

WATER WELL RECORD Form WWC-5

Division of Water Resources App. No.

Well ID MW-6

Original Record Correction Change in Well Use

1 LOCATION OF WATER WELL: County: Doniphan	Fraction ¼ NE ¼ SW ¼ NE ¼	Section Number 34	Township Number T 3 S	Range Number R 22 <input checked="" type="checkbox"/> E <input type="checkbox"/> W
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2 WELL OWNER: Last Name: Growmark Terminal, Wathena KS First: _____
 Business: 963 Vernon Road Street or Rural Address where well is located (if unknown, distance and direction from nearest town or intersection): If at owner's address, check here:
 Address: _____
 City: Wathena State: KS ZIP: 66090

3 LOCATE WELL WITH "X" IN SECTION BOX:
N

NW	NE
SW	SE

S
-----1 mile-----

4 DEPTH OF COMPLETED WELL: 20 ft.
 Depth(s) Groundwater Encountered: 1) 6 ft.
 2) ft. 3) ft. or 4) Dry Well
WELL'S STATIC WATER LEVEL: 4.62 ft.
 below land surface, measured on (mo-day-yr) 11-15-18
 above land surface, measured on (mo-day-yr)
 Pump test data: Well water was ft.
 after hours pumping gpm
 Well water was ft.
 after hours pumping gpm
 Estimated Yield: gpm
 Bore Hole Diameter: in. to ft. and
 in. to ft.

5 Latitude: 39.750680 (decimal degrees)
Longitude: -94.928954 (decimal degrees)
 Horizontal Datum: WGS 84 NAD 83 NAD 27
 Source for Latitude/Longitude:
 GPS (unit make/model: Garmin etrek)
 (WAAS enabled? Yes No)
 Land Survey Topographic Map
 Online Mapper:

6 Elevation: ft. Ground Level TOC
 Source: Land Survey GPS Topographic Map
 Other

7 WELL WATER TO BE USED AS:

1. Domestic: <input type="checkbox"/> Household <input type="checkbox"/> Lawn & Garden <input type="checkbox"/> Livestock 2. <input type="checkbox"/> Irrigation 3. <input type="checkbox"/> Feedlot 4. <input type="checkbox"/> Industrial	5. <input type="checkbox"/> Public Water Supply: well ID 6. <input type="checkbox"/> Dewatering: how many wells? 7. <input type="checkbox"/> Aquifer Recharge: well ID 8. <input checked="" type="checkbox"/> Monitoring: well ID <u>MW-6</u> 9. Environmental Remediation: well ID <input type="checkbox"/> Air Sparge <input type="checkbox"/> Soil Vapor Extraction <input type="checkbox"/> Recovery <input type="checkbox"/> Injection	10. <input type="checkbox"/> Oil Field Water Supply: lease 11. Test Hole: well ID <input type="checkbox"/> Cased <input type="checkbox"/> Uncased <input type="checkbox"/> Geotechnical 12. Geothermal: how many bores? a) Closed Loop <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical b) Open Loop <input type="checkbox"/> Surface Discharge <input type="checkbox"/> Inj. of Water 13. <input type="checkbox"/> Other (specify):
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Was a chemical/bacteriological sample submitted to KDHE? Yes No If yes, date sample was submitted:
 Water well disinfected? Yes No

8 TYPE OF CASING USED: Steel PVC Other CASING JOINTS: Glued Clamped Welded Threaded
 Casing diameter 2 in. to 5 ft. Diameter in. to ft. Diameter in. to ft.
 Casing height above land surface 6 in. Weight lbs./ft. Wall thickness or gauge No. Sch 40

TYPE OF SCREEN OR PERFORATION MATERIAL:
 Steel Stainless Steel Fiberglass PVC Other (Specify)
 Brass Galvanized Steel Concrete tile None used (open hole)

SCREEN OR PERFORATION OPENINGS ARE:
 Continuous Slot Mill Slot Gauze Wrapped Torch Cut Drilled Holes Other (Specify)
 Louvered Shutter Key Punched Wire Wrapped Saw Cut None (Open Hole)

SCREEN-PERFORATED INTERVALS: From 5 ft. to 20 ft., From ft. to ft., From ft. to ft.
GRAVEL PACK INTERVALS: From 4 ft. to 20 ft., From ft. to ft., From ft. to ft.

9 GROUT MATERIAL: Neat cement Cement grout Bentonite Other
 Grout Intervals: From 2 ft. to 4 ft., From ft. to ft., From ft. to ft.

Nearest source of possible contamination:
 Septic Tank Lateral Lines Pit Privy Livestock Pens Insecticide Storage
 Sewer Lines Cess Pool Sewage Lagoon Fuel Storage Abandoned Water Well
 Watertight Sewer Lines Seepage Pit Feedyard Fertilizer Storage Oil Well/Gas Well
 Other (Specify)
 Direction from well? north Distance from well? 275 ft.

10 FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS

Notes: Boring log attached

11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, reconstructed, or plugged under my jurisdiction and was completed on (mo-day-year) 11/14/2018 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 710 This Water Well Record was completed on (mo-day-year) 12/05/2018 under the business name of Below Ground Surface, Inc. Signature Craig R. Hester

Division of Environment
Curtis State Office Building
1000 SW Jackson St., Suite 400
Topeka, KS 66612-1367



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Fax: 785-296-8464
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Lee A. Norman, M.D., Acting Secretary

Laura Kelly, Governor

February 27, 2019

Craig Hewins
Below Ground Surface, Inc. (Ks WWC Lic. #710)
8110 Cole Pkwy
Shawnee, KS 66227

Subj: Flush-Mount & Grouting Waiver Request for Monitoring Well at the Growmark St. Joseph Terminal, 936 Vernon Rd, Wathena, Doniphan County, KS 66090 [KDHE Project Code: C402273209]

Dear Mr. Hewins,

On February 21, 2019, the Kansas Department of Health and Environment, Bureau of Water, Geology & Well Technology Unit (KDHE), received the above referenced request for waiver to install one (1) additional monitoring well at-grade (or flush-mount), at the request of the Kansas Department of Transportation at the Growmark St. Joseph Terminal near Wathena, KS. The proposed well will be in an area that requires grass management in Hwy 36 right-of-way.

In addition, the well is proposed to be approximately 20-feet in depth with 10-feet of screen and an expected water table at a depth of 12-feet. As a result, the minimum grouting interval must be modified to meet local conditions as allowed in Article 30 – K.A.R. 28-30-6(c). The well will be in the NE¼, SW¼, NE¼, Sec. 34, T. 3S, R. 22E, and will be installed by Below Ground Surface, Inc. (Lic. #710).

KDHE has reviewed the waiver request materials. This letter provides notice of approval for grout modification in and completion of an additional at-grade monitoring well in accordance with the *KDHE Flush-Mount Well Construction Detail* dated January 2018.

As required in KDHE's Procedure *WWP-5 – Procedure for Requesting a Waiver to Allow Installation of a Flush-Mount Monitoring Well*, the location, well number, and latitude/longitude coordinates and associated horizontal datum will be shown in a scaled map and provided to KDHE along with the water well record (WWC-5 Form) for this well in accordance with Article 30 - K.A.R. 28-30-6(s). **Please confirm that this requirement will be met.**

Once the stated use of the well has ceased, it must be plugged in accordance with regulations in Article 30 (K.A.R. 28-30-7), and the Water Well Program *Procedure WWP-10 - Procedure for Plugging a Groundwater Monitoring Well*.

Please contact me at 785-296-3565 or Pam.Chaffee@ks.gov if you have questions or need further assistance.

Sincerely,

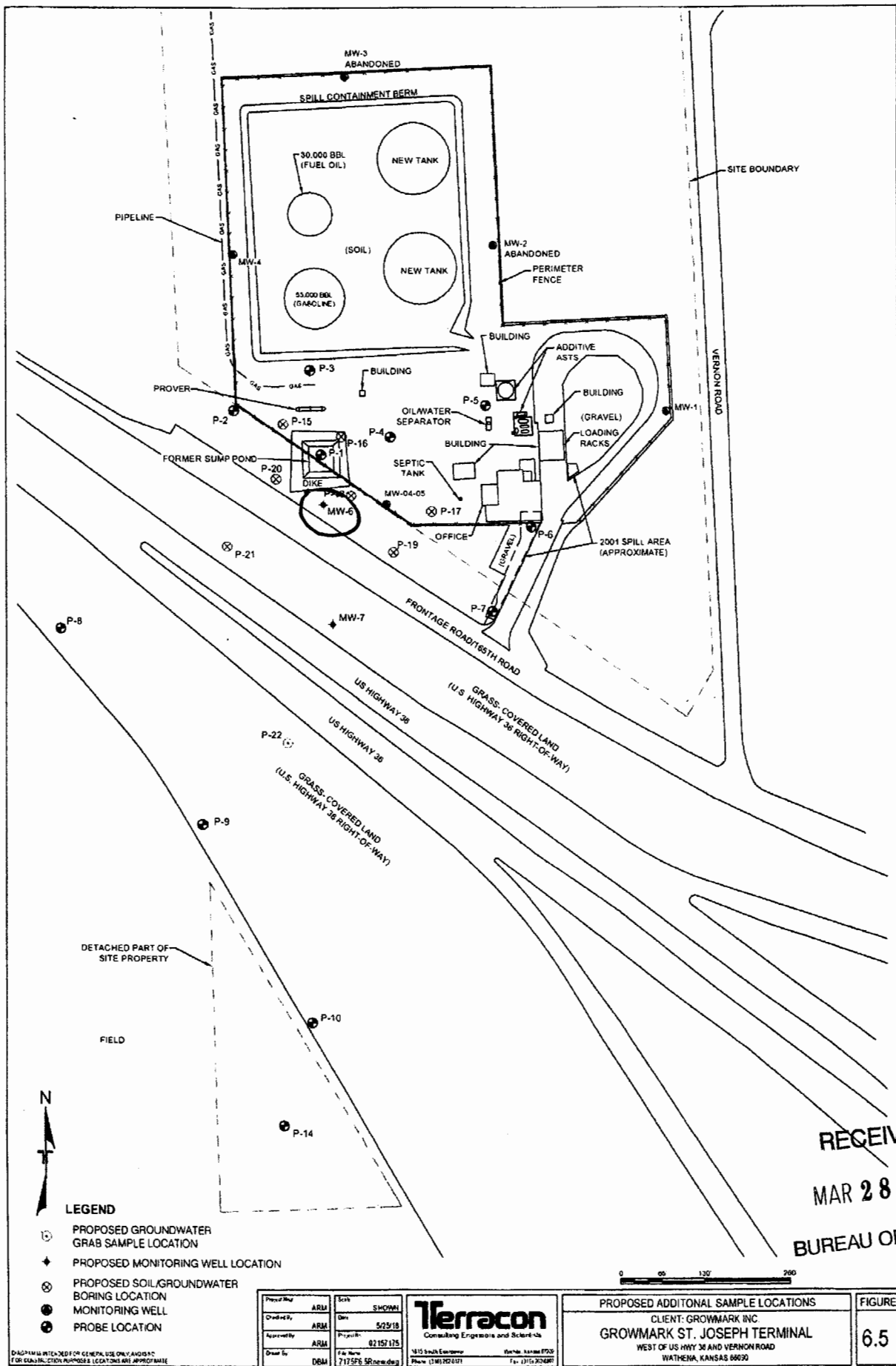
Pamela Chaffee, P.G.
Chief, Water Well & Technical Support Unit
Geology & Well Technology Section
Bureau of Water

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DIAGRAM INTENDED FOR GENERAL USE ONLY AND NOT FOR CONSTRUCTION PURPOSES & LOCATIONS ARE APPROXIMATE

WELL LOG NO. MW-6

PROJECT: Growmark St. Joseph Terminal

CLIENT: Growmark, Inc.
Bloomington, Illinois

SITE: 963 Vernon Road
Wathena, Kansas

GRAPHIC LOG	LOCATION See Exhibit 2	INSTALLATION DETAILS	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	PID (ppm)	Soil Sample Interval
	DEPTH: _____ MATERIAL DESCRIPTION: _____	Well Completion: Surface Mount						
0.0	SILTY CLAY (CL-ML) , brown, moist, stiff, medium plasticity						0.0	
4.0							0.0	
6.0	SILTY SAND (SM) , grey, very moist, loose, dense, fine-grained	12/20 sand	5	▽			0.0	
6.0	SILTY SAND (SM) , wet, loose, very dense, fine-grained			▽			0.0	
10.0			10				0.0	
15.0			15				0.0	
20.0			20				0.0	
	Boring Terminated at 20 Feet							

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

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Advancement Method:
Direct Push

Notes:
Author of logs: Shane Strobe

Abandonment Method:
2" diameter PVC well casing with locked J-plug and 8" diameter flush mount well vault

WATER LEVEL OBSERVATIONS

- ▽ Groundwater observed at 6' bgs while drilling
- ▽ Groundwater measured at 4.62' bgs 11-15-18



1815 S Eisenhower St
Wichita, KS

Well Started: 11-15-2018

Well Completed: 11-15-2018

Drill Rig: 6610 DT

Driller: BGS

Project No.: 01187133

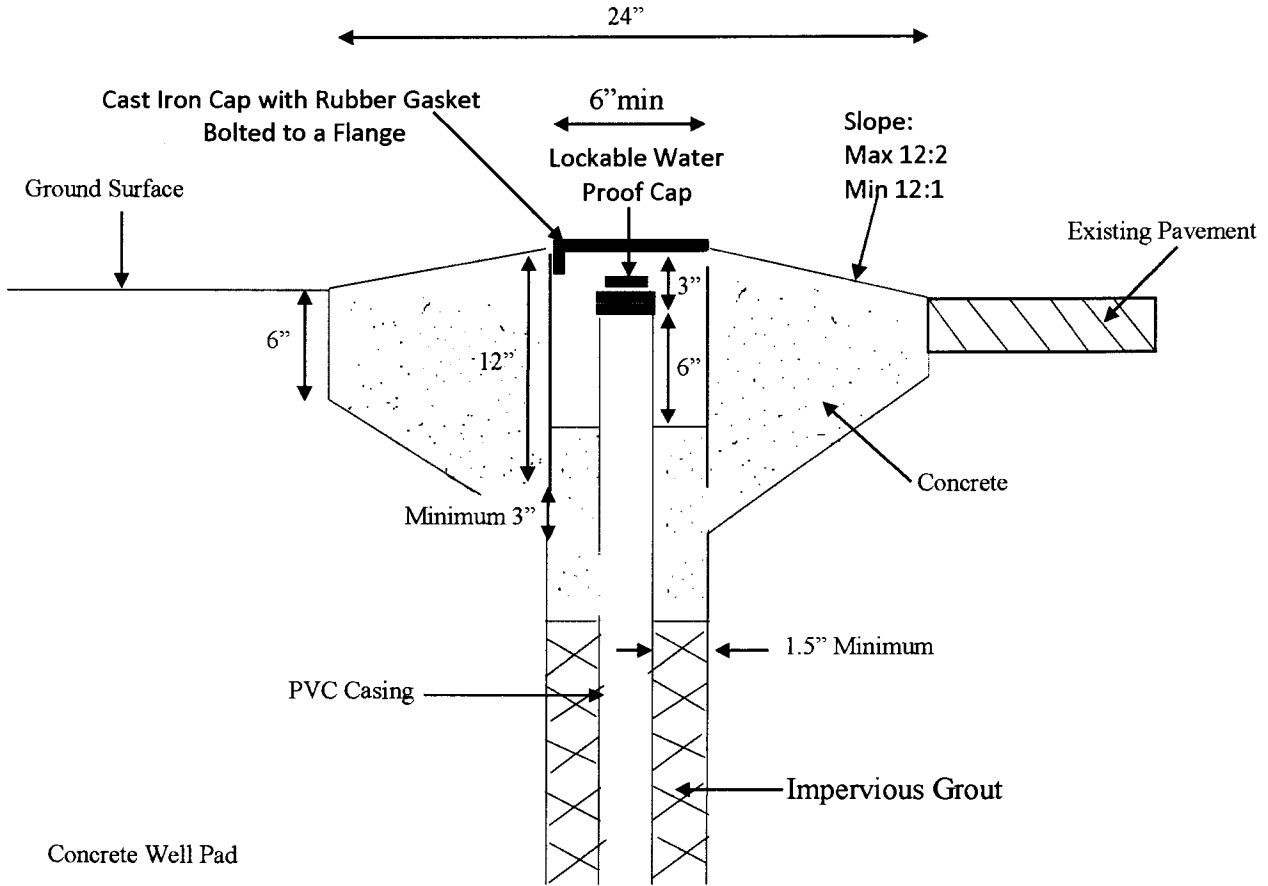
Exhibit: P-9

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG 01187133 LOGS.GPJ TERRACON DATATEMPLATE.GDT 12/3/18

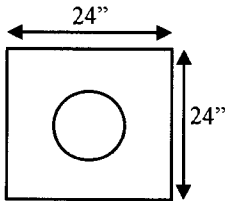
KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

FLUSH-MOUNT WELL CONSTRUCTION DETAIL

(Not to Scale)

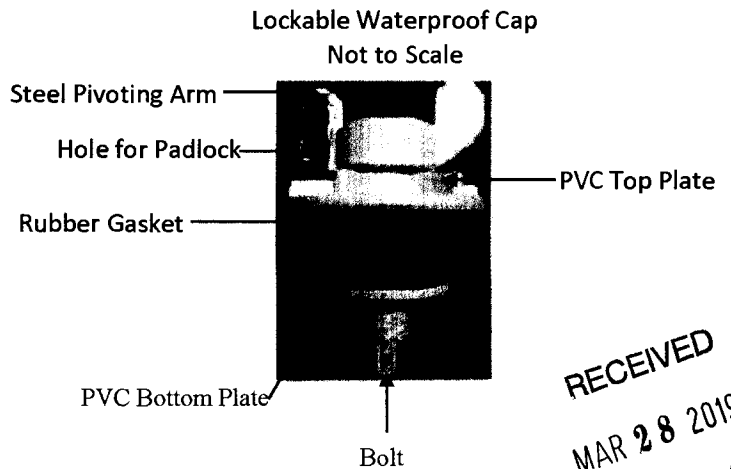


Concrete Well Pad



Top View - Not to Scale

Casing Diameter	2" or less	4"
Vault Diameter	6" min	8" min
Concrete Pad	24" x 24"	24" x 24"



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