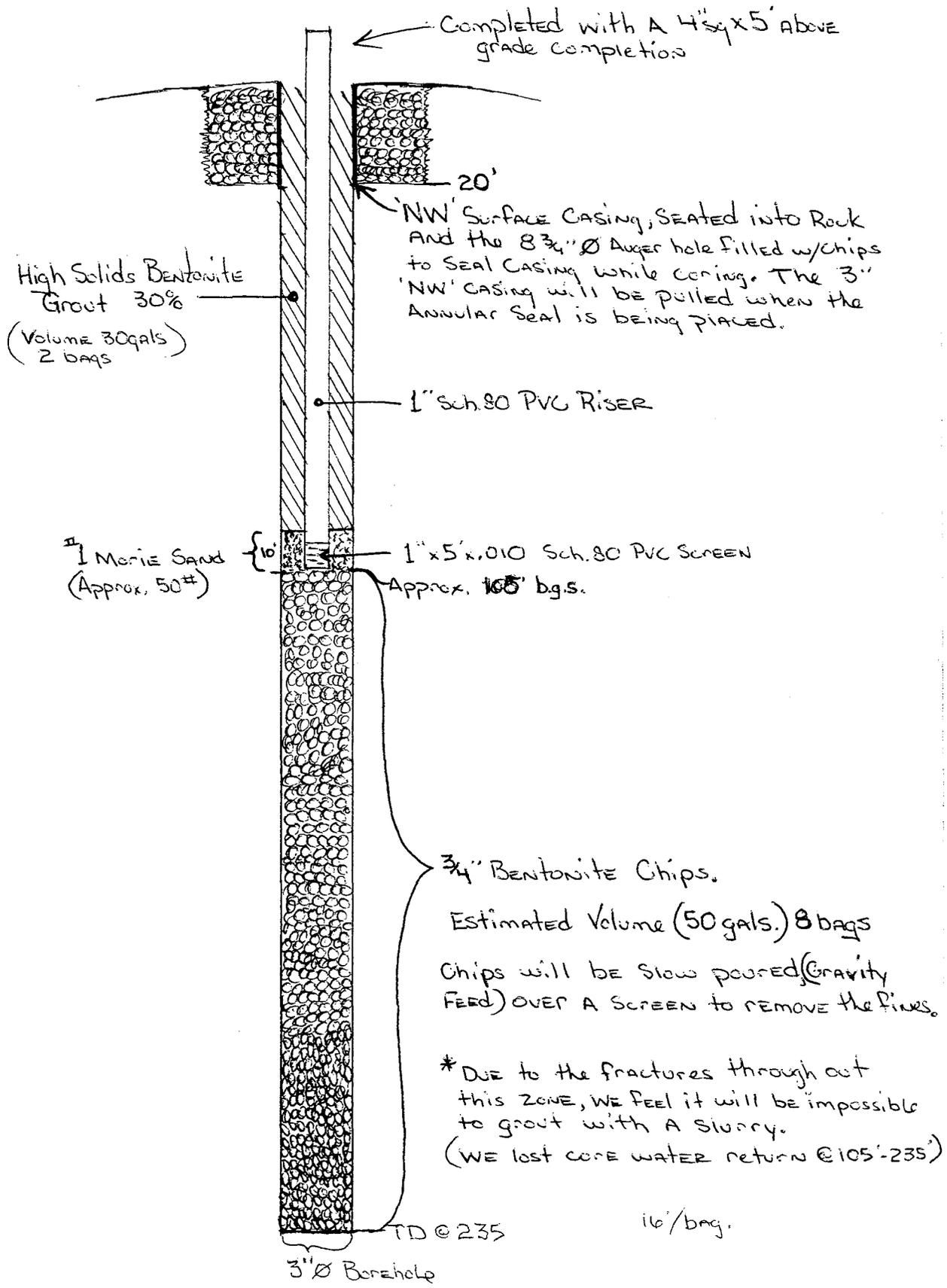
Visual Observations:

- Well condition noted as good
- Protective outer casing constructed of 4 inch square aluminum
- Well pad construction – 2 ft X 2 ft concrete
- Three guard posts in place
- Water-tight lockable cap in place
- Rehabilitation and/or maintenance not required



Hole # BR-1p

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Westinghouse Electric Company Hematite Facility

Well Inspection Report



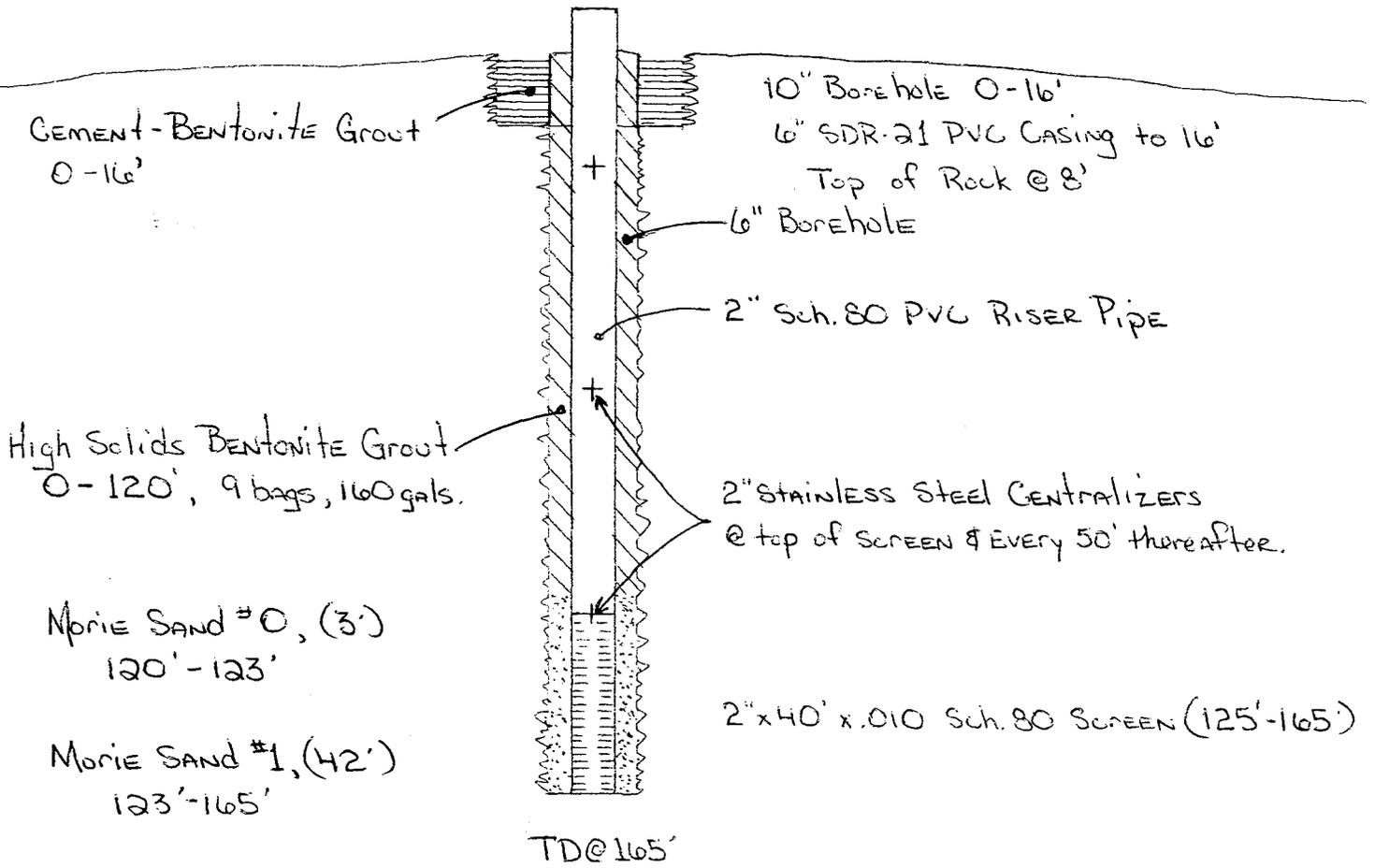
Well Number: BR1-RB	Date Installed: 7/24/2002	Project Number: SAHEM00136
Coordinates (MO State Plane NAD83): Northing/Easting		Elevation (TOC): 442.49
N 864407.126	E 826497.893	Water Level (feet BTOC): 25.27
Total Depth (feet BTOC): 167.60	Riser Height (feet above pad): 2.47	Screen Length (feet): 40.0
Well Construction Material: PVC	Well Casing Diameter (inches): 2	Screen Length (feet): 40.0
Hydrostratigraphic Zone: Roubidoux Formation	Inspected By: R. Tubbs	Date Inspected: 8/20/2004

Visual Observations:

- Well condition noted as good
- Protective outer casing constructed of 4 inch square aluminum
- Well pad construction – 2 ft X 2 ft concrete
- Four guard posts in place
- Water-tight lockable cap in place
- Rehabilitation and/or maintenance not required



BR-1



Westinghouse Electric Company Hematite Facility

Well Inspection Report



Well Number: BR2-JC	Date Installed: 7/23/2002	Project Number: SAHEM00136
Coordinates (MO State Plane NAD83): Northing/Easting		Elevation (TOC):
N 865552.903	E 830590.896	431.17
Total Depth (feet BTOC): 117.69	Riser Height (feet above pad): 2.41	Water Level (feet BTOC): 23.69
Well Construction Material: PVC	Well Casing Diameter (inches): 1	Screen Length (feet): 5.0
Hydrostratigraphic Zone: Jefferson City – Cotter Dolomite	Inspected By: R. Tubbs	Date Inspected: 8/20/2004

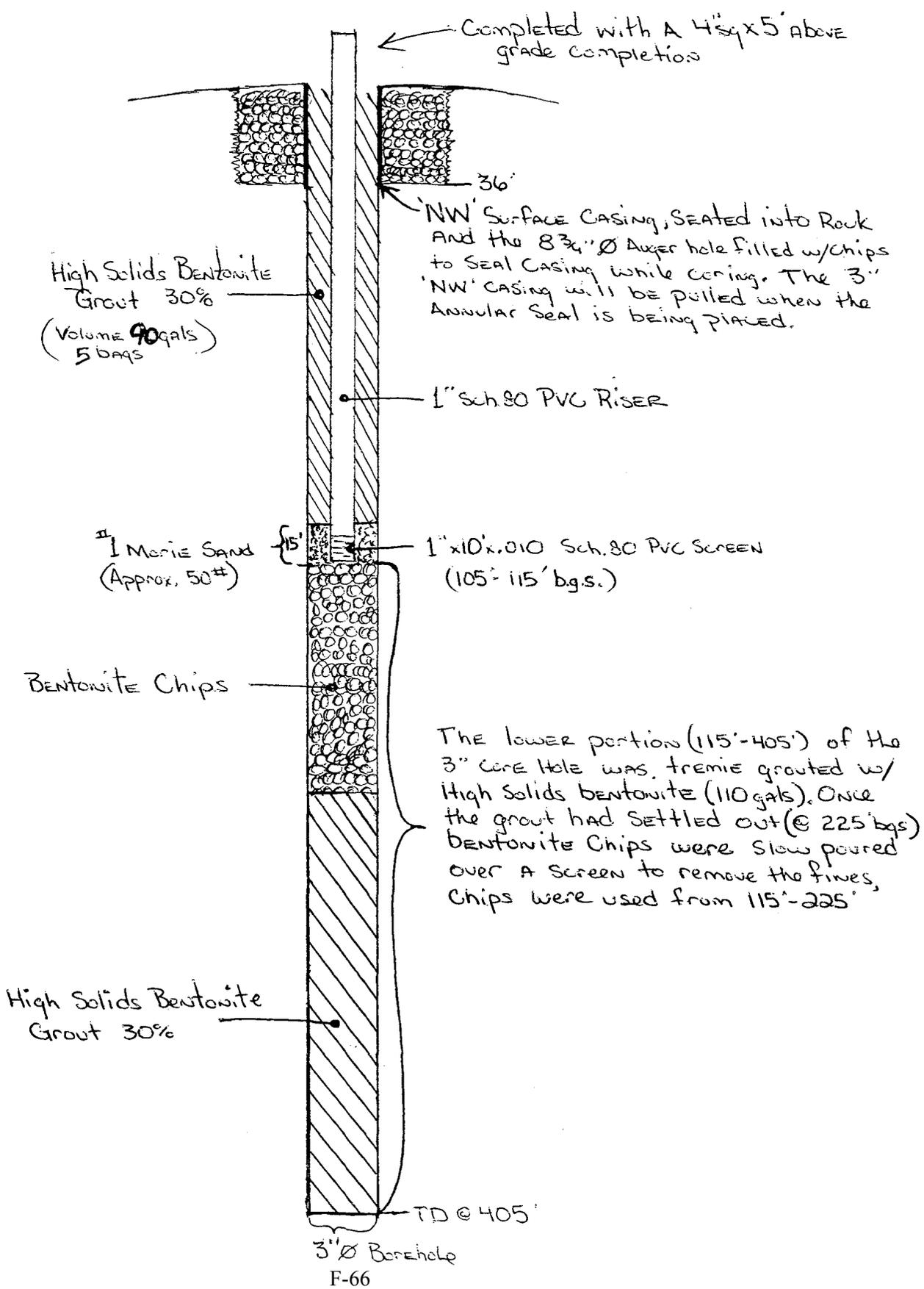
Visual Observations:

- Well condition noted as good
- Protective outer casing constructed of 4 inch square aluminum
- Well pad construction – 2 ft X 2 ft concrete
- Three guard posts in place
- Water-tight lockable cap in place
- Tall grass noted around well location
- Rehabilitation and/or maintenance not required



Hole # BR-2p (JC)

PREPARED BY	T.C.D.
DATE	9/10/02



Westinghouse Electric Company Hematite Facility

Well Inspection Report



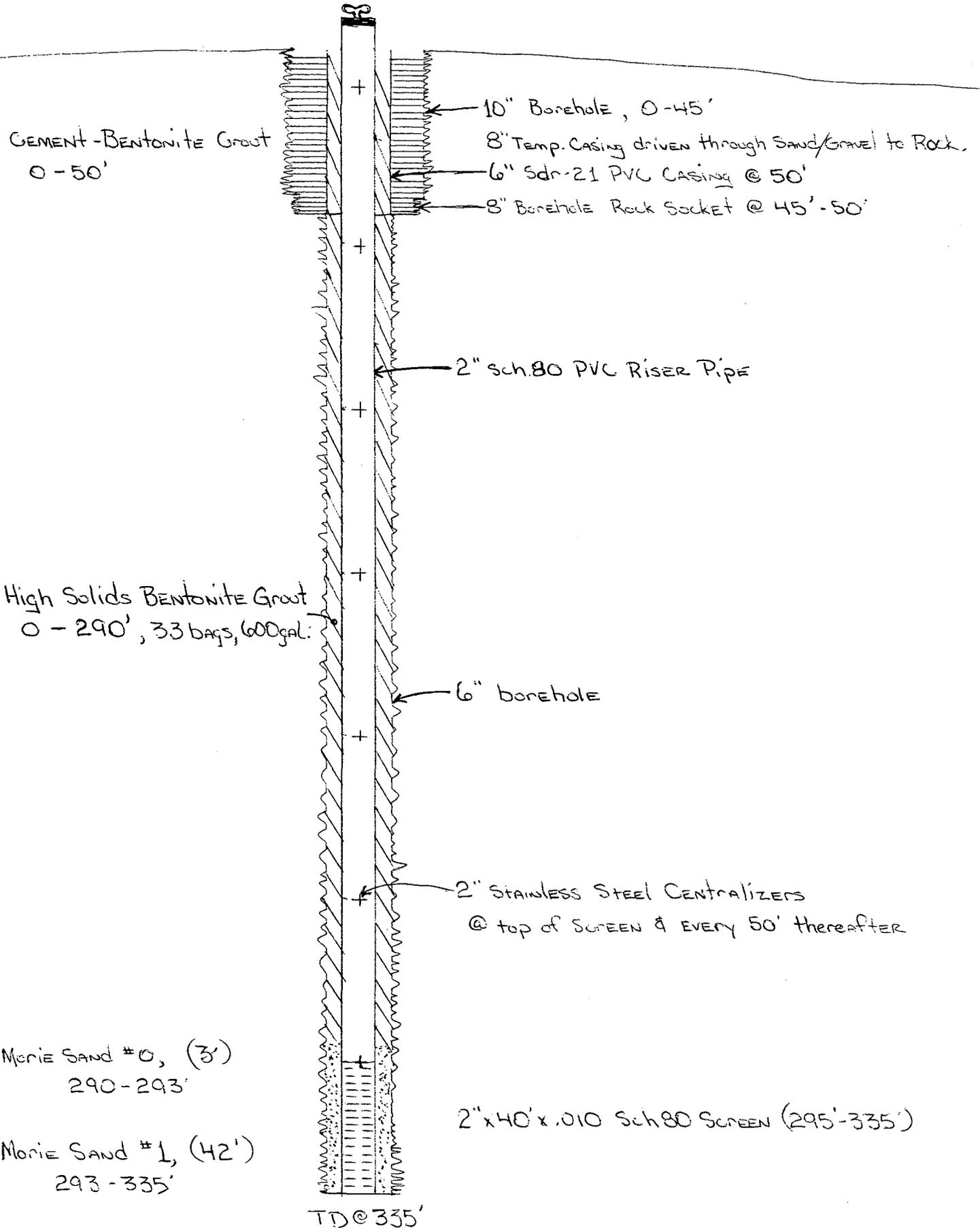
Well Number: BR2-RB	Date Installed: 7/24/2002	Project Number: SAHEM00136
Coordinates (MO State Plane NAD83):		Elevation (TOC): 431.37
 Northing/Easting		Water Level
N 865532.163	E 830550.398	(feet BTOC): 27.27
Total Depth	Riser Height	Screen Length
(feet BTOC): 338.27	(feet above pad): 3.20	(feet): 40.0
Well Construction	Well Casing	Date Inspected: 8/9/2004
Material: PVC	Diameter (inches): 2	
Hydrostratigraphic	Inspected By: R. Tubbs	
Zone: Roubidoux Formation		

Visual Observations:

- Well condition noted as good
- Protective outer casing constructed of 4 inch square aluminum
- Well pad construction – 2 ft X 2 ft concrete
- Four guard posts in place
- Water-tight lockable cap in place
- Tall grass noted around well location
- Rehabilitation and/or maintenance not required



BR-2 (RB)





Westinghouse Electric Company Hematite Facility

Well Inspection Report

Well Number: BR3-OB	Date Installed: 7/23/2002	Project Number: SAHEM00136
Coordinates (MO State Plane NAD83): Northing/Easting		Elevation (TOC): 421.63
N 863910.175	E 828167.015	Water Level (feet BTOC): 13.67
Total Depth (feet BTOC): 27.37	Riser Height (feet above pad): 2.74	Screen Length (feet): 11.0
Well Construction Material: PVC	Well Casing Diameter (inches): 2	Date Inspected: 8/20/2004
Hydrostratigraphic Zone: Fluvial/Unconsolidated	Inspected By: R. Tubbs	

Visual Observations:

- Well condition noted as good
- Protective outer casing constructed of 4 inch square aluminum
- Well pad construction – 2 ft X 2 ft concrete
- Water-tight lockable cap in place
- Rehabilitation not required
- Guard posts recommended to be placed around well





MISSOURI DEPARTMENT OF
NATURAL RESOURCES
DIVISION OF GEOLOGY AND
LAND SURVEY
(573) 368-2165

**MONITORING WELL
CERTIFICATION RECORD**

OFFICE USE ONLY		DATE RECEIVED
REF. NO. 284981		
C.R.NO.	CHECK NO.	
STATE WELL NUMBER	REVENUE NO.	
ENTERED Ph 1 Ph 2 Ph 3	APPROVED BY	ROUTE / /

INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR

OWNER NAME Westinghouse Electric Co., LLC		WELL NUMBER OB-3		VARIANCE GRANTED BY THE D.N.R. <input type="checkbox"/> NO <input type="checkbox"/> YES, ATTACH A COPY OF THE VARIANCE	
OWNER ADDRESS 3300 Hwy "P"		CITY Hematite	STATE MO	ZIP CODE 63028	
SITE NAME Westinghouse Electric Co.			CONTACT NAME		
SITE ADDRESS 3300 Hwy "P"		CITY Hematite	STATE MO	ZIP CODE 63028	
PROPOSED USE OF WELL <input type="checkbox"/> GAS MONITORING WELL <input checked="" type="checkbox"/> MONITORING WELL <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> PIEZOMETERS		TYPE OF POTENTIAL SITE <input checked="" type="checkbox"/> HAZARDOUS MATERIAL <input type="checkbox"/> LANDFILL <input type="checkbox"/> INITIAL SITE ASSESSMENT <input type="checkbox"/> L.U.S.T. <input type="checkbox"/> WATER LEVEL DRAWDOWN		MONITORING FOR: (CHECK ALL THAT APPLY) <input checked="" type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input checked="" type="checkbox"/> METALS <input checked="" type="checkbox"/> V.O.C. <input checked="" type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES	

SKETCH LOCATION OF WELL INCLUDING MILEAGE ON ALL ROADS TRAVELLED FROM NEAREST TOWNS. <i>See Attached</i>	LOCATION OF WELL		AREA 1	ELEV 418.65
	LAT. 38° 12' 24"		COUNTY Jefferson	
	LONG. 90° 28' 15"		SMALLEST LARGEST _____ 1/4 1/4 1/4 SEC. _____ TWN. 40 N. RNG. 5 E OR W	

DESCRIBE LOCATION OF THE WELL SO WE WOULD BE ABLE TO VISIT THE WELL SITE	DRILLER NOTES:
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TYPE OF SURFACE COMPLETION <input checked="" type="checkbox"/> ABOVE GROUND <input type="checkbox"/> FLUSH MOUNT	LENGTH OF PROTECTIVE CASING 5 FT.	DIAMETER OF PROTECTIVE CASING 4" sq. IN.	DIAMETER AND DEPTH OF THE HOLE PROTECTIVE CASING WAS PLACED 6" casing 2.5' IN. FT.	PROTECTIVE CASING MATERIAL <input type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC	LOCKING CAP? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
WEEP HOLE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	VENTED CAP? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	LENGTH OF FLUSH MOUNT - FT.	DIAMETER OF FLUSH MOUNT - IN.	DIAMETER AND DEPTH OF THE HOLE FLUSH MOUNT WAS PLACED - IN. FT.	SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER

RISER PIPE DETAIL	LENGTH 15.5' FT.	DIAMETER 2" IN.	WEIGHT OR SDR# sch40	DIAMETER OF DRILL HOLE 3.75 FT.	MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER	BENTONITE SEAL	LENGTH OF SEAL 3 FT.	MATERIAL <input type="checkbox"/> SLURRY <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input checked="" type="checkbox"/> CHIPS
	GLUED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SECONDARY FILTER PACK <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> UNSATURATED ZONE HYDRATED <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> BOTH ZONES IF YES, HYDRATED <input type="checkbox"/> YES <input type="checkbox"/> NO			DEPTH FROM TO		FORMATION DESCRIPTION

PRIMARY FILTER PACK	LENGTH 13' FT.	DEPTH TO TOP OF PRIMARY FILTER PACK 11' FT.	SECONDARY FILTER PACK LENGTH - FT.	0 24'	Overburden Top of rock
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ANNULAR SEAL	<input type="checkbox"/> BENTONITE SLURRY <input checked="" type="checkbox"/> NON SLURRY BENTONITE TYPE chips	<input type="checkbox"/> CEMENT/BENTONITE SLURRY BAGS OF CEMENT USED _____ % OF BENTONITE USED _____ WATER USED/BAG _____ GAL	LENGTH 5.5 FT.
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WELL SCREEN	LENGTH 11 FT.	DIAMETER 2 IN.	DIAMETER OF DRILL HOLE 3.75 IN.	DEPTH TO TOP OF SCREEN 13 FT.	MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER
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MULTIPLE CASED WELLS <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	PUMP INSTALLED FOR REMEDIATION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE AND SIZE OF ALL CASING, HOLE DIAMETERS AND GROUT USED	
TOTAL DEPTH: 24'	

SIGNATURE (PRIMARY CONTRACTOR) <i>Kenny Mikolajewicz (L366)</i>	PERMIT NUMBER 003272 PM	STATIC WATER LEVEL 10.59' FEET FROM MEASURING POINT	DATE WELL DRILLING WAS COMPLETED 9/18/02 protector 8/9/02
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I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.

SIGNATURE (WELL DRILLER) <i>Tom Clevley</i>	PERMIT NUMBER 003211 WPM	DATE 9/18/02	SIGNATURE (PUMP INSTALLER) X N/A	PERMIT NUMBER	DATE
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Well No. BR-3-OB

Installation: Above Ground Completion

Project No.

Client/Project: Westinghouse Electric Company

Site: Hematite Facility

Contractor: Leggette, Brashears and Graham, Inc.

Drill Contractor: Jerry Mathews Drilling

Start Date: 7/23/02

End Date: 7/23/02

Elevation (Top of Pad): ft amsl 418.89

Coordinates: N 863910.175

E 828167.015

2.74'

Protective Casing

Material Type: Aluminum
Diameter: 4 inch square
Weep Hole? (Y / N): Yes
Guard Posts (Y / N): No

Depth

Surface Pad

Composition and Size: 2 ft x 2 ft Concrete

2.5'

Surface Casing

Type: Unknown
Diameter: 6 in.
Total Length: 2.5 ft

Riser Pipe

Type: SCH 40 PVC
Diameter: 2 inch
Total Depth (Ground surface to TOS): 13.0'
Ventilated Cap (Y / N): No

Annular Seal

Type: Bentonite chips
Interval BGS: 2.5' – 5.5'

Bentonite Seal

Type: Bentonite chips
Interval BGS: 5.5' – 11.0'

Primary Filter Pack

Type: Unknown
Amt. Used: Unknown

5.5'

11.0'

Screen

Type: SCH 40 PVC
Diameter: 2 in.
Length: 11 ft
Slot Size and Type: 0.010 slotted
Interval BGS: 13.0' – 24.0'

13.0'

24.0'

8.75"

NOT TO SCALE

Note: All depths inferred from Monitoring Well Certification Record

WESTINGHOUSE ELECTRIC COMPANY
HEMATITE FACILITY
HEMATITE, MISSOURI





Westinghouse Electric Company Hematite Facility

Well Inspection Report



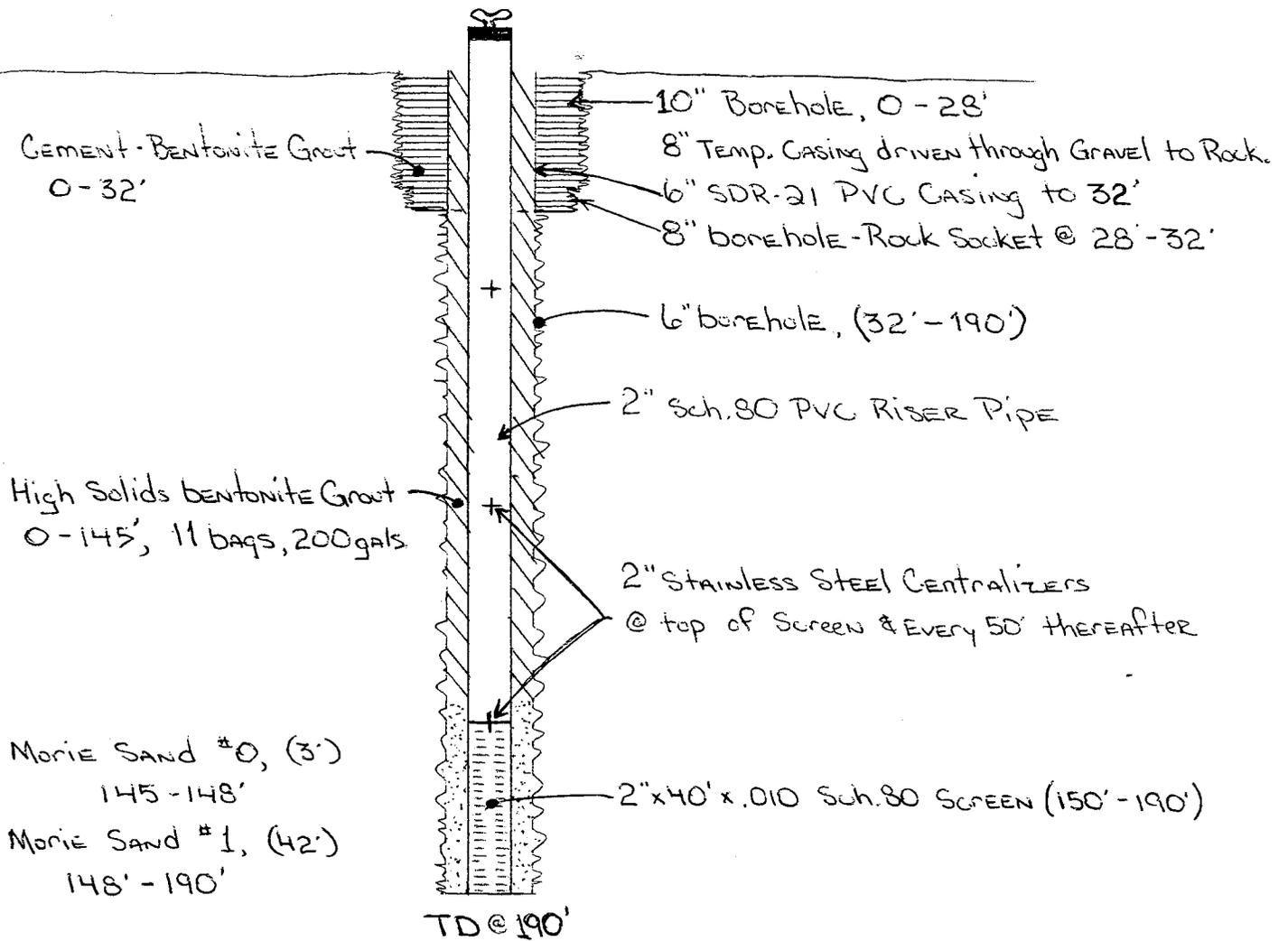
Well Number: BR3-RB	Date Installed: 7/24/2002	Project Number: SAHEM00136
Coordinates (MO State Plane NAD83): Northing/Easting		Elevation (TOC): 420.69
N 863886.933	E 828116.706	Water Level (feet BTOC): 3.02
Total Depth (feet BTOC): 192.61	Riser Height (feet above pad): 2.26	Screen Length (feet): 40.0
Well Construction Material: PVC	Well Casing Diameter (inches): 2	Date Inspected: 8/20/2004
Hydrostratigraphic Zone: Roubidoux Formation	Inspected By: R. Tubbs	

Visual Observations:

- Well condition noted as good
- Protective outer casing constructed of 4 inch square aluminum
- Well pad construction – 2 ft X 2 ft concrete
- Water-tight lockable cap in place
- Rehabilitation not required
- Guard posts recommended to be placed around well



BR - 3 (RB)





Westinghouse Electric Company Hematite Facility

Well Inspection Report



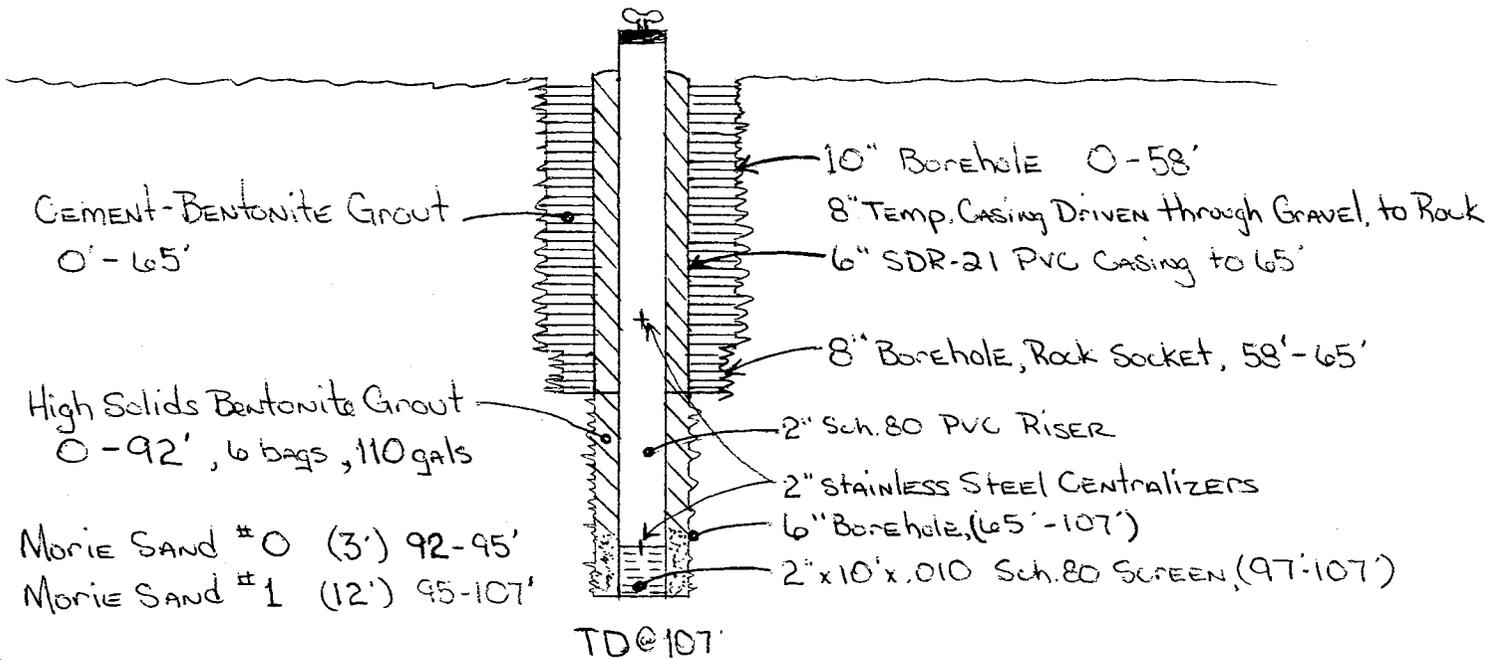
Well Number: BR4-JC	Date Installed: 7/24/2002	Project Number: SAHEM00136
Coordinates (MO State Plane NAD83): Northing/Easting		Elevation (TOC):
N 865741.874	E 828010.390	434.27
Total Depth (feet BTOC):	Riser Height (feet above pad):	Water Level (feet BTOC):
107.40	2.11	26.02
Well Construction	Well Casing	Screen Length
Material: PVC	Diameter (inches): 2	(feet): 10.0
Hydrostratigraphic Zone:	Inspected By:	Date Inspected:
Jefferson City – Cotter Dolomite	R. Tubbs	8/20/2004

Visual Observations:

- Well condition noted as good
- Protective outer casing constructed of 4 inch square aluminum
- Well pad construction – 2 ft X 2 ft concrete
- Two guard posts in place
- Water-tight lockable cap in place
- Rehabilitation and/or maintenance not required



BR-4 (JC)





Westinghouse Electric Company Hematite Facility

Well Inspection Report



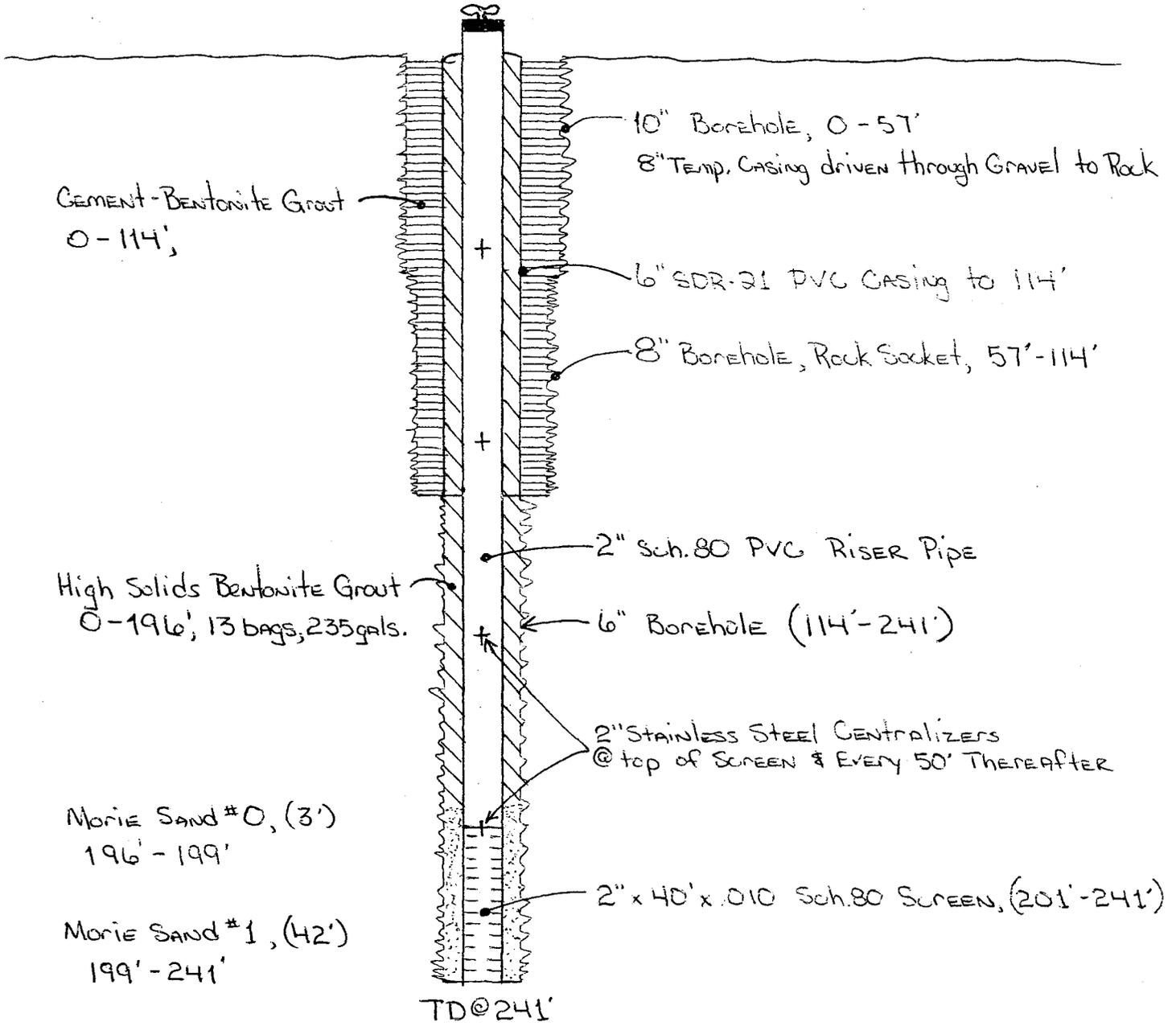
Well Number: BR4-RB	Date Installed: 7/24/2002	Project Number: SAHEM00136
Coordinates (MO State Plane NAD83): Northing/Easting		Elevation (TOC): 434.73
N 865780.532	E 828097.050	Water Level (feet BTOC): 24.51
Total Depth (feet BTOC): 242.98	Riser Height (feet above pad): 2.62	Screen Length (feet): 40.0
Well Construction Material: PVC	Well Casing Diameter (inches): 2	Date Inspected: 8/20/2004
Hydrostratigraphic Zone: Roubidoux Formation	Inspected By: R. Tubbs	

Visual Observations:

- Well condition noted as good
- Protective outer casing constructed of 4 inch square aluminum
- Well pad construction – 2 ft X 2 ft concrete
- Three guard posts in place
- Water-tight lockable cap in place
- Rehabilitation and/or maintenance not required



BR-4A (RB)



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