

MW-07

WATER WELL RECORD

Form WWC-5

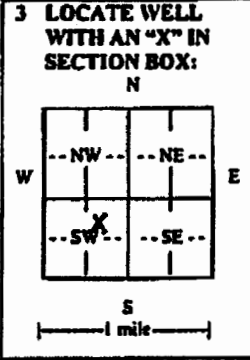
Division of Water Resources App. No.

1 LOCATION OF WATER WELL: County: <u>Jefferson</u>	Fraction <u>NW 1/4 SW 1/4 NE 1/4 SW 1/4</u>	Section Number <u>9</u>	Township No. <u>T 9 S</u>	Range Number <u>R 17 E</u>
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Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here
End of Platte Road & Kansas HWY 4
1900' North + 1000' West

Global Positioning System (GPS) information:
 Latitude: 39.2790575 (in decimal degrees)
 Longitude: -95.5297930 (in decimal degrees)
 Elevation:
 Datum: WGS 84, NAD 83, NAD 27
 Collection Method:
 GPS unit (Make/Model:)
 Digital Map/Photo, Topographic Map, Land Survey
 Est. Accuracy: <3 m, 3-5 m, 5-15 m, >15 m

2 WATER WELL OWNER: USACE Kansas City District
 R.R.#, Street Address, Box #: 601 E. 12th St.
 City, State, ZIP Code: Kansas City, MO, 64106



4 DEPTH OF COMPLETED WELL 21 ft.
 Depth(s) Groundwater Encountered (1) 1.5 ft. (2) ft. (3) ft.
 WELL'S STATIC WATER LEVEL ft. below land surface measured on mo/day/yr
 Pump test data: Well water was ft. after hours pumping gpm
 EST. YIELD gpm. Well water was ft. after hours pumping gpm
 Bore Hole Diameter 6" in. to ft., and in. to ft.
 WELL WATER TO BE USED AS: Public water supply Geothermal Injection well
 Domestic Feedlot Oil field water supply Dewatering Other (Specify below)
 Irrigation Industrial Domestic-lawn & garden Monitoring well
 Was a chemical/bacteriological sample submitted to Department? Yes No
 If yes, mo/day/yr sample was submitted.....
 Water well disinfected? Yes No

5 TYPE OF CASING USED: Steel PVC Other
CASING JOINTS: Glued Clamped Welded Threaded
 Casing diameter in. to 11 ft., Diameter in. to ft., Diameter in. to ft.
 Casing height above land surface FLUSH in., Weight 70 lbs./ft., Wall thickness or gauge No. 5.6440
TYPE OF SCREEN OR PERFORATION MATERIAL:
 Steel Stainless Steel PVC Other (Specify)
 Brass Galvanized Steel None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
 Continuous slot Mill slot Gauze wrapped Torch cut Drilled holes None (open hole)
 Louvered shutter Key punched Wire wrapped Saw cut Other (specify)
SCREEN-PERFORATED INTERVALS: From 11 ft. to 21 ft., From ft. to ft.
 From ft. to ft., From ft. to ft.
GRAVEL PACK INTERVALS: From 9 ft. to 21 ft., From ft. to ft.
 From ft. to ft., From ft. to ft.

6 GROUT MATERIAL: Neat cement Cement grout Bentonite Other
 Grout Intervals: From 1 ft. to 9 ft., From ft. to ft., From ft. to ft.
 What is the nearest source of possible contamination:
 Septic tank Lateral lines Pit privy Livestock pens Insecticide storage Other (specify below)
 Sewer lines Cesspool Sewage lagoon Fuel storage Abandoned water well
 Watertight sewer lines Seepage pit Feedyard Fertilizer storage Oil well/gas well
 Direction from well Distance from well

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	10	RAW SILTY CLAY			
10	16	grey shale			
16	25	yellow shale / limestone			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo/day/year) 9/21/2015 and this record is true to the best of my knowledge and belief.
 Kansas Water Well Contractor's License No. 597 This Water Well Record was completed on (mo/day/year) 9/21/2015
 under the business name of Cascade Drilling, Inc. by (signature) [Signature]

INSTRUCTIONS: Use typewriter or ball point pen. PLEASE PRESS FIRMLY and PRINT clearly. Please fill in blanks and check the correct answers. Send one copy to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5524. Send one copy to WATER WELL OWNER and retain one for your records. Include fee of \$5.00 for each constructed well. Visit us at <http://www.kdheks.gov/waterwell/index.html>

Bureau of Water
Geology and Well Technology Section
1000 SW Jackson St, Ste 420
Topeka, KS 66612-1367



Phone: 785-296-3665
Fax: 785-296-5509
pchaffee@kdheks.gov
www.kdheks.gov

Susan Mosier, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

July 31, 2015

Joshua Boeckmann
Corps of Engineers, KC District
Department of the Army
635 Federal Building
601 E. 12th St
Kansas City, MO 64106-2824

Subject: Waiver Request - Flush-Mount Well Completion of Groundwater Monitoring Wells at the Former Forbes Atlas Missile Site S-1, Platte Rd, Valley Falls, Jefferson County, KS

Dear Mr. Boeckmann,

On July 16, 2015, the Kansas Department of Health and Environment, Bureau of Water (KDHE-BOW), received the above referenced request for waiver for five (5) shallow monitoring wells to be installed at the above referenced site. KDHE-BOW has reviewed the waiver request materials and provides approval to complete the proposed groundwater monitoring wells at grade (flush-mount).

In accordance with K.A.R. 28-30-6(s), please provide a scaled map showing the locations and latitude and longitude coordinates for each monitoring well to KDHE-BOW along with the water well record (WWC-5 Form) for one of the five wells completed under this waiver. Please include information on the flush-mount well completion method in appropriate areas of each WWC-5 Form as well as the name of the approving KDHE contact person.

While requests for waiver to allow less than the minimum grout interval of 20 feet (K.A.R. 28-30-6(b)(1)) are not required if the grout modification is based solely on targeting shallow groundwater, the reason for modifying the grout interval must be indicated on the WWC-5 Forms for the appropriate wells. Information provided in your request adequately justifies the shallow nature of the proposed monitoring wells.

If you have any questions concerning this letter or if you need assistance, feel free to contact me by telephone (785-296-3565), fax (785-296-5509), or email (pchaffee@kdheks.gov).

Sincerely,

Pamela K. Chaffee, P.G., Chief, Water Well Unit
Geology & Well Technology Section, Bureau of Water
Kansas Department of Health and Environment
1000 SW Jackson, Suite 420
Topeka, KS 66612-1367

Copy: File - BOW-GWTS-Jefferson County



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, KANSAS CITY DISTRICT
635 FEDERAL BUILDING
601 E 12TH STREET
KANSAS CITY MO 64106-2824

July 14, 2015

Environmental Programs Branch
Planning, Programs and Project Management Division

Kansas Department of Health and Environment (KDHE)
Bureau of Water – Geology Section
1000 S.W. Jackson, Suite 420
Topeka, Kansas 66612-1367

Ms. Pamela Chaffee:

Submitted for your review is a request for a waiver to allow the installation of flush mount groundwater monitoring wells. The U.S. Army Corps of Engineers (USACE), Kansas City District and its subcontractors has been performing Remedial Investigation activities at the former Forbes Atlas Missile Site S-1 located in Jefferson County, Kansas. Field activities are being conducted in accordance with a Work Plan (WP) approved by KDHE and Environmental Protection Agency (EPA). To complete the investigation, 5 shallow permanent groundwater monitoring wells will be installed by a KDHE-licensed Water Well Contractor (KS #597, Steve Johnson). The wells will be placed in the parcels identified in Figure 1 and as depicted on Figure 2. The shallow wells will have a target depth of 25-30 feet and will have 10-foot screens. The depth of the shallow monitoring wells and screen placement will be determined in the field based on the observed saturated zone in cores to be collected from the well boreholes and the depth of perched groundwater encountered during drilling. Previous studies at this site have measured the shallow groundwater levels around 13.4 feet below ground surface (bgs). These conditions will likely result in screens being placed at shallow depths bgs that will not allow for a full 20 feet of grout to be placed in the remainder of the borings. The wells will be grouted from the bentonite seal above the screen and filter pack to approximately 1 foot bgs as shown in Figure 3. If settling occurs after removal of drilling tools, additional grout will be added. The shallow monitoring wells will be completed as flush-mount wells, each with a 8-inch diameter protective cover, a 2-foot x 2-foot square concrete pad, and expandable well plug. The flush-mount installation was requested by the property owners.

Please see the next page for site information. If you have any questions, please contact me at (816) 389-3328 or by email at Joshua.R.Boeckmann@usace.army.mil.

Sincerely,

BOECKMANN JOSHUA
A.RYAN.1385638406

Josh R. Boeckmann
Project Manager

Digitally signed by
BOECKMANN JOSHUA RYAN.1385638406
DN: c=US, o=U.S. Government, ou=DoD,
ou=PKI, ou=USA,
cn=BOECKMANN JOSHUA RYAN.1385638406
Date: 2015.07.14 12:11:22 -05'00'