

1801 Old Highway 8 Northwest, Suite 114, St. Paul, Minnesota 55112 Telephone: 651-639-0913 Facsimile: 651-639-0923

www.CRAworld.com

December 16, 2011

Reference No. 019607

Mr. Hylton Jackson
IOWA DEPARTMENT OF NATURAL RESOURCES
Land Recycling Program
Wallace State Office Building
502 East 9th Street
Des Moines, Iowa 50319-0034

CON 12-15 Doc # 26193

Dear Mr. Jackson:

Re: Monitoring and Recovery Well Abandonment

Union Pacific Railroad Company AST-UST Site - Oelwein, Iowa

This letter was prepared on behalf of Union Pacific Railroad Company (UPRR) by Conestoga-Rovers and Associates (CRA) to summarize the field activities related to the abandonment of the groundwater recovery and monitoring wells RW-1, MW-1U, MW-4U, MW-6U, MW-7U, MW-8U, MW-11L, and MW-11U at the UPRR Oelwein Railyard located near the intersection of West Charles Street and Fourth Avenue, in Oelwein, Iowa (Site). The work was completed in accordance with the letter work plan submitted on November 30, 2011. The wells that were abandoned are shown on Figure 1. The IDNR *Abandoned Water Well Plugging Record* (Form 542-1226) for each well is included as Attachment A.

RECOVERY WELL ABANDONMENT PROCEDURES

Following disconnection of the electricity and removal of the submersible pump and control panel, the UST area recovery well RW-1 steel box enclosure was removed. An updated well construction summary is provided in the table below:

RECOVERY WELL CONST	RUCTION SUMMARY
Well Number	RW-1
Well Boring Diameter (inches)	30
Screen/Casing Diameter (inches)	30
Approximate Well Depth (feet BGS)	20
Screen Length (feet)	10
Casing Length (feet)	10
Stick-up (feet)	1
Static Water Level (feet BGS)	12.5

Notes: BGS - below ground surface

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Equal Employment Opportunity Employer





December 16, 2011

Reference No. 19607

-2-

Since the recovery well was less than 100 feet deep and greater than 18-inches in diameter, it was classified under Iowa rules as a *Class I* well. The well was abandoned in accordance with Iowa Administrative Code (IAC) Chapter 39 (*Requirements for Properly Plugging Abandoned Wells*) by Matrix Environmental LLC of Osseo, Minnesota (Matrix) under well contractor certification #6603, with oversight provided by CRA. Well abandonment work was conducted December 6 and 7, 2011, with miscellaneous site grading and clean-up occurring on December 8, 2011.

As part of abandonment procedures, the well was checked to ensure there were no obstructions that would interfere with plugging operations. Clean filling materials and sealing (bentonite) products were poured from the top of the well to within 1-foot of the static water level. A bentonite grout seal was placed over those materials to approximately 4 feet below grade surface (BGS). Excavating equipment was then used to dig to 4-feet BGS and around the well casing so it could be cut off at that depth and removed for later disposal at a recycler. The concrete slab was also broken up during the excavation process and left on site for later disposal at a concrete recycler or to be crushed and used as backfill in accordance with Site building demolition specifications. The remediation system piping that was connected to the well was capped in place. The remaining casing was capped in place with a minimum 1-foot bentonite seal that extending greater than 6-inches beyond the outside diameter of the remaining well casing. The remaining void was backfilled with soil and graded such that surface storm water would not pond at the abandoned well location.

MONITORING WELL PLUGGING PROCEDURES

Monitoring wells MW-1U, MW-4U, MW-6U, MW-7U, MW-8U, MW-11L, and MW-11U were 2-inch diameter wells approximately 20-feet in depth that were all are "stick-up" wells, except for "flush-mount" wells MW-6U, MW-7U, and MW-8U. These wells were also abandoned in accordance with Iowa Administrative Code (IAC) Chapter 39 (*Requirements for Properly Plugging Abandoned Wells*) by Matrix, with oversight provided by CRA. The plugging of these wells was conducted on December 6, 2011.

The wells were checked for obstructions as part of well abandonment procedures. The protective well covers and bollards (if present), and well casing and screen were completely removed. The well borehole was backfilled to within 6-inches of the ground surface using bentonite chips. The remaining portion of the well borehole was backfilled with soil or concrete to match the existing grade. The IDNR *Abandoned Water Well Plugging Record* (Form 542-1226) for each well is included as Attachment A.



December 16, 2011

Reference No. 19607

-3-

Should you have any questions or require additional information regarding the well abandonment, please contact me in our St. Paul office at (651) 639-0439 ext. 308.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

James M. Blumke

James M.

Iowa Certified Groundwater Professional #1962

JMB/sb/21 Encl.

cc: Jeff McDermott, UPRR (via email)

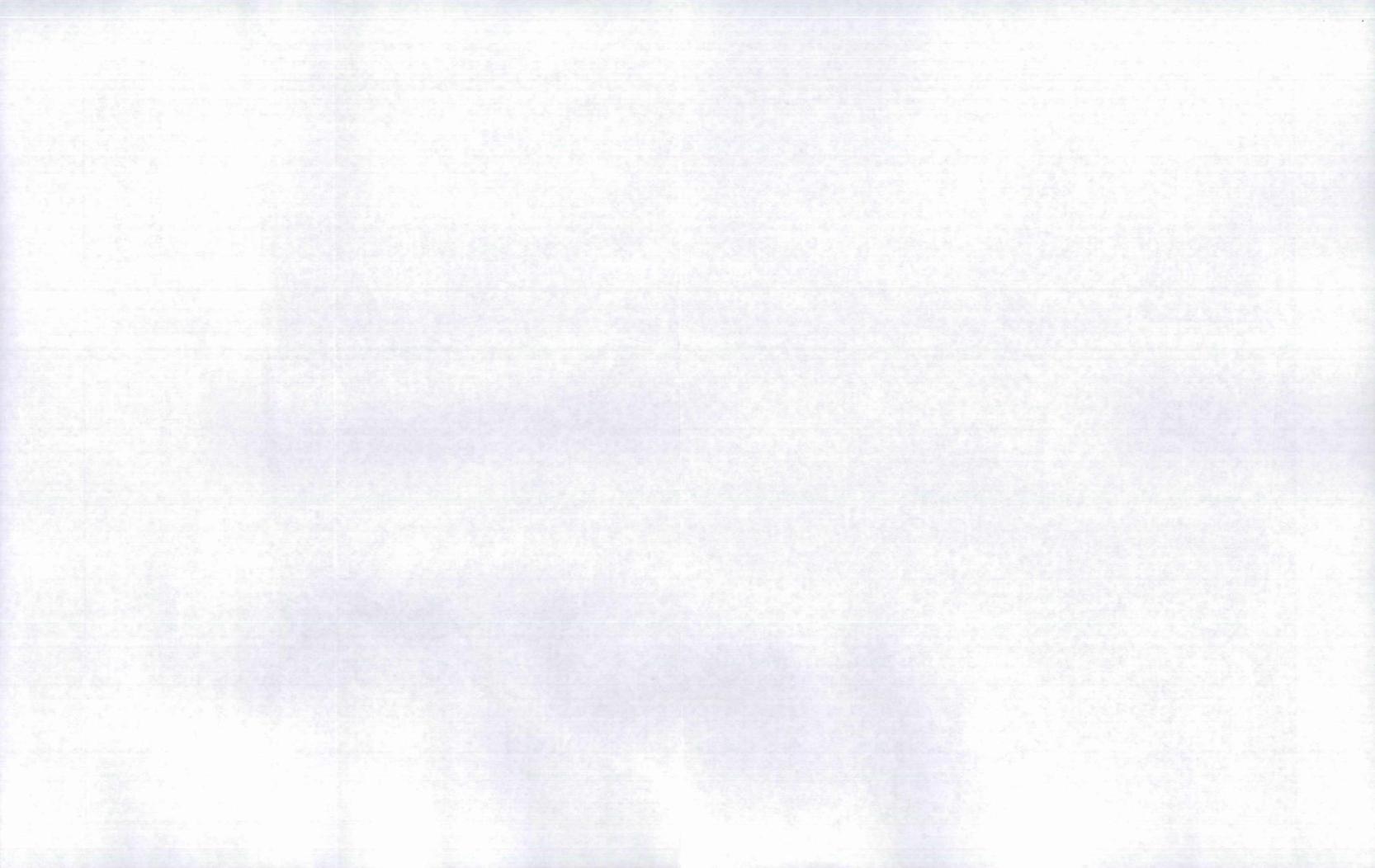
Joe Sanfilippo, IDNR (via email)

Catherine Miller, Fayette County Environmental Health (via email)

Victor Kane, City of Oelwein (via email)



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ATTACHMENT 1

ABANDONED WATER WELL PLUGGING RECORDS MW-1U, MW-4U, MW-6U, MW-7U, MW-8U, MW-11L, MW-11U, RW-1



Name: Union Pacific Rail Road	Phone: 402-544-3675			
Address: 1400 Dougles street stop 1030				
City: Omaha 4 State:	NE Zip: 68179			
If this was a Public Water Supply Well, please provide:	· • • • • • • • • • • • • • • • • • • •			
	PWSID Number:			
2. Location of Well (Cistern):				
Wof, nw Wof, Sw Wof, Section	m 21, T 91N, R 9 East ■ West			
County: Favelle Describe well locate	on on property. East side			
GPS Well Location: Latitude:	Longitude:			
3. Well Description:				
Well depth: 20 ft				
Depth to water 12.5 ft.				
Casing depth: 10 ft. Casing Mate	rial: Steel Plastic Concrete Clay Brick Stone			
Casing diameter: 2 in.	•			
Year or decade constructed: 1992 Type of Cons	struction: Drilled Driven Bored Augured Dug			
Is this a Monitoring Well? Yes No Well ID: MV	V-1U			
Check if Cistern Depth: ft. Diamete	r:			
I certify this well has been plugged as required by rule 567-39.8 of the lowa Administrative Gode (IAC). I agree to provide any additional information the county or department may need concerning this well.				
Signature of Owner Juffey Am Lermott Date Plugged: 12-6-2011				
If plugged by certified well contractor, complete this box:	Administrative Code (IAC)			
I have plugged this well as required by rule 567-39:8 of the lowa Administrative Code (IAC).				
Signature of Contractor:	Cert No: 660			
OR, If plugged by well owner, complete this box:				
The property owner has plugged this well following requirements in rule 567-39.8 of the lowa Administrative Code (IAC) with				
the oversight and assistance of the designated county agent.				
Signature of County Agent:	Date Approved:			
The state of the s				
Eligible for Grants-to-Counties cost share: Yes No (Determined by County Agent)				
Complete one form for each well plugged and submit within	30			
days to the local county agent:	. OR, only if no county agent is available, to:			
- Francisco - Marie -	Water Supply Section Iowa Department of Natural Resources 401 SW 7th St Ste M			
	Des Moines IA 50309-4611			



Illian Davida Davida	and the state of t			
Name: Union Pacific Rall Road	Phone: 402-544-3675			
Address: 1400 Dougles street stop 1030				
City: Omaha a	State: NE Zip: 68179			
If this was a Public Water Supply Well, please p				
	PWSID Number;			
2. Location of Well (Cistern):				
14 of, NW 14 of, SW 14 o	of Section 21 T 91 NgR 9 Gast West			
County: Fayette Describe wo	cell location on property: East side			
GPS Well Location: Latitude:	Longitude:			
3. Well Description:				
Well depth: 23 ft				
Depth to water 12.5 ft.				
Casing depth: 13 ft. Casin	ing Matérial: 🔲 Steel 🔳 Plastic 🔲 Concrete 🔲 Clay 🔲 Břick 🔝 Stone			
Casing diameter: 2 in.	· · · · · · · · · · · · · · · · · · ·			
Year or decade constructed: 1992 Type	oe of Construction: Drilled Driven Bored Augured Dog			
ts this a Monitoring Well? Yes No Well No Well	HID: MW-4U			
Check if Cistern Depth: ft. 1	Diameter: ft.			
I certify this well has been plugged as required by rule 567-39.8 of the lowa Administrative Code (IAC). I agree to provide any additional information the county or department may need concerning this well. Signature of Owner Lifety D. M. Desmott Date Plugged: 12-6-201 If plugged by certifical well contractor, complete this box:				
I have plugged this well as required by rule 567-39.8	8 of the Iowa Administrative Code (IAC).			
Signature of Contractor:	GETT Cert No: 6603			
	2			
OR, If plugged by well owner, complete this box: The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code (IAC) with				
the oversight and assistance of the designated county agent.				
Signature of County Agent:	Date Approved:			
Eligible for Grants-to-Counties cost share: 🔲 Yes 📋	No (Determined by County Agent)			
Complete one form for each well-plugged and submit days to the local county agent:	OR, only if no county agent is available, to:			
	Water Supply Section Iowa Department of Natural Resources 401 SW 7th St Ste M Des Moines IA 50309-4611			



I, Owner:			The second secon
Name: Union Pacific Rail F			Phone: 402-544-3675
Address: 1400 Dougles str	eet stop 1030	· · · · · · · · · · · · · · · · · · ·	many to the second seco
City: Omaha a		State: NE	Zip: 68179
If this was a Public Water	Smooly Well, pla	ase provide:	
DIVIDIO MARINE			PWSID Number:
2. Location of Well (Ciste		FC	m 91
الم	74 01; 517	Work Section	T 91 N.R 9 East West
Cuc Wall Lagration, Lathridge	Desci	toe wen tocation on p	property: East side
Grs wen Lucation: Latitude:	***************************************		Longitude:
3. Well Description:	***		
Well depth:	20 n		
Dopth to water	12.5 ft.		
Casing depth:	10 /t.	Casing Material: [Steel Plastic Concrete Clay Brick Stone
Casing diameter:	2 in.	•	
Year or decade constructed:			on: 🔲 Drilled 🔲 Driven 🛄 Bored 🖲 Augured 🔲 Dug
Is this a Monitoring Well?	Yes No	Well ID: MW-6U	
Check if Cistern Depti	1:	ft. Diameter:	(t.
I certify this well has been plugged as required by rule 567-39.8 of the lowa Administrative Code (IAC). Lagree to provide any additional information the county or department may need concerning this well. Signature of Owner Ame Desmoth Date Plugged: 12-6-2011 If plugged by certified well contractor, complete this box:			
I have plugged this well as red	juired by rule 56	7-39,8 of the Iowa Ac	lministrative Code (IAC).
Signature of Contractor: 9- 100 6603			
OR, If plugged by well owner, complete this box: The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code (IAC) with the oversight and assistance of the designated county agent.			
Signature of County Agent:	Martin Committee on the Committee of the		Date Approved:
Eligible for Grants-to-Countles cost share:			
Complete one form for each w			OR, only if no county agent is available, to:
		10	Vater Supply Section Dwa Department of Natural Resources O1 SW 7 th St Ste M Des Moines IA 50309-4611



Name: Union Pacific Rail F	Road		ph 402-544-3675	
Address: 1400 Dougles str	eet slop 1030		Phone: 402-544-3675	
City: Omaha a		State: NE	Zip: 68179	
			· · · · · · · · · · · · · · · · · · ·	
If this was a Public Water	Supply Well, ple	ease provide:		
PWSID Name:			PWSID Number:	
2. Location of Well (Ciste				
14 of, nw	1/4 of, SW	14 of, Section 21		
County: Favette Describe well location on property. East side			roperty: East side	
GPS Well Location: Latitude:			Longitude:	
3. Well Description:				
Well depth:	<u>17</u> n			
Depth to water	12.5 ft.			
Casing depth:	<u>7</u> ft.	Casing Material:	Steel Plastic Concrete Clay Brick Stone	
Casing diameter:	2 in.	•	•	
Year or decade constructed:	1992	Type of Construction	n: 🔲 Drilled 🗌 Driven 🗌 Bored 🖲 Augurêd 🗍 Dug	
Is this a Monitoring Well?	Yes No	Well ID: MW-7U		
Check if Cistern Deptl):	ft. Diameter:		
I certify this well has been plugged as required by rule 567-39.8 of the lowa Administrative Code (IAC). Tagree to provide any additional information the county or department may need concerning this well. Signature of Owner				
I have plugged this well as re			ministrati <u>ve C</u> ode (IAC).	
Signature of Contractor: 4 (660 3				
OR, If plugged by well owner, complete this box: The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code (IAC) with the oversight and assistance of the designated county agent.				
Signature of County Agent: Date Approved:				
Eligible for Grants-to-Counties cost share: Yes No (Determined by County Agent)				
Complete one form for each well plugged and submit within 30 days to the local county agent is available, to: OR, only if no county agent is available, to:				
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1. Owier:	3 l		100 5 4 4 0005	
Name: Union Pacific Rail F			Phone: 402-544-3675	and the second s
Address: 1400 Dougles str				
City: Omaha a		State: NE	Zip: 68179	
If this was a Public Water	Supply Well, ple	ase provide:		
PWSID Name:	<u> </u>		PWSID Number:	
2. Location of Well (Ciste				
4 of nw	1/4 of, sw	14 of, Section 21	, T 91 N.R 9 East	West
County: Fayelte	Docce	llie well location on use	opertur East side	
GPS Well Location: Latitude:			Longitude:	
3. Well Description:		*		
Well depth:	17 (i			
Depth to water	12.5 ft.		·	ì
Casing depth:	7 ft.	Casing Material:	Steel 🔳 Plastic 🗌 Concrete 🔲 Clay 🔲 Brick 🗀	Stone
Casing diameter:	in.			,
Year or decade constructed:	1992	Type of Construction:	: Drilled Driven Bored Magured	Dag
Is this a Monitoring Well?	Yes No			. "
Check if Cistern Deptl	1:	ft. Diameter:	ft.	
I certify this well has been plugged as required by rule 567-39.8 of the lowa Administrative Code (IAC). Lagree to provide any additional information the county or department may need concerning this well. Signature of Owner Supply				
I have plugged this well as re-	guir <mark>e</mark> d by rule 567	7-39.8 of the Iowa Adm	ninistrative Code (IAC).	į
Signature of Contractor:	9 (Dog Mo	Cert No: 660 3	· · · · · · · · · · · · · · · · · · ·
OR, If plugged by well owner, complete this box: The property owner has plugged this well following requirements in rule 567-39.8 of the lowa Administrative Code (IAC) with the oversight and assistance of the designated county agent.				
Signature of County Agent:		nere se compres de que des distribuirs des des des des des des des des des de	Date Approved:	
Eligible for Grants-to-Counties cost share: Yes No (Determined by County Agent)			to remove and and	
Complete one form for each well plugged and submit within 30 days to the local county agent (5 available, to:				
1		Wal Iow 401	iter Supply Section va Department of Natural Resources 1 SW 7th St Ste M s Moines IA 50309-4611	



1. Owner:				
Name: Union Pacific Rail Road	Phone: 402-544-3675			
Address: 1400 Dougles street stop 1030				
City: Omaha A State: N	E 7.ip: 68179			
PWSID Name:	PWSID Number:			
2. Location of Well (Cistern):				
14 of, nw 14 of, Sw 14 of, Section	21 T 91 N.R 9 East • West			
County: Fayette Describe well location	on property: East side			
GPS Well Location: Latitude:	Longitude:			
3. Well Description:				
Well depth: 27.5 ft				
Depth to water 12.5 ft				
(: Steel Plastic Concrete Clay Brick Stone			
Casing diameter: 2 in.				
	iction: 🔲 Drilled 🔲 Driven 🔲 Bored 🖲 Augured 🔲 Dug			
Is this a Monitoring Well? Yes No Well ID: MW-1	<u>1L</u>			
Check if Cistern Depth: ft. Diameter:	fi.			
I certify this well has been plugged as required by rule 567-39.8 of the Iowa Administrative Code (IAC). I agree to provide any additional information the county or department may need concerning this well. Signature of Owner Agree Owner Agree Owner Agree Owner Agree Owner Agree Owner O				
If phyged by certifical well contractor, complete this box:				
I have plugged this well as required by rule 567-39:8 of the low				
Signature of Contractor: 2 12/2/1/19 Cert No: 6603				
OR, If plugged by well owner, complete this box: " The property owner has plugged this well following requirements in rule 567-39.8 of the lowa Administrative Code (IAC) with the oversight and assistance of the designated county agent.				
Signature of County Agent:	Date Approved:			
Eligible for Grants-to-Counties cost share:				
Complete one form for each well plugged and submit within 30 days to the local county agent: OR, only if no county agent is available, to:				
	Water Supply Section Iowa Department of Natural Resources 401 SW 7th St Ste M Des Moines IA 50309-4611			



Name: Union Pacific Rail F	land		A00 E44 0076
			Phone: 402-544-3675
Address: 1400 Dougles str	eet slop 1030	AIC	00.000
City: Omaha a		State: NE	Zip: 68179
If this was a Public Water	Supply Well, ple	ease provide:	
PWSID Name:	•		PWSID Number:
2. Location of Well (Ciste	ern):	1.	
₩or, nw	14 of, sw	1/4 of Section 21	, 7 91 N, R 9 ☐ East • West
County: Fayette	Descr	ibe well location on p	property: East side
GPS Well Location: Latitude:	***		Longitude:
3. Well Description:			
Well depth:	17 n		
Depth to water	12.5 ft.		
Casing depth:	7 <u>n</u> .	Casing Material:	Steel Plastic Concrete Clay Brick Stone
Casing diameter:	2 in.		·
Year or decade constructed:	2008	Type of Construction	on: Drilled Drlven Bored Augured Dug
Is this a Monitoring Well?	Yes No	Well ID: MW-11U	منته والمستعمد
Check if Cistern Depth: ft. Diameter: ft. I certify this well has been plugged as required by rule 567-39.8 of the Iowa Administrative Code (IAC). Lagree to provide any			
additional information the co	· ~	/	•
Signature of Owner Juffrey Mortesmot Date Plugged: 12-6-2011			
If plugged by certified well co)		
I have alreged this well as re-	autead by rule 56	7.39 8 of the lowa Adi	ministrative Code (IAC).
Signature of Contractor: 6603			
OR, If plugged by well owner, complete this hox:			
The property owner has plugged this well following requirements in rule 567-39.8 of the Iowa Administrative Code (IAC) with			
the oversight and assistance of the designated county agent.			
Signature of County Agent:			Date Approved:
Eligible for Grants-to-Counties cost share: Yes No (Determined by County Agent)			
Complete one form for each well plugged and submit within 30			
days to the local county agen	l:		OR, only if no county agent is available, to:
			Vater Supply Section owa Department of Natural Resources
			01 SW 7th St Ste M
		i),	es Moines IA 50309-4611



1. Owner:				
Name: Union Pacific Rail Road	Phone: 402-544-3675			
Address: 1400 Dougles street stop 1030				
City: Omaha A S	State: NE Zip: 68179			
(False and D. 1.12 March Company)	The state of the s			
If this was a Public Water Supply Well, please prov				
PWSID Name:	PWSID Number:			
2. Location of Well (Cistern):				
4 of, nw 4 of, sw 4 of, S	Section 21 , T 91 N,R 9 East West			
County: Fayette Describe well l	ocation on property. East side			
GPS Well Location: Latitude:	Longitude:			
3. Well Description:	A second			
Well depth: 20 (t				
Depth to water 12.5 ft.				
	Material: Steel Plastic Concrete Clay Brick Stone			
Casing diameter: 30 in.				
Year or decade constructed: 1992 Type of	Construction: Drilled Driven Bored Augured Dug			
Is this a Monitoring Well? Yes No Well ID	: RW1			
Check if Cistern Depth: ft. Dia	meter: ft.			
I certify this well has been plugged as required by rule 567-39.8 of the lowa Administrative Code (IAC). I agree to provide any additional information the county or department may need concerning this well. Signature of Owner July Dermot Date Plugged: 12-6-7-201				
If plugged by certified well contractor, complete this box	Χ:			
I have plugged this well as required by hale 567-39.8 of	the lowa Administrative Code (IAC).			
Signature of Contractor:	Cert No: 6603			
OR, If plugged by well owner, complete this box: The property owner has plugged this well following requirements in rule 567-39.8 of the lowa Administrative Code (IAC) with the oversight and assistance of the designated county agent.				
Signature of County Agent:	Date Approved:			
Eligible for Grants-to-Counties cost share: Yes N	lo (Determined by County Agent)			
Complete one form for each well plugged and submit wi	OR, only if no county agent is available, to:			
	Water Supply Section lowa Department of Natural Resources 401 SW 7th St Ste M Des Moines IA 50309-4611			