PROJECT NO. 11104

CONTRACT SPECIFICATIONS FOR THE ABANDONMENT OF WELL NO. 1 AND WELL NO. 4

OAK CREEK WATER AND SEWER UTILITY

June 1, 2011

170 W. Drexel Avenue
Oak Creek, WI 53154

Telephone: (414) 570 - 8200
www.water.oak-creek.wi.us

PROJECT NO. 11104

CONTRACT SPECIFICATIONS FOR THE ABANDONMENT OF WELL NO. 1 AND WELL NO. 4

OAK CREEK WATER & SEWER UTILITY

June 1, 2011

Project Design & Construction Coordination
Michael J. Sullivan, P.E.
Utility Engineer
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TABLE OF CONTENTS

Note: Any addenda and plans are a part of this contract volume.

NOTICE TO BIDDERS

OWNER

The Oak Creek Water & Sewer Utility hereby gives notice that sealed proposals will be received in the Utility's office at 170 W. Drexel Avenue, Oak Creek, Wisconsin, 53154.

PROJECT

The work, officially known as Project No. 11104, Well No. 1 (8520 S. Knights Place) and Well No. 4 (9750 S. 20th Street) Abandonment, consists of constructing the following approximate quantities:

ITEM DESCRIPTION	QUANTITY
Well No. 1 Pump and Piping Removal	1 LS
Well No. 4 Abandonment	1 LS

TIME

Proposals must be received by the office of the Utility, 170 W. Drexel Avenue, no later than **10:00 a.m., Thursday July 7, 2011**, at which time and place the proposals will be publicly opened and read aloud.

CONTRACT DOCUMENTS

Bid documents may be obtained at the Utility's web site: www.water.oak-creek.wi.us under the public contracts section after June 8, 2011.

STATUTORY PROVISIONS

The Contract letting shall be subject to the provisions of Section 62.15, 66.0901, 66.0903, and 779.16 Wisconsin Statutes. The minimum wage scale to be paid on this project shall be in accordance with the prevailing minimum wage as determined by federal or state law, whichever applies, and such wage is incorporated by reference, as it may be amended from time to time. If the United States Department of Housing and Urban Development or State of Wisconsin, Department of Workforce Development has issued a wage rate determination, then it shall apply.

BID GUARANTEE

A certified check or bank draft payable to the Oak Creek Water & Sewer Utility, or a satisfactory bid bond, in an amount not less than 5% of the bid shall accompany each bid as a guarantee that if the bid is accepted, the bidder will execute and file the proposed contract and bond within 10 days after the award of the contract. In case the bidder fails to file such contract and bond within the time set by the Utility, the check or bid bond shall be forfeited to the Utility as liquidated damages pursuant to SS.62.15(3).

EQUAL OPPORTUNITY	The Oak Creek Water & Sewer Utility hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the ground of race, color, sex, or national origin in consideration for an award.
BID REJECTION	The Oak Creek Water & Sewer Utility Commission reserves the right to reject any and all bids, waive any informalities in bidding, or to accept the bid or bids, which best serves the interest of the Utility.
BID WITHDRAWAL	No bid shall be withdrawn for a period of 30 days after the scheduled opening of the bids without the consent of the Oak Creek Water & Sewer Utility Commission.
SITE ACCESS	Site access is by appointment only. Bidders may arrange an appointment by calling Mike Sullivan or Fred Fairbanks at (414) 570-8210.

INSTRUCTIONS TO BIDDERS

1. Proposal Forms

No bid will be considered which is not submitted on forms furnished by the Utility Engineer.

2. Quantities

The estimated quantities of the work are the result of careful calculations but are considered approximate. The quantity shown will be used as a basis for determining the lowest bidder. After the contract is awarded, the quantity of work listed under any item, or all items, may be increased or decreased according to the specifications at the discretion of the Utility Engineer, without invalidating the bid price.

The general description of bid items is provided to give bidders a brief description of the work covered under this contract, but is not meant to be all inclusive of the work and materials required to complete each item. All miscellaneous items required by the plans and specifications, although not expressly listed on the bid form, are assumed to be included on the unit prices of each general bid item. Bids will be compared on the basis of the quantities listed in the Bidding Schedule. Payment on the contract will be based on the actual, field-measured units installed.

3. Prior Examination of Contract Documents and Worksite

Bidders shall inform themselves of the conditions under which work is to be performed by examining the contract documents, site, ground conditions and obstacles to be encountered in the field, and by such other means necessary. After proposal submittal, the Utility will not accept a claim that there was any misunderstanding as to the quantities, conditions, nature of the work, or extra compensation for items the Contractor failed to inform himself of prior to bidding.

4. Inadequacies and Omissions

Any verbal information obtained from or statement made by representatives of the Utility at the time of the examination of the contract documents or the site for the purpose of bidding, which apparently corrects or in any way amends the contract documents shall be invalid. The Oak Creek Water and Sewer Utility will not be responsible for such verbal information or statements.

Bidders shall bring any inadequacies, omissions, or conflicts to the Utility Engineer's attention at least seven days before the due date of bids. Prompt clarification will be immediately supplied to all bidders by addenda, and each addendum shall be acknowledged on the proposal form. Failure to so request clarification of any inadequacy, omission or conflict will not relieve the contractor

of responsibility. The signing of the contract will be considered as implicitly denoting that the contractor has a thorough comprehension of the full intent and scope of the specifications and drawings.

5. Subcontractors

Bidders shall be required to submit a list of subcontractors with their proposal in accordance with Section 66.0901(7), Wisconsin Statutes.

This list of subcontractors shall not be added to nor altered without the written consent of the Utility Engineer. The Utility Engineer may reject proposals if the list of subcontractors and the class of work to be performed is omitted. The omission shall be considered inadvertent or a representation that the bidder will perform the work himself. If such an omission is inadvertent, the bidder shall provide the list of subcontractors within two working days from the date and time of the bid opening.

6. Time of Performance

When not otherwise specified, the bidder must state in the proposal the least number of calendar days (including Saturdays, Sundays and holidays) after the date to commence work given in the Notice to Proceed, in which he will start construction and the number of calendar days (including Saturdays, Sundays and holidays) after date to commence work given in the Notice to Proceed in which he will fully complete the work as specified.

In stating time, the bidder should make due allowance for all probable difficulties which may be encountered.

In the event of failure to complete the work within the time stated or otherwise specified, liquidated damages will be assessed as provided in the specifications.

7. Proposal Guaranty

The Oak Creek Water and Sewer Utility requires either a bid bond or a certified check of at least 5% of the bid.

8. Requirements for Signing Proposals

A. The full name and business address of each bidder must be entered on the proposal submitted. The proposal shall be signed in the space provided by written signature of the person or persons properly authorized to sign it.

B. A proposal submitted by an individual shall be signed by the bidder or by an authorized agent.

C. A proposal submitted by a firm or partnership shall be signed by a member or by an authorized agent; if by joint adventurers, the proposal shall be signed by each of their authorized agent(s).

D. Proposals which are signed by an attorney-in-fact for individuals, firms, partnerships or joint adventurers shall have attached a power-of-attorney evidencing authority to sign the bid.

E. A proposal submitted by a corporation shall be signed by an authorized officer or agent of such corporation. Such corporation must be licensed to do business in the State of Wisconsin before a proposal to do the work can be received. If a foreign corporation, the state under which it is incorporated must be named.

9. Submission of Proposal

The proposal and the proposal guaranty shall be placed in an envelope or in separate envelopes and shall be sealed. On the envelope or envelopes shall be plainly written the PROJECT NUMBER, DATE OF OPENING BIDS, NAME OF BIDDER, AND THE TYPE AND LOCATION OF THE WORK. Such envelope(s) shall be addressed and delivered to the office of the office of the Utility before the time specified in the Notice to Bidders for opening bids.

10. Withdrawal of Proposal

A bidder may withdraw a proposal, provided the Utility Engineer receives a written request prior to the deadline for accepting proposals. The proposal will be returned to the bidder unopened.

11. Bid Prices

Bidders must submit a bid price, in accordance with the specifications, for each item of the job or branch, in compliance with the bidding units specified for the quantities listed in the proposal. Bid prices must be written out in words and also entered in figures. In case of variation, the written prices will prevail.

12. Double Bidding

Two proposals under different names will not be accepted from one firm or association.

13. Disqualifying of Bid Proposal

A bid proposal will be disqualified because of gross errors in computation which cannot be resolved by mathematical correction without resorting to information not contained in the bid.

Errors in extension may be corrected providing that the unit cost is legible and can be definitely identified as complying with item specifications. The total bid shall be adjusted in accordance with approved extension corrections. An extension may not be divided by number of units specified to determine a unit cost if such is omitted by the bidder. It is the responsibility of the bidder to submit a neat, accurate and complete proposal if his bid is to be accepted.

14. Right to Accept or Reject Bids

The Utility reserves the unqualified right to reject any or all bids at its sole and absolute discretion, or to reject any or all bids where the Utility Engineer has determined that the contractor or bidder has unbalanced his bid and unit prices. The Utility further reserves the unqualified right to waive any irregularities in any bid, or to accept any bid which will best serve the interests of the Utility. The Utility also reserves the unrestricted privilege to reject any unit prices for additions to or deductions from the scheduled amount of work as given in the bid, if the same are considered excessive or unreasonable, or to accept any or all such unit prices which may be considered fair and reasonable.

The bid openings are open to the public, and no awards will be made immediately upon opening bids nor until the bids opened can be compared, scheduled, and reviewed by the Utility Commission. The contract shall be awarded by Utility Commission action and the bidder to whom the award is made will be notified at the earliest possible date.

15. Performance Guaranty

The performance of the contract must be assured by a surety bond executed by the successful bidder in the full amount of the contract. Such bond must also be executed by a surety company.

16. Contract Execution

Within ten days from the date of receipt of the contract forms from the City Attorney, the successful bidder shall sign four copies of the contract form, attach the performance guarantee of the approved licensed surety, and deliver to the office of the Utility. The contract, when signed by the Utility, and approved as to form and execution by the City Attorney, shall be a part of the contract documents. When all parties have signed the contract, the Utility will refund the proposal deposit to the successful bidder.

In case of failure to have delivered such properly executed copies of the contract within ten days, or such extension as the Utility Commission only may deem reasonable, bidder will be considered as having abandoned his proposal. Bidder will be considered in default to the Utility to the full amount of the bid deposit. It will be understood and agreed by the party submitting the proposal that such bid deposit represents the damages to which the Utility will be subjected by reason

of the bidder's default in acceptance of contract, or failure to either properly execute the contract forms or deliver within the specified time of such extension.

17. Starting Work Before Notification

No work shall be performed under the contract and no materials or equipment shall be delivered to the site of the work prior to the date in the Utility Engineer's written Notice to Proceed.

18. Refund of Bid Deposit to Unsuccessful Bidders

The bid deposit of all except the two lowest bidders will be refunded after the Utility Commission has determined the lowest responsible bidder. The remaining bid deposit will be refunded upon execution of the contract.

July 7, 2011

To: The Oak Creek Water & Sewer Utility Commission

Re: Bid Proposal

In conformity with the notice to bidders, the undersigned bidder, having examined the site of the work and the contract, submits the following proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed hereunder, and agrees to execute the proposed contract and furnish the required bond for the completion of said work, at the locations and for the prices set forth in the attached Schedule One.

The undersigned bidder deposits herewith a certified check payable to the order of the Oak Creek Water and Sewer Utility, or an approved bid bond, in the sum designated in said notice, and hereby agrees that in the event the undersigned bidder shall fail to execute the contract with surety bond thereto and return the same to the Utility within ten calendar days after transmittal by the Utility, then said certified check shall be retained by and become the property of the Oak Creek Water & Sewer Utility as fixed and liquidated damages or the penalty as provided by said bond shall be recovered as liquidated damages.

It is further understood that construction on this contract shall commence and be completed as specified in the Detail Specifications.

This proposal submitted by:

_____ _____

Bidder Address

_____ _____

Phone City, State, Zip Code

Operating as: Sole Trader _____ Partnership _____ Corporation _____

Under the laws of the State of _____

By: _____ (Signature)

_____ (Title)

ADDENDUM RECEIPT: We acknowledge the receipt of Addenda _____ inclusive.

SWORN STATEMENT OF BIDDER

PURSUANT TO SECTION 66.0901 (7) WISCONSIN STATUTES

I, being duly sworn at _____ (City), _____ (State), on oath, do hereby state on behalf of said bidder that I have examined and carefully prepared this proposal from the plans, specifications, the work site including surface and underground conditions, and other contract documents and have checked the same in detail before submitting this proposal; and that this sworn statement is hereby made an integral part of this proposal.

By: _____
(Signature)

_____
(Title)

Subscribed and sworn to before me this _____ day of _____, 2011.

_____

Notary Public, _____ County

State of _____

My commission expires:_____

Affix corporate seal below.

INFORMATION ON SURETY ***(please fill out completely)***

Firm _____

Address, City, State, Zip Code_____

Attorney-in-fact _____

Address, City, State, Zip Code_____

INFORMATION ON SUBCONTRACTORS

The undersigned bidder will employ, subject to the approval of the said owner, the following subcontractors. This list shall not be added to nor altered without the written consent of the owner. A bid shall not be invalid if the list of subcontractors and the class of work to be performed has been omitted. The omission shall be considered inadvertent or a representation that the bidder will perform the work himself. If such an omission is inadvertent, the bidder shall provide the list of subcontractors within two working days from the date and time of the bid opening.

NAME	ADDRESS	CLASS OF WORK
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Schedule One

Item No.	Item Description	Bid Quantity	Units	Unit Price	Total Price
1	Well No. 1 Pump and Piping Removal Unit price per lump sum _____ dollars & _____ cents .	1	LS		
2	Abandon Well No. 4 Unit price per lump sum. _____ dollars & _____ cents .	1	LS		

BASE BID TOTAL ITEMS 1 - 2 INCLUSIVE $_____

DETAIL SPECIFICATIONS

I. GENERAL

A. INTRODUCTION

These specifications govern the abandonment of wells, in the City of Oak Creek in the locations as shown on the plans.

All work performed and all materials supplied under this contract shall conform to the Contract Documents and to all specifications, codes, and ordinances either referred to or established by law.

B. APPLICABLE SPECIFICATIONS

The following specifications shall be applicable to all construction under this project:

1. General Specifications of the Department of Engineering, City of Oak Creek, hereinafter referred to as the General Specifications in these Detail Specifications.

2. Standard Specifications for Sewer and Water Construction in Wisconsin, Sixth Edition, with addendums hereinafter referred to as the Standard Specifications in these Detail Specifications.

3. Highway and Structure Construction - Std. Specs. Dept. of Trans., Division of Highways, State of Wis., current edition and supplemental specifications hereinafter referred to as the State Specifications in these Detail Specifications.

4. These Detail Specifications.

5. The Construction Plans.

6. Manual on Uniform Traffic Control Devices, current edition.

7. City of Oak Creek Engineering Design Manual, current edition.

Copies of the aforementioned General, Standard and State Specifications are on file at the Engineering Department of the City of Oak Creek for use and reference on the premises by prospective bidders and by the Contractor.

The Detail Specifications and the construction plans cover items, corrections, deletions or additions to the applicable contract specifications and take precedence over those other parts of these specifications that may be in conflict herewith.

Any conflict between the various specifications and the construction plans shall be

brought to the attention of the Utility Engineer by the bidders and/or the Contractor. Where such conflict may exist, the Utility Engineer shall have the sole authority to exercise a decision as to the meaning of the bidding and contract documents.

Reference shall also be made to the Instructions to Bidders of the bid and contract documents.

C. CONTROL OF CONSTRUCTION OPERATIONS

1. Scheduling Work

The Contractor will not be permitted to start new phases of the project until previously started phases are fully completed or continuous work, in the opinion of the Utility Engineer, is being done to fully complete the previously started phases. However, the Contractor may with the approval of the Utility Engineer, start a second crew with a second foreman on other portions of the project. (Refer also to Sections 1.2.2 and 1.3.21 (Pages 1-10 and 1-21, respectively) of the Standard Specifications).

At any time during the execution of the contract that the Contractor either suspends or returns to work, he must notify the Utility Engineer of his intentions at least three working days in advance of said suspension or return to work.

2. Maintenance of Public Safety and Convenience

The Contractor shall provide for the placing of necessary detour signs, barricades, warning lights, and warning and informational signs to provide for the safety and convenience of the public prior to starting of any of the work per the State Manual on Uniform Traffic Control Devices. Adjustment to the traffic control devices shall be included and performed by the contractor as called for by the progression of work. Necessary traffic control adjustments shall be in place prior to proceeding with work that could impact the safety of the general public as determined by the Utility Engineer.

All such devices shall comply with the Federal Manual on Uniform Traffic Control Devices.

3. Access to Properties

The Contractor shall provide for access to the properties abutting the work site area in accordance with Section 1.7.7 (Page 1-33) of the Standard Specifications. In addition, the operations shall be conducted in such a manner that 1) all streets at all times shall be maintained with at least one lane of roadway open for fire and residential vehicular access. Driveway access shall be maintained at all times. Affected property owners shall be notified at least 24 hours in advance of any driveway closures. All abutting properties shall be provided with vehicular access overnight, on weekends and on holidays.

4. Haul Roads and Storage Areas

The Contractor shall be required to submit a plan indicating his intended location of haul roads and storage areas for equipment and materials. Such plan shall be presented at the pre-construction meeting and shall be subject to the approval of the Utility Engineer. Any subsequent proposed changes to the approved plan shall be submitted to the Utility Engineer for approval prior to implementation of the change. Construction traffic shall be permitted on pre-approved areas. All areas used for haul roads and storage shall be subject to restoration by the Contractor to the condition prior to the start of work under this contract.

D. DESCRIPTION OF WORK

1. Well No. 1
   a. Remove submersible pump and piping from the well (electrical cabinets will be disconnected and removed by owner). The pump is set 1,200' below the surface and has a 2" discharge pipe.
   b. Remove gauges, taps and piping from well cap and weld flush or within 2" of cap

2. Well No. 4
   a. Abandonment of the well per the requirements of NR 811, Wisconsin Administrative Code.
   b. Removal of the pumping equipment (well log attached)
   c. Disconnection and removal of the electrical feeders from the electrical service panel to the well base.
   d. Excavate discharge piping within 35' of the building, cut, cap both sides and pour concrete buttress between caps (approx. depth <10')
   e. Cutting flush with the floor and filling all unused conduits
   f. Disconnection, removal, cutting flush with the floor, and filling discharge pipe with concrete.
   g. Sealing and permanently capping the well casing to WDNR requirements, below the floor
   h. Removal of the pump base to 4" below the floor
   i. Removal of right angle engine drive base 4" below the floor
   j. Patching the floor with a minimum 4" thick concrete patch.

E. PROJECT LOCATION

1. Well No. 1

This well is located within an existing building at 8520 S. Knights Place.

2. Well No. 4

This well is located within an existing building at 9750 S. 20th Street.

II. CONTRACTOR'S INSURANCE

A. GENERAL

The Contractor shall not commence work under this contract until he has obtained all insurance required under this paragraph and such insurance has been approved by the Utility and insurance certificates have been filed with the Utility, nor shall the Contractor allow any Subcontractor to commence work on his subcontract until all similar insurance required of the Subcontractor has been so obtained and approved in accordance with Section 1.8.4 of the Standard Specifications and these Detail Specification provisions.

B. COMPENSATION INSURANCE

The Contractor shall take out and maintain during the life of this contract, Worker's Compensation Insurance for all of his employees at the site of the project and in case any work is sublet, the Contractor shall require the Subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees, unless such employees are covered by the protection afforded by the Contractor. In case any class of employees engaged in hazardous work under this contract at the site of the project is not protected under the Worker's Compensation Statute, the Contractor shall provide and shall cause each Subcontractor to provide adequate insurance coverage for the protection of his employees not otherwise protected.

C. PUBLIC LIABILITY, PROPERTY DAMAGE, AND CONTRACTUAL LIABILITY INSURANCE

The Contractor shall take out and maintain during the life of this contract, public liability, property damage, and contractual liability insurance in the following minimum amounts:

Bodily Injury	$1,000,000 per occurrence
	$1,000,000 aggregate
Property Damage	$500,000 per occurrence
	$500,000 aggregate

These policies shall protect the Contractor and any Subcontractor performing work covered by this contract from the claims and damages for personal injury, including accidental death, as well as claims for property damage, which may arise from the performance of the work or under the hold-harmless and indemnifying clauses which are a part of this contract. The said policies are to cover not only the Contractor or Subcontractor but also any other directly or indirectly employed by either of them.

D. INSURANCE AGAINST THE FOLLOWING SPECIAL HAZARDS

The following respective amounts shall be procured by the Contractor or Subcontractor before the commencement of any operation by the Contractor, or the happening of any circumstance creating or tending to create the particular special hazard:

Kind	Amount
Operating of elevators or hoists	$25,000.00
Use and operation of automobiles and truck	$25,000.00
Structural alterations or demolitions	$25,000.00
Undermining adjacent structures	$10,000.00
Blasting operations	$10,000.00
Operation of excavating machinery in streets and highways	$10,000.00
Operation within other public or private right-of-way (including railroad right-of-way)	As Required

III. PERFORMANCE BOND AND GUARANTEE

Where the contract is over $10,000.00, the contractor will be required to furnish a satisfactory performance bond in the amount of 100% of the contract. The Contractor shall pay the total cost of this bond. Such bond shall be executed by an authorized surety company and shall remain in full force and effect for a period of one year after the final payment for the work to guarantee workmanship and materials. A performance bond shall not be required for public works contracts below $10,000.00 regardless of bond requirement.

The Contractor shall agree and guarantee that the material and workmanship supplied by him shall be free from all defects, and strictly in accordance with the plans and specifications, at the time of its completion and acceptance by the municipality, and for a time of one year thereafter, the Contractor agrees to forthwith repair the same upon notification by the municipality using the same material required by these specifications. In case the Contractor shall fail to make such repairs or cause the same to be made, the Contractor agrees and guarantees to pay on demand the cost thereof, to said municipality upon the completion of such repairs, and the Contractor further agrees and guarantees to pay for all labor and material used in or about the construction of said work in his contract, which may become a lien or a claim against the municipality.

IV. METHOD OF PAYMENTS

Payments will normally be made monthly throughout the progress of the work, provided the work completed is substantial enough in the opinion of the Utility Engineer.

Substantial completion of water main construction shall be considered to include all flushing and testing of the mains including pressure tests and safe water samples. Partial and final payments will not be made until such time that all work is substantially completed including testing and accepted by the approving agencies.

Such payments shall be in accord with Section 66.0901 (9) b, of the State Statutes which states that the City,

> "(b) Retained percentages. As the work progresses under a contract involving $1,000 or more for the construction, execution, repair, remodeling or improvement of a public work or building or for the furnishing of supplies or materials, regardless of whether proposals for the contract are required to

be advertised by law, the municipality, from time to time, shall grant to the contractor an estimate of the amount and proportionate value of the work done, which entitles the contractor to receive the amount of the estimate, less the retainage, from the proper fund. The retainage shall be an amount equal to not more than 5% of the estimate until 50% of the work has been completed. At 50% completion, further partial payments shall be made in full to the contractor and no additional amounts may be retained unless the architect or engineer certifies that the job is not proceeding satisfactorily, but amounts previously retained shall not be paid to the contractor. At 50% completion or any time after 50% completion when the progress of the work is not satisfactory, additional amounts may be retained but the total retainage may not be more than 10% of the value of the work completed."

Final payment, including the retainer, shall be made at the final acceptance of the work. Compliance with the following portion of Section 66.0901(9)(b), shall be provided at the discretion of the Utility Engineer.

"Upon substantial completion of the work, an amount retained may be paid to the contractor. When the work has been substantially completed except for work which cannot be completed because of weather conditions, lack of materials or other reasons which in the judgment of the municipality are valid reasons for noncompletion, the municipality may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the work still to be completed or may pay out the entire amount retained and receive from the contractor guarantees in the form of a bond or other collateral sufficient to ensure completion of the job. For the purposes of this section, estimates may include any fabricated or manufactured materials and components specified, previously paid for by the contractor and delivered to the work or properly stored and suitable for incorporation in the work embraced in the contract. "

V. MATERIALS - GENERAL

In accordance with Utility purchasing policy, the Contractor is requested to use American products in the performance of the contract whenever the quality and the price are comparable with other goods.

VI. WELL ABANDONMENT

A. GENERAL

1. The Contractor shall file one acceptable well abandonment report (Form 3300-005) with the Department of Natural Resources within 30 days after the well has been permanently abandoned. Provide two copies of the report to the Engineer.

2. Remove pump motor, piping, pump and pump base

3. Televise well

3. Abandon per NR 811.13 (attached) with:
   a. Chlorinated pea gravel from 1846' to 1035', sounding every 50' to prevent bridging
   b. Cement plug (40') from 1035' to 995'
   c. Chlorinated pea gravel from 995' to 625', sounding every 50' to prevent bridging
   d. Sand cement grout from 625' to surface with tremie pipe

4. The contractor may use an alternate filling method only if he obtains approval from the owner and the Department of Natural Resources. The WDNR approval shall be in writing specific to the well to be abandoned and addressed to the owner.

5. The contractor shall restore any areas disturbed to their original condition.

VII. CONSTRUCTION DETAILS

A. COMPLYING WITH SPECIFICATIONS

The Contractor shall comply with the specifications and ably perform all operations to the extent that the first-class work will be obtained. A representative of the Oak Creek Water & Sewer Utility will inspect the work as it progresses to determine full compliance with the specifications. The Inspector shall notify the Utility Engineer of any noncompliance and have authority to stop any work not being performed in accordance with the specifications, in order that an Engineer may investigate such noncompliance.

Any work performed after the work has been ordered stopped by the Inspector shall not be considered as work performed under the contract, and consequently will not be accepted by the Utility nor allowed in any monthly or final payment until corrected to the satisfaction of the Utility Engineer.

The "Standard Specifications for Sewer and Water Construction in Wisconsin", (herein referred to as The Standard Specifications), shall apply for all sewer and water main construction unless otherwise noted in these Detail Specifications or on the construction plans. The Highway and Structure Construction - Standard Specifications Department of Transportation, Division of Highways, State of Wisconsin and Supplemental Specifications (herein referred to as the State Specifications), shall apply for pavement restoration. The MUTCD and State Specifications shall apply to all traffic control.

B. MATERIAL ENCOUNTERED

No variation from the price named in the proposal will be made or allowed whether the material through which excavations must be made are hard or soft, and wet or dry. It is the Contractor's responsibility to determine for himself the character, nature, type and condition of materials likely to be encountered in the proposed work. The submission of a proposal for the work herein shall in itself be accepted as evidence that the Contractor has examined the site of all work, made borings, investigations and studies of all conditions and provided for all such conditions in his proposal.

Any and all necessary dewatering shall be in accordance with Chapter 2.2.13 of the Standard Specifications.

Contractor is responsible to reconnect existing field tiles that may be encountered during excavation. Existing tiles must be repaired and connected to a storm sewer or have positive outfall provided.

C. EROSION CONTROL AND GROUND COVER

Pursuant to City of Oak Creek Code, construction activities are required to comply with erosion control and ground cover requirements. For public works construction, specifically, the following construction activity requirements are applicable.

1. Those involving grading, removal of protective ground cover or vegetation, excavation, landfilling or other land disturbing activity affecting a surface area of 4,000 square feet or more;

2. Those involving excavation or filling or a combination of excavation and filling affecting 400 cubic yards or more of dirt, sand or other excavation or fill material;

3. Those involving street, highway, road, or bridge construction, enlargement, relocation or reconstruction;

4. Those involving the laying, repairing, replacing or enlarging of an underground pipe facility for a distance of 300' or more.

To address the requirements, the Contractor shall provide for the implementation of the control measures as may be specified on the construction plans and in these Detail Specifications.

D. DISTRIBUTION OF EXCESS EXCAVATED MATERIAL

The disposal of all surplus excavated materials shall be the responsibility of the Contractor, shall be at the Contractor's expense and if disposed of within the limits of the City of Oak Creek, shall comply with the following regulations. The Contractor prior to the start of construction shall indicate the location at which the surplus excavated material will be disposed of.

The placement of fill on private lands located in the City of Oak Creek is under City regulation, in accordance with the Municipal Code. The disposal of surplus excavated materials, including that derived from public works construction, is subject to compliance with this code. Basically, the Code provides for only the following forms of landfilling:

1. When the fill comprises of less than 1,000 cubic yards and is to be placed on a parcel of land of one acre or less in size. An application shall be made to the City Engineer for a permit, on a one-time-only basis. A $300.00 fee, plus an applicable erosion control permit and fee, is required.

2. Shoreline erosion control, whereby a license must be applied for and granted prior to landfilling activity being undertaken.

3. On a site, where fill may be needed in conjunction with building construction and where a building permit is in effect.

4. On City-owned property, subject to plans approved by the Common Council.

5. On a site where a landfill license is in effect.

VIII. RESTORATION IN THE WORK AREA

A. GENERAL

Upon completion of the utility installation, the Contractor shall remove all debris, surplus materials, and return the surface of the street or right-of-way and all other places disturbed or affected by the work to a condition at least comparable to that existing before starting the work and shall maintain it in such condition until its final completion and acceptance. The restoration shall include seeding or sodding grass areas and graveling or pavement repair of streets and driveways. Final payment for any installation will not be made until this restoration has been completed and accepted.

Acceptance or approval of any excavation work by the Utility Engineer shall not prevent the City from asserting a claim against the Contractor and his surety under the surety bond required hereunder for incomplete or defective work if discovered within 12 months from the acceptance of the completed work. The Utility Engineer's presence during the performance of any excavation work shall not relieve the Contractor of his responsibilities hereunder.

Cost of all restoration shall be included in the bid price for the water main installation. It shall be the duty of the Contractor to guarantee and maintain the site of the excavation for one year after restoring it to its original condition.

Included in the restoration shall be any damage to drainage ways due to discharge of trench waters. The Contractor is required to implement erosion control techniques.

B. RESTORATION OF GRAVELED SURFACES

The Contractor shall be required to restore all graveled surfaces to a drivable condition, which were removed for the underground installation with traffic bound granular materials. Materials and installation shall conform to Section 304 of the State Specifications.

C. RESTORATION OF LAWNS

The contractor shall repair, reseed, resod and/or replanted all established lawns damaged during the course of construction to a condition equal to or better than the condition at the commencement of his work in accordance with Type “C", Lawn Replacement of Chapter 2.7.4 of the Standard Specifications, as indicated on the construction plans or as directed by the Engineer. Mulching under Type "C" Replacement shall be in accordance with Section 627 of the State Specifications.

Replace cover by means of seeding with grass seed at the rate of not less than six pounds per thousand square feet on leveled topsoil.

D. UTILITY’S RIGHT TO RESTORE SURFACE

If the Contractor shall have failed to restore the surface to its specified condition upon the expiration of the time fixed by such contract or shall otherwise have failed to complete the excavation work covered by the contract, the Utility Engineer, if he deems it advisable, shall have the right to use Utility forces to do all the work necessary to restore the work area. The Contractor shall be liable for the actual cost thereof plus 25% for general overhead and administrative expenses. Compensation for the amount of such costs shall become due to the Utility and credit for such amount shall be applied against any funds that may be due to the Contractor. If final payment under the contract has already been made, the Contractor shall be directly billed for the amount due. As a last resort, the Utility will enforce compensation for costs it has incurred through collection from the Contractor's surety.

IX. CLEAN-UP AND FINAL INSPECTION

The Contractor shall have thorough and systematic clean-up operations follow closely behind the construction work. He shall at his own expense, remove and properly dispose of all water, dirt, rubbish, or any other foreign substances. Any defects of any nature whatsoever shall be promptly corrected at his own expense. Notice to begin final cleaning and repairs if such is needed will be given by the Engineer and shall be complied with by the Contractor. The Engineer will make an inspection of the work during the progress of final cleaning and repairing and any work so inspected shall be kept clean by the Contractor until the final inspection by the Engineer and the acceptance of the entire work. When the Contractor has finally cleaned and repaired the work, he shall notify the Engineer that he is ready for a final inspection and the Engineer will thereupon inspect the work. If the work is not found satisfactory, the Engineer may require further cleaning and repairing and when these are completed will again inspect the work. In no case will the final payment be made until the Contractor has complied with all the requirements set forth and the Engineer has made his final inspection of the entire work and is satisfied that the entire work is properly and satisfactorily constructed in accordance with the plans and specifications and contract, and that such work is ready for his final inspection and acceptance by the Utility (see Section 1.5.2 - of the Standard Specifications).

Note: The routing of all punch lists on items that remain needing attention shall be between the Engineer and the Contractor or his authorized project coordinator.

X. PROTECTION AND RESTORATION OF PROPERTY

A. UNDERGROUND

The Contractor shall protect, repair and restore any underground drain lines, conduit, culverts, etc., encountered in the progress of the work and shall be responsible for the protection and replacing of any utilities encountered or damaged during construction, at no cost to the Utility. The Contractor shall also restore any septic system drain lines or field tiles encountered in the progress of the work and shall use watertight joints on the replaced drain lines when directed to do so by the Engineer. The cost of this work shall be included in the unit bid and contract price for water main, and no extra payment will be made therefore.

B. SURVEY CORNERS AND ABOVE SURFACE OBSTRUCTIONS

The Contractor while on this job, will be solely responsible for the protection and/or replacement of all survey corners which exist throughout the area. These corners will be located and marked by the Engineering Department of the City of Oak Creek upon request by the Contractor prior to commencing his work. Any such damaged corners shall be replaced by the City and the amount deducted from the contract payment.

The Contractor shall protect, repair and replace any mailboxes, fences, signs or other structures damaged or displaced in the progress of the work.

XI. TIME OF COMPLETION

The starting date for work under this contract shall be at the discretion of the Contractor, subject to the following:

A. Preconstruction meeting as arranged by the Utility Engineer.

B. Issuance of the Notice to Proceed by the Utility Engineer.

C. Once work has commenced on Well No.1, it shall not last longer than 10 working days and be completed no later than October 7, 2011.

D. Once work has commenced on Well No.4, it shall not last longer than 20 working days and be completed no later than November 11, 2011.

It shall be understood by the Contractor that the date of starting construction and the date of completion of the work to be done hereunder are ESSENTIAL CONDITIONS of this contract, and it is further understood and agreed that the work shall be commenced as aforementioned.

The Contractor agrees that the work shall be pursued regularly, diligently, and uninterruptedly at such rate of progress as will assure completion of the work on the dates as stated in the proposal.

The Contractor agrees that the work shall be completed in conjunction with the Milwaukee County paving project of S. 13th Street. All work will also be coordinated with Milwaukee County.

XII. EXTENSIONS OF TIME

Extensions of time may be allowed by the Utility for reasonable delays due exclusively to causes beyond the control and without the fault of the Contractor including but not restricted to owner purchased material delivery delays, extra work or supplemental contract work added to the original contract, fires, strikes, unusual floods, accidents and unreasonable delays in receiving ordered materials and equipment. It should be understood by the Contractor that rain events occur and fluctuate from year to year and shall not be considered cause for a time extensions.

All requests for extensions of time shall be presented in writing to the Utility Engineer within ten calendar days after the occurrence of the claimed delay, accompanied by all necessary supporting data, and, if based on valid grounds will be considered by the Utility and such extensions of time shall be granted as may seem to be fair and reasonable. However, no claims will be considered when based on delays caused by conditions existing at the time bids were received and of which the Contractor might be reasonably expected to have knowledge at the time of bidding, or upon delays caused by failure on the part of the Contractor to anticipate properly the requirements of the work contracted for as to the securing of needed materials, labor and equipment.

XIII. LIQUIDATED DAMAGES

When the work embraced in the contract is not completed within the time stated in the Detail Specifications for the water main construction, and/or for the entire work, including testing, flushing, and surface restoration, as stated, and within such extra time as may be allowed by extensions, the Contractor shall pay to the Oak Creek Water & Sewer Utility the following sum for each and every calendar day that the time consumed in final completion exceeds the time allowed therefore, plus the engineering and inspection costs incurred during the time used beyond the allowed time:

Original Contract Amount		**Daily Charge**
From More Than	To and Including	Calendar Day
$0	$50,000	$200.00
$50,000	$100,000	$250.00
$100,000	$300,000	$350.00
$300,000	$500,000	$500.00
$500,000	$1,000,000	$700.00
$1,000,000	$1,500,000	$1,000.00
$1,500,000	$2,000,000	$1,350.00
$2,000,000	$2,500,000	$1,400.00
$2,500,000	---	$1,550.00

Completion of the work under this contract on the specified time schedules is necessary and vital to the Utility. Failure to complete the project on or before specified working days or calendar dates will result in loss of revenues, loss of timely use of the proposed facilities, delays, and possibly inflated costs for related or subsequent improvement installations, detrimental to the economic development of the City and Utility, as well as the additional cost of engineering expenses which will be required to be paid by the Utility.

Said sum in view of the difficulty of accurately ascertaining the loss which the Utility will suffer by reason of delay in completion is hereby fixed and agreed by the parties hereto as the liquidated damages that will be suffered by reason of such delay, and not as a penalty. The Utility will deduct and retain out of the monies which may become due hereunder, the amount of any such liquidated damages and in case the amount which may become due hereunder shall be less than the amount of liquidated damages suffered, the Contractor shall be liable to pay the difference upon demand by the Utility.

XIV. PROPOSAL ITEMS

Special note to the bidder and successful contractor

Contractor will be allowed to work only while there is an Inspector at the site at any or all times and the Contractor must notify the Utility Engineer prior to commencing with any of the work specified for this project (i.e., excavation, shoring, sheathing, bedding, laying pipe, backfilling, clean-up, etc.) An Inspector will be provided to the Contractor by the Utility at no cost to the Contractor; except that inspection time shall be charged to the Contractor in addition to the specified liquidated damages after he has exceeded his time of completion (see Instructions to Bidders). If the Contractor requests to work on Sundays or declared Utility holidays, an Inspector will be provided but the Contractor must pay for the Inspector's wages for such work. A list of official holidays can be obtained from the City of Oak Creek Engineering Department.

The bid price for each bid item shall include the furnishings of all materials, tools, labor, etc. It shall include saw cutting pavement full depth, execution disposition of surplus material, pipe laying, backfilling, sheeting, shoring, tunneling, auguring, dewatering, furnishing and installing of fittings, connecting to existing water mains disturbed or damaged by the Contractor's operation and clean-up, all as specified. Traffic control, surface restoration and any other incidental items necessary shall be incorporated into the various bid items. The item numbers referred to below correspond to the item number in the proposal. Contractor shall refer to the items below for details of the work included.


Location Map
Well No. 1
8520 S. Knights Place
Well No. 4
9750 S. 20th Street
COLLEGE AVENUE
RAWSON AVENUE
DREXEL AVENUE
PUETZ ROAD
RYAN ROAD
OAKWOOD ROAD
ELM ROAD
COUNTY LINE ROAD
STH. 100
I-94
U.S.H.41
S.T.H. 38
27TH STREET
13TH STREET
HOWELL AVENUE
SHEPARD AVENUE
NICHOLSON ROAD
PENNSYLVANIA AVENUE
15TH AVENUE
5TH AVE.
CHICAGO ROAD

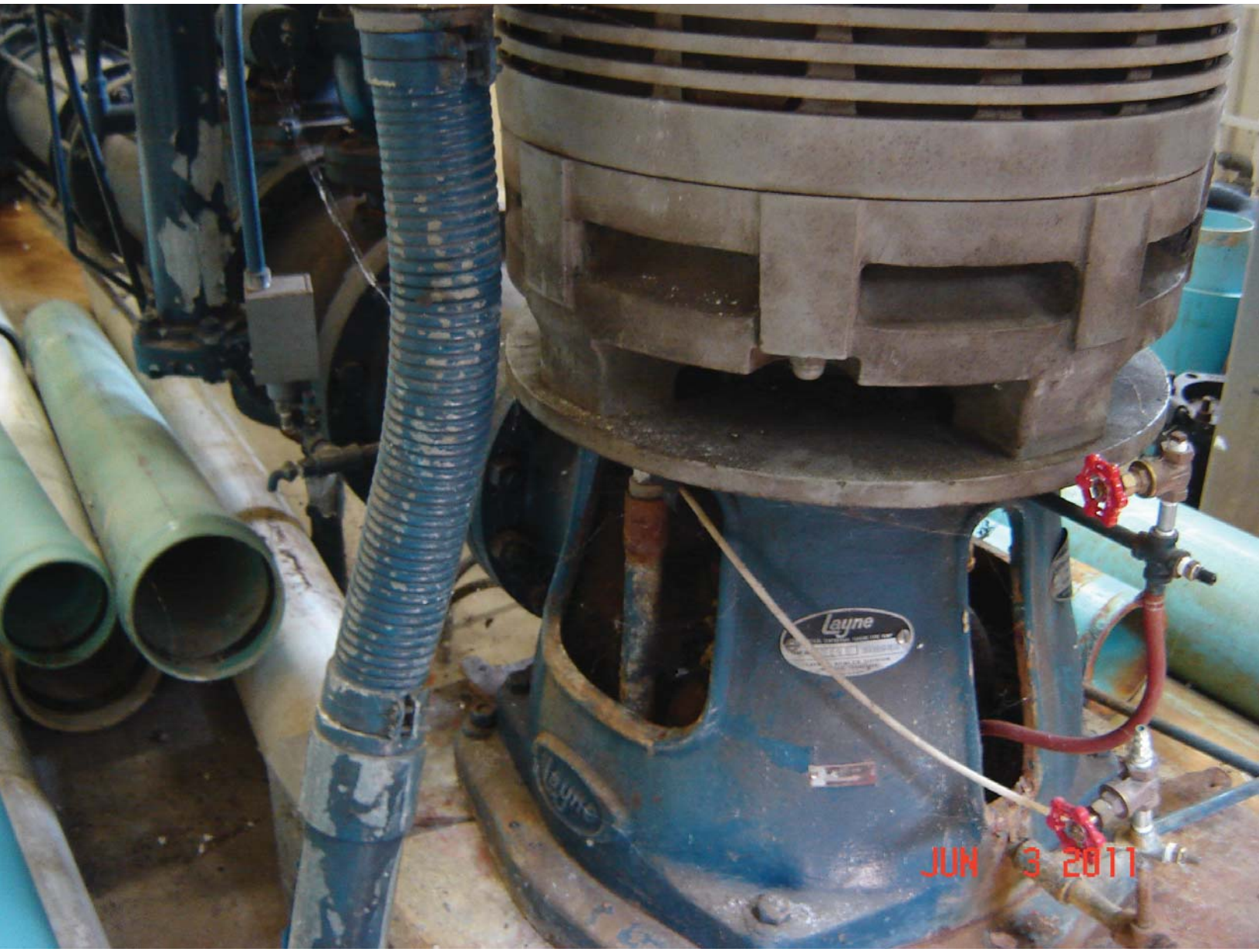
Well No. 1

Well No. 1


Well No. 1
DANGER
JUN 3 2011


Well No. 4
HOLLOSHAFT
JUN 3 2011

Well No. 4



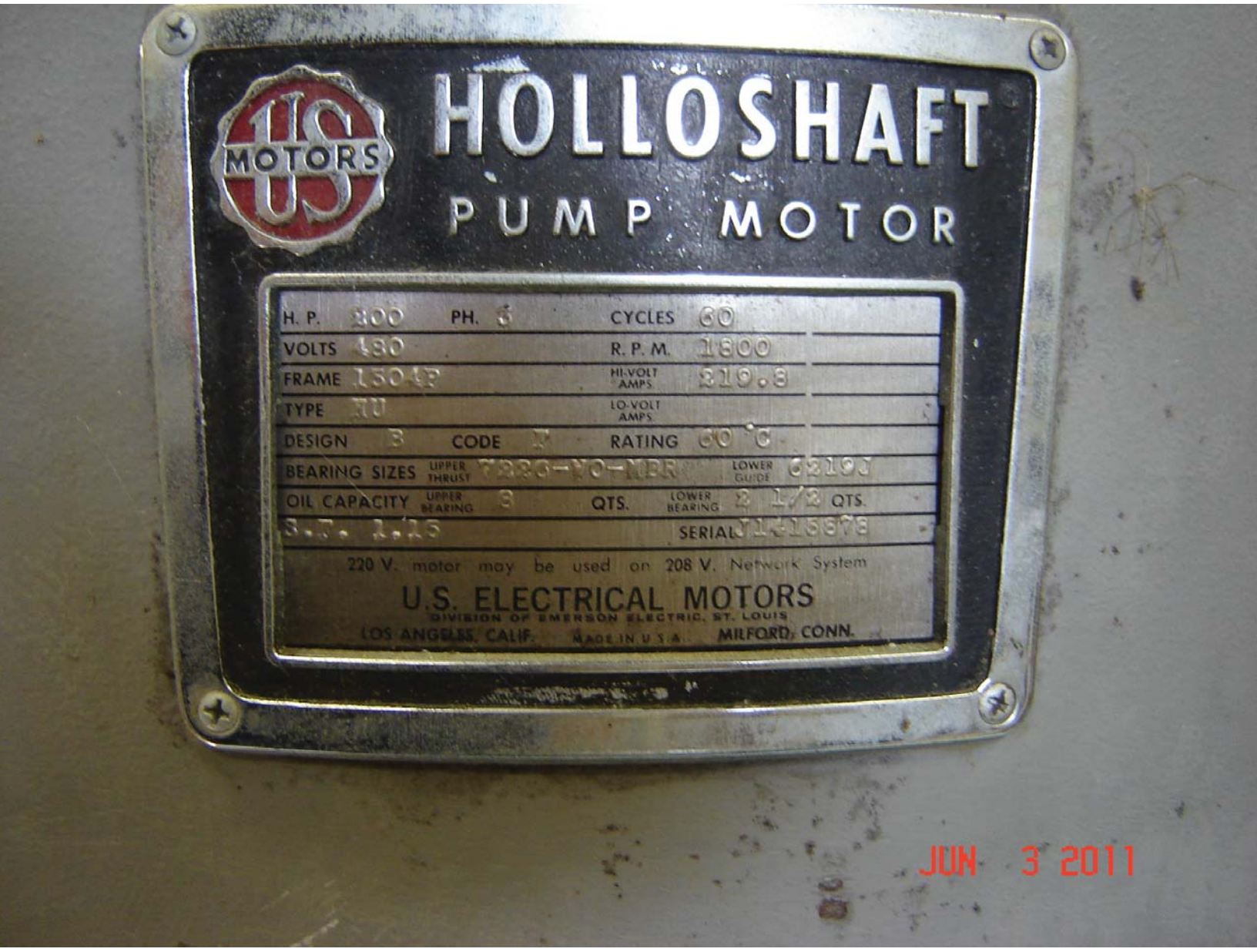
Well No. 4

Well No. 4

Well No. 4


Well No. 4
JUN 3 2011

Well No. 4


US MOTORS
HOLLOSHAFT
PUMP MOTOR
H. P. 300 PH. 3 CYCLES 60
VOLTS 480 R. P. M. 1800
FRAME 1504P HI-VOLT AMPS 210.8
TYPE TU LO-VOLT AMPS
DESIGN B CODE F RATING 60 °C
BEARING SIZES UPPER THRUST 7330-NO-NBR LOWER GUIDE 6210J
OIL CAPACITY UPPER BEARING 3 QTS. LOWER BEARING 2 1/2 QTS.
S.F. 1.15 SERIAL
220 V. motor may be used on 208 V. Network System
U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC, ST. LOUIS
LOS ANGELES, CALIF. MADE IN U.S.A. MILFORD, CONN.
JUN 3 2011

Well No. 4
Right Angle Drive Engine Base

WISCONSIN UNIQUE WELL NUMBER
SOURCE: SWAP PROJECT KEYED **BG460**

State of Wi-Private Water Systems-DG/2
Department Of Natural Resources, Box 7921
Madison, WI 53707

Form 3300-77A
(Rev 12/00)

Depth **1846** FT

Property Owner: **CITY OF OAK CREEK** Telephone Number: - -

Mailing Address: 8640 S. HOWELL AV.

City: OAK CREEK | State: WI | Zip Code: 53154

County of Well Location: 41 MILWAUKEE | Co Well Permit No W SE | Well Completion Date: June 1, 1967

Well Constructor: LAYNE NORTHWEST | License #: 589 | Facility ID (Public): 24101726

Address: 6005 WEST MARTIN AV. | Public Well Plan Approval#:

City: MILWAUKEE | State: WI | Zip Code: 53213 | Date Of Approval:

Hicap Permanent Well #: 82744 | Common Well #: | 7.3 gpm/ft

1. Well Location
C T=Town C=City V=Village of OAK CREEK | Fire#:
Street Address or Road Name and Number:
Subdivision Name: | Lot#: | Block #:
Gov't Lot or **NW** 1/4 of **NE** 1/4 of Section **30** T **5** N R **22** E
Latitude Deg. Min.
Longitude Deg Min.

2. Well Type **1** 1=New 2=Replacement 3=Reconstruction (See item 12 below)
of previous unique well # _____ constructed in _____
Reason for replaced or reconstructed Well?

Lat/Long Method:

3. Well Serves # of homes and or (eg: barn, restaurant, church, school, industry, etc.)
M M=Munic O=OTM N=NonCom P=Private Z=Other X=NonPot A=Anode L=Loop H=Drillhole

High Capacity: Well? Y Property? N

1 1=Drilled 2=Driven Point 3=Jetted 4=Other

4. Is the well located upslope or sideslope and not downslope from any contamination sources, including those on neighboring properties? N

Well located in floodplain? N

Distance in feet from well to nearest: (including proposed)

1. Landfill
2. Building Overhang
3. 1=Septic 2= Holding Tank
4. Sewage Absorption Unit
5. Nonconforming Pit
6. Buried Home Heating Oil Tank
7. Buried Petroleum Tank
8. 1=Shoreline 2= Swimming Pool
9. Downspout/ Yard Hydrant
10. Privy
11. Foundation Drain to Clearwater
12. Foundation Drain to Sewer
13. Building Drain 1=Cast Iron or Plastic 2=Other
14. Building Sewer 1=Gravity 2=Pressure 1=Cast Iron or Plastic 2=Other
15. Collector Sewer: ___ units ___ in . diam.
16. Clearwater Sump
17. Wastewater Sump
18. Paved Animal Barn Pen
19. Animal Yard or Shelter
20. Silo
21. Barn Gutter
22. Manure Pipe 1=Gravity 2=Pressure 1=Cast iron or Plastic 2=Other
23. Other manure Storage
24. Ditch
25. Other NR 812 Waste Source

5. Drillhole Dimensions and Construction Method

Dia.(in.)	From (ft)	To (ft)
26.0	surface	197
23.0	197	605
19.0	605	1117
15.0	111	1846

Upper Enlarged Drillhole — Lower Open Bedrock
-- 1. Rotary - Mud Circulation
-- 2. Rotary - Air
-- 3. Rotary - Air and Foam
-- 4. Drill-Through Casing Hammer
-- 5. Reverse Rotary
-- 6. Cable-tool Bit _____ in. dia
-- 7. Temp. Outer Casing _____ in. dia. _____ depth ft. Removed ?
Other

6. Casing Liner Screen Material, Weight, Specification Manufacturer & Method of Assembly

Dia. (in.)		From (ft.)	To (ft.)
26.0	STEEL	surface	197
20.0	PRIME STEEL	0	605
16.0	PRIME STEEL	948	1117

Dia.(in.)	Screen type, material & slot size	From	To

7. Grout or Other Sealing Material

Method / Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
NEAT CEMENT	surface		

8. Geology Type, Caving/Noncaving, Color, Hardness, etc

Geology Codes		From (ft.)	To (ft.)
	DRIFT	0	195
L	SILURIAN	195	380
H	MAQUOKETA	380	595
L	GALENE PLATTEVILLE	595	875
N	ST. PETER	875	1015
N	EAU CLAIRE	1015	1095
N	MT. SIMON	1095	1846

9. Static Water Level
175.0 feet B ground surface A=Above B=Below

10. Pump Test
Pumping level 380.5ft. below surface
Pumping at 1506GP 24.0Hrs

11. Well Is: A Grade
24 in. A=Above B=Below
Developed? N
Disinfected? Y
Capped? Y

12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property? N
If no, explain

13. Initials of Well Constructor or Supervisory Driller | Date Signed

NR 811.13 Abandonment of wells. (1) CRITERIA FOR ABANDONMENT. The owner shall permanently abandon all unused permanent wells, test wells, and monitoring wells for permanent wells or test wells unless the department agrees to the delayed abandonment of the well as part of an extended well abandonment agreement. Wells shall be abandoned in accordance with the following criteria:

(a) Test wells and monitoring wells constructed as part of the test well or permanent well construction and test pumping evaluation processes shall be permanently abandoned prior to placing the permanent well in service unless the department approves the wells to remain in service in accordance with the requirements of s. NR 811.12 (21).

(b) Permanent wells with one or more water quality parameters exceeding a primary drinking water standard contained in ch. NR 809 shall be permanently abandoned unless department approval is obtained to continue the well in service and only if department approved water treatment is installed to provide point−of−entry water quality compliance or an extended well abandonment agreement is obtained from the department in conformance with s. NR 810.22. The department shall be contacted and written department approval shall be obtained for the abandonment of contaminated wells where the department deems it necessary to require more stringent abandonment requirements in order to protect lower aquifers from additional contamination.

(c) The department may allow existing permanent wells that are not constructed in accordance with the minimum requirements of this chapter to remain in service if the well water quality continues to meet all of the primary drinking water standards contained in ch. NR 809 or if department−approved water treatment is installed to provide point−of−entry water quality compliance. All ungrouted municipal wells shall be immediately reconstructed by grouting in a liner casing to a depth approved by the department or the well shall be taken out of service and permanently abandoned.

(2) QUALIFICATIONS OF PERSONS ABANDONING WELLS. All wells shall be permanently abandoned by persons who meet the following qualifications:

(a) For wells located within a municipal water system, the person shall be a licensed well driller, a licensed pump installer, a water system operator certified under s. 281.17 (3), Stats., working for the municipal water system, or a person under the supervision of a licensed well driller, licensed pump installer, or a water system operator certified under s. 281.17 (3), Stats., working for the municipal water system.

(b) For wells not located within a municipal water system, the person shall be a licensed well driller, a licensed pump installer or a person under the supervision of a licensed well driller or licensed pump installer.

(3) TEMPORARY ABANDONMENT. When a well is temporarily removed from service, the top of the well casing shall be sealed with a watertight threaded or welded cap. The well shall be permanently abandoned no later than 5 years after the well is temporarily abandoned. The department may enter into a written extended well abandonment agreement with the well owner in accordance with s. NR 810.22 to allow an unused or standby well to remain operational for more than 5 years after the well is temporarily abandoned.

(4) PRE−ABANDONMENT REQUIREMENTS. (a) All debris, pumps, piping, ungrouted liner pipe that can be removed, inner ungrouted casings and well screens, and any other obstruction known to be in the well shall be removed if possible before the well is permanently abandoned.

(b) Well casing pipe may be removed from a well to be abandoned if the end of the pipe remains in the well sealing material as the pipe is pulled from the well.

(c) Wells that have uncertain construction details shall be televised prior to abandonment if required by the department to allow for a proper well abandonment.

(d) All casings and liner pipes located within ungrouted annular spaces and that cannot be removed from a well prior to abandonment shall either be shot or ripped in place prior to abandonment of the well. The following minimum requirements shall be met:

1. The casing shall either be perforated using projectiles fired perpendicular and completely through the casing or liner pipe or shall be vertically ripped.

2. There shall be 4 shots or one rip per each 5 feet of casing.

3. Each shot shall be a minimum of 0.4 inches in diameter. Each rip shall have a minimum width of 0.25 inches and a minimum length of 12 inches.

4. Each successive shot or rip shall be rotated by 90 degrees.

5. The portion of the well with a casing or liner pipe to be shot or ripped shall be completely filled inside and outside by pressure grouting with neat cement from the inside out and from the bottom up in accordance with s. NR 811.12 (14).

(5) ABANDONMENT MATERIALS AND LIMITATIONS. All wells shall be abandoned using the following materials:

(a) Neat cement grout, sand−cement grout, or concrete meeting the specifications in s. NR 811.12 (14) (a). Powdered bentonite shall not be added to neat cement grout.

(b) Department approved slow−hydrating bentonite chips with the following limitations:

1. The well diameter shall be 4 inches or larger.

2. The depth of chip placement shall not exceed 500 feet.

3. The depth of standing water in the well shall not exceed 350 feet.

4. Fine particles and dust contained in the bags of bentonite chips shall be prevented from entering the well by allowing the chips to tumble under their own weight down a coarse mesh screen into the well. The chips shall be poured across the screen and into the well at a rate not to exceed emptying the bag in 3 minutes.

5. The depth of chips shall be monitored a minimum of once every calculated 50 feet to monitor for bridging of chips. Any chip bridges shall be removed.

6. Water from a clean, known bacteriologically safe source shall be poured down the well on a continuous basis as the chips are being introduced into the well in order to hydrate all of the chips. Water shall be continuously introduced until the water level rises to the top of the well casing and stays there.

(c) Pea gravel that is round, washed to be free of sand and other fine materials, disinfected and having a maximum diameter of 0.375 inches, may be poured into a well without the use of a conductor pipe if the well is sounded at 50−foot intervals to ensure that bridging of the gravel does not occur.

(6) GENERAL ABANDONMENT REQUIREMENTS. Abandonment methods shall meet the following requirements:

(a) All wells shall be filled from the bottom of the well up to the ground surface using approved materials unless it is necessary to terminate the abandonment below the ground surface to accommodate construction over the well. Well casings and abandonment materials may be terminated as much as 3 feet below the ground surface or to a depth below any future building foundation to accommodate construction over the well.

(b) The bottom end of the conductor pipe shall be submerged in the sealing material at all times.

(c) Sealing materials shall be placed by use of a conductor pipe or by means of a dump bailer except when approved bentonite chips or pea gravel are used. Bentonite chips may be poured into the well in accordance with sub. (5) (b). Pea gravel may be poured

into the well in accordance with sub. (5) (c). Conductor piping used for pressure methods shall meet the requirements of s. NR 811.12 (14) (b) 8. for well grouting. Conductor piping for non−pressure methods shall be one of the following:

1. Metal pipe.

2. Rubber−covered hose reinforced with braided fiber or steel and rated at least 300 psi.

3. For use at depths less than 100 feet, thermoplastic pipe rated for at least 100 psi, including any of the following:

a. Polyvinyl chloride (PVC).

b. Chlorinated polyvinyl chloride (CPVC).

c. Polyethylene (PE).

d. Polybutylene (PB).

e. Acrylonitrile butadiene styrene (ABS).

(7) SPECIAL ABANDONMENT REQUIREMENTS. To permanently abandon a well, the owner shall have a person who meets the qualifications of sub. (2) fill and seal the well to prevent it from acting as a channel for the vertical movement of contamination or groundwater, by the following applicable method:

(a) *Monitoring wells.* Monitoring wells constructed to ch. NR 141 requirements shall be permanently abandoned in accordance with ch. NR 141 requirements.

(b) *Flowing wells.* For flowing wells, the flow shall be confined and the well shall be filled in accordance with par. (c), (d), or (e) or sealed in accordance with sub. (6) using neat cement grout applied by a pressure method.

(c) *Drift or other unconsolidated wells*. For drift or other unconsolidated wells, the well shall be completely filled from the bottom up with concrete, sand cement grout, neat cement, or approved slow−hydrating bentonite chips. Sealing materials shall meet the requirements of sub. (5). An attempt shall be made to remove any inner ungrouted well casings and screens from gravel−pack wells prior to filling. If the well casings and screens cannot be removed, an attempt shall be made to remove as much gravel pack as possible using air or water or both jetting techniques and the interior and exterior of the ungrouted casings and screens shall then be sealed from the bottom up in accordance with sub. (6) using neat cement applied by a pressure method.

(d) *Bedrock formation wells.* Wells completed in bedrock formations shall be completely filled from the bottom up with concrete, sand−cement, neat cement, or approved slow−hydrating bentonite chips. Sealing materials shall meet the requirements of sub. (5). As an alternative for uncontaminated bedrock wells deeper than 250 feet or for wells cased and grouted through the Maquoketa Shale formation, chlorinated, sand−free pea gravel may be used to fill the open drillhole from the bottom of the well up to the 250−foot depth or to a depth 20 feet below the bottom of the protective casing, whichever is deeper. Additionally, minimum 40−foot thick plugs of sealing materials meeting the requirements of sub. (5) shall be centered at the top of the uppermost Cambrian Sandstone formation and at the top of the Eau Claire formation where these formations are open in the drillhole. The department shall be contacted for specific abandonment requirements where the top or the bottom of the Maquoketa Shale formation is exposed in the open drillhole.

(e) *Dug and bored wells.* The cover and the top curbing or concrete wall shall be removed to a depth of 5 feet below grade for dug or bored wells. Concrete or rock curbing materials may be caved into the drillhole as the well is being sealed only if performed in a manner to prevent bridging.

1. If constructed in unconsolidated formations, the well shall be filled from the bottom up using clean clay or silt, clean native soil, concrete, sand−cement, neat cement, or approved slow−hydrating bentonite chips or a combination of the above. Sealing materials shall meet the requirements of sub. (5).

2. If constructed partially or completely into bedrock, the well shall be filled from the bottom up to the ground surface with concrete, sand−cement, neat cement, approved slow−hydrating bentonite chips or a combination of the above except that if bedrock is encountered below the ground surface, these materials shall be placed to a point at least 2 feet above the top of the bedrock. The remainder of the well may be abandoned with any of the materials listed in subd. 1. Sealing materials shall meet the requirements of sub. (5).

3. Dug or bored wells 18 inches in diameter and smaller shall be filled by means of a conductor pipe, or tremie pipe, except when slow−hydrating bentonite chips are used as specified in sub. (5) (b) or when clean clay or silt or clean native soil is used and the dug or bored well is 25 feet deep or less.

(8) ABANDONMENT REPORTS. The person who abandoned the well shall file an abandonment report with the department, on forms provided by the department, within 30 days after the completion of the well abandonment. The report shall be completely filled out in accordance with the information known and shall include complete information on the depths and types of sealing materials used. Well drillers and pump installers shall report to the department any unused or unabandoned wells on the property of which they have knowledge.

History: CR 09−073: cr. Register November 2010 No. 659, eff. 12−1−10.

NR 811.14 Special requirements for wells developed in unconsolidated formations. (1) CASED AND GROUTED DEPTH. The cased and grouted depth for screened wells in unconsolidated formations shall be dependent on the controlling geologic conditions. Where practical, the grouted casing shall extend to at least 5 feet below the normal pumping water level and to within 5 feet of the top of the screen unless the grout depth is at least 60 feet.

(2) TREATMENT. Additional treatment shall be provided for wells with less than 60 feet of grouted well casing.

(a) Continuous disinfection shall be provided for wells with less than 60 feet of grouted well casing.

(b) Additional detention time and treatment shall be provided when the department determines that additional protection is necessary.

(c) Wells with less than 30 feet of grouted well casing shall be provided with treatment meeting the groundwater under the direct influence of surface water requirements found in ss. NR 810.30, 810.31, 810.33, 810.34, 810.35, 810.36, 810.37, 810.38, 810.39 and 810.40.

(3) CASING AND GROUTING THROUGH CLAY OR HARDPAN. If clay or hardpan is encountered above the formation to be developed, the protective casing and grout shall extend through the materials, but any outer casing shall be withdrawn at least 5 feet above the clay or hardpan during grouting.

(4) GRAVEL PACK. If the well is gravel packed, the gravel shall be acid resistant and free of foreign material, properly sized, washed and disinfected prior to or during placement.

(5) GROUT SEAL. A sand or bentonite seal to prevent leakage of grout into the gravel pack or screen shall be provided. The seal shall be no more than 2 feet thick.

(6) GRAVEL REFILL AND OBSERVATION PIPES. Gravel refill pipes and observation pipes, when used, shall be surrounded by a minimum of 1.5 inches of grout if installed in the grouted annular opening. Observation pipes installed between the inner and the protective casing may be plastic. Pipes shall be incorporated into the concrete pump foundation to a point at least 4 inches above the floor, and shall terminate with a threaded cap at least 12 inches above the pumphouse floor.

History: CR 09−073: cr. Register November 2010 No. 659, eff. 12−1−10.

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing

Form 3300-005 (R 4/08)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ **Verification Only of Fill and Seal**

Route to:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other: _____

1. Well Location Information

County | WI Unique Well # of Removed Well (__ __ __ __ __) | Hicap #

Lattitude / Longitude (Degrees and Minutes) | Method Code (see instructions)
__ __ ° __ __ . __ __ __ 'N
__ __ ° __ __ . __ __ __ 'W
__ __ __ __ __ __

¼ / ¼ | ¼ | Section | Township N | Range ☐ E ☐ W
or Gov't Lot #

Well Street Address

Well City, Village or Town | Well ZIP Code

Subdivision Name | Lot #

Reason For Removal From Service | WI Unique Well # of Replacement Well (__ __ __ __ __)

2. Facility / Owner Information

Facility Name

Facility ID (FID or PWS)

License/Permit/Monitoring #

Original Well Owner

Present Well Owner

Mailing Address of Present Owner

City of Present Owner | State | ZIP Code

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☐ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy)

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (specify): _____

Formation Type:
☐ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.)

Lower Drillhole Diameter (in.) | Casing Depth (ft.)

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)? | Depth to Water (feet)

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☐ N/A
Liner(s) removed?	☐ Yes	☐ No	☐ N/A
Screen removed?	☐ Yes	☐ No	☐ N/A
Casing left in place?	☐ Yes	☐ No	☐ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☐ N/A
Did sealing material rise to surface?	☐ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☐ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☐ N/A
If bentonite chips were used, were they hydrated with water from a known safe source?	☐ Yes	☐ No	☐ N/A

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☐ Other (Explain): _____

Sealing Materials
☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☐ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used To Fill Well / Drillhole

Material Used To Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
	Surface			

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing (mm/dd/yyyy)

Street or Route | Telephone Number ( )

City | State | ZIP Code | Signature of Person Doing Work | Date Signed

DNR Use Only

Date Received | Noted By

Comments

Instructions

Well Filling and Sealing

Wisconsin Administrative Code (NR811, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

1. Remove any pump, pump piping, debris or other obstacles that could interfere with the sealing operation.
2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

General Instructions: Fill out Well/Drillhole/Borehole Filling & Sealing Form 3300-005 as completely as possible for each well or borehole filled and sealed. Information should be provided for every box on the form where available. Sign each form. Please note that these forms are subject to change. (Personally identifiable information on these forms is not intended to be used for any other purpose.)

Verification Only of Fill and Seal: If you are only verifying that filling and sealing has previously occurred on a well and are NOT performing any filling and sealing work on the well, check the box near the top of the form. Complete Parts 1 and 2 of the form completely and any information you can provide in Parts 3, 4 and 5. You must provide comments in Part 6 as to the method used to verify both the filling and sealing of the well. Complete Part 7, excluding the date of Filling and Sealing. It will be implied that you did not do the filling and sealing work as stated in Part 7.

Route to: Check the appropriate routing box on the top of the form to assure proper routing to the DNR program requiring this well be filled and sealed. Mail the form and any attachments to the Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921.

If you do any work to fill or seal the well, you must complete this form as intended and do not check the Verification Only of Fill and Seal box.

(1) **WELL LOCATION INFORMATION**

WI Unique Well #: Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

Hicap #: If this was a high capacity well, enter the number assigned to the well by the Department.

Well Location: The well location can be determined by latitude and longitude coordinates in degrees and decimal minutes (to the thousandths, for example, latitude 43°04.347'N longitude 89°24.803'W) using a Global Positioning System (GPS) unit. If using GPS, check the method code for the GPS unit. The location can also be determined using Public Land Survey (Gov't Lot or ¼ ¼, ¼, Section, Township and Range).

Method Code: This field lists data collection method codes for latitude and longitude coordinates. This field must be entered if a latitude/longitude coordinate is entered.

GPS006 - Mapping or recreational grade GPS receiver with no differential correction and selective availability off
GPS007 - Mapping or recreational grade GPS receiver with no differential correction and selective availability on
GPS008 - GPS receiver grade and or differential correction procedures unknown

(2) **FACILITY / OWNER INFORMATION**

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

Facility ID: Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

License/Permit/Monitoring #: Fill in number assigned to facility by the Department. If unknown, leave blank.

Present Well Owner: Fill in the name, address, city, state and ZIP code of the present owner.

(3) **WELL/DRILLHOLE/BOREHOLE INFORMATION**

Original Construction Date: Fill in the original date of construction for the well or boring in mm/dd/yyyy format.

Depth to Water: Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

Date of Filling & Sealing: List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed.