

**ARIZONA DEPARTMENT OF WATER RESOURCES
WATER MANAGEMENT SUPPORT SECTION**

3550 N. Central Avenue
Phoenix, Arizona 85012

THIS AUTHORIZATION SHALL BE IN POSSESSION OF THE DRILLER DURING ALL DRILL OPERATIONS

WELL REGISTRATION NO: 55-585612

WR-427A

AUTHORIZED DRILLER: DRILLING SERVICES, INC.

LICENSE NO: 739

NOTICE OF INTENTION TO MODIFY A MONITOR WELL(S) HAS BEEN FILED WITH THE DEPARTMENT BY:

WELL OWNER: CITY OF TUCSON ENVIRONMENTAL SERVICES 100 N STONE ST 2ND FLOOR TUCSON, AZ 85701

THE WELL(S) IS/ARE TO BE LOCATED IN THE:

NW ¼ OF THE SW ¼ OF THE NE ¼ SECTION 14 TOWNSHIP 14 SOUTH RANGE 13 EAST

NO. OF WELLS IN THIS PROJECT: 1

ASSESSOR PARCEL NO: 116-20-138A

THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 11TH DAY OF AUGUST, 2010

Darlene Supta King
WATER MANAGEMENT SUPPORT

THE DRILLER MUST FILE A LOG OF THE WELL
WITHIN 30 DAYS OF COMPLETION OF DRILLING



ARIZONA DEPARTMENT OF WATER RESOURCES

3550 N. Central Avenue, Phoenix, Arizona 85012
Telephone (602) 771-8500
Fax (602) 771-8691



Janice K. Brewer
Governor

Herbert R. Guenther
Director

September 21, 2009

CITY OF TUCSON ENVIRONMENTAL SERVICES
100 N STONE ST 2ND FLOOR
TUCSON, AZ 85701

Registration No. 55-585612
File No. D(14-13) 14 ACB

Dear Well Owner:

Enclosed for your records is an annotated copy of the Notice of Intention to Drill (NOI) a Monitor/Piezometer/Environmental Well, which you recently filed with this Department pursuant to A.R.S. § 45-596. This is to inform you that the Department has approved the NOI and has mailed a drilling card authorizing the drilling of the well to your designated well drilling contractor. The driller may not begin drilling until he has received the drilling card, which he must keep in his possession at the well site during drilling.

Well drilling activities must be completed within one year after the date the NOI was filed with the Department. If drilling is not completed within one year, you must file a new NOI before proceeding with further drilling. If it is necessary to change the location of the proposed well, you may not proceed with drilling until you file an amended NOI with the Department. A properly amended drilling card will then be issued and must be in the possession of the well drilling contractor before drilling begins.

Since this well is being drilled as a monitor or piezometer well, or for remediation purposes, our standard Well Driller Report and Well Log form (DWR form 55-55) is being furnished to the well drilling contractor. This form must be filed with the Department within 30 days after completion of the well. A Pump Installation Completion Report form (DWR form 55-56) is being furnished to the well owner for monitor wells where a pump installation is authorized. This must be completed within 30 days of installing a pump as required by A.R.S. § 45-600. During the drilling of a new well, if it is determined that it must be abandoned, then a Well Abandonment Completion Report (DWR form 55-58) must be submitted per R12-15-816(F).

Please be advised that A.R.S. § 45-593(C) requires the person to whom a well is registered to notify the Department of a change of ownership of the well and/or information pertaining to the physical characteristics of the well, in order to keep the well registration file current and accurate. Any change in well information or a request to change well driller must be filed on a Request to Change Well Information form (DWR form 55-71A), which is enclosed for your future use.

Sincerely,

A handwritten signature in cursive script that reads "Toni Bergeman".

Toni Bergeman
NOI Unit
Water Management Support Section

Enclosures

RECEIVED

CK# 4332

4/1/10



Arizona Department of Water Resources
 Water Management Support Section
 P.O. Box 33589 Phoenix, Arizona 85067-3589
 (602) 771-8500 • (800) 352-8488
 www.azwater.gov

Notice of Intent to
Drill, Deepen, or Modify a
Monitor / Piezometer / Environmental Well
 WR-427A

\$150
 FEE

- ❖ Review instructions prior to completing form in black or blue ink.
- ❖ You must include with your Notice:
 - \$150 check or money order for the filing fee.
 - Well construction diagram, labeling all specifications listed in Section 6.
- ❖ Authority for fee: A.R.S. § 45-596.

AMA / INA <i>Tucson</i>	B <i>16</i>
RECEIVED DATE <i>8-12-09</i>	WS <i>09</i>
ISSUED DATE <i>9-21-09</i>	WQAR CERCLA

FILE NUMBER <i>004-0114 A-B</i>
WELL REGISTRATION NUMBER <i>55 - 585612</i>

**** PLEASE PRINT CLEARLY ****

Well Type	Proposed Action	Location of Well
CHECK ONE <input checked="" type="checkbox"/> Monitor <input type="checkbox"/> Piezometer <input type="checkbox"/> Vadose Zone <input type="checkbox"/> Air Sparging <input type="checkbox"/> Soil Vapor Extraction <input type="checkbox"/> Other (please specify):	CHECK ONE <input type="checkbox"/> Drill New Well <input type="checkbox"/> Deepen <input checked="" type="checkbox"/> Modify If Deepening or Modifying: WELL REGISTRATION NUMBER <i>55 - 585612</i>	WELL LOCATION ADDRESS (IF ANY) 350 S. Brickyard Lane Tucson, AZ 85745 TOWNSHIP (N/S) RANGE (E/W) SECTION 160 ACRE 40 ACRE 10 ACRE <i>14S</i> <i>13E</i> <i>14</i> <i>NE 1/4</i> <i>SW 1/4</i> <i>NE 1/4</i> COUNTY ASSESSOR'S PARCEL ID NUMBER BOOK <i>116</i> MAP <i>20</i> PARCEL <i>138A</i> COUNTY WHERE WELL IS LOCATED Pima

Handwritten notes:
 HWT
 Review
 9-21-09
 EN
 Stream

Well Owner	Landowner (if different from Well Owner)
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL City of Tucson Environmental Services	FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL Same
MAILING ADDRESS 100 N. Stone St. 2nd Floor	MAILING ADDRESS RECEIVED
CITY / STATE / ZIP CODE Tucson, AZ 85701	CITY / STATE / ZIP CODE SEP 4 - 2009
CONTACT PERSON NAME AND TITLE Molly Collins, Project Coordinator	CONTACT PERSON NAME AND TITLE WATER MGMT
TELEPHONE NUMBER (520) 429-4986	TELEPHONE NUMBER
FAX (520) 791-5417	FAX

Drilling Firm	Consultant (if applicable)
NAME Drilling Services, Inc.	CONSULTING FIRM Verdad Group, LLC
DWR LICENSE NUMBER ROC193358	CONTACT PERSON NAME Matt Wallace
ROC LICENSE CATEGORY A-04	TELEPHONE NUMBER (520) 241-0505
TELEPHONE NUMBER 602-818-8444	FAX (520) 624-1081
E-MAIL ADDRESS CIAY@drilling-services.com	E-MAIL ADDRESS matt@verdadgroupllc.com

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	IF YES, PLEASE STATE WR-427A
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER
6. For monitor wells, is dedicated pump equipment to be installed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IF YES, PLEASE STATE DESIGN PUMP CAPACITY Gallons per Minute
7. Is this well a new well located in an Active Management Area AND intended to pump water for the purpose of remediating groundwater?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). (See instructions)
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED?

Notice of Intent to Drill, Deepen, or Modify a Monitor / Piezometer / Environmental Well

WELL REGISTRATION NUMBER
55 - 585612

SECTION 5. WELL CONSTRUCTION DETAILS		
Drill Method	Method of Well Development	Grout Emplacement Method
CHECK ONE <input type="checkbox"/> Air Rotary <input type="checkbox"/> Bored or Augered <input type="checkbox"/> Cable Tool <input type="checkbox"/> Dual Rotary <input type="checkbox"/> Mud Rotary <input type="checkbox"/> Reverse Circulation <input type="checkbox"/> Driven <input type="checkbox"/> Jetted <input type="checkbox"/> Air Percussion / Odex Tubing <input type="checkbox"/> Other (please specify): Not Applicable for Modification	CHECK ONE <input type="checkbox"/> Airlift <input type="checkbox"/> Bail <input type="checkbox"/> Surge Block <input type="checkbox"/> Surge Pump <input type="checkbox"/> Other (please specify): Not Applicable for Modification	CHECK ONE <input type="checkbox"/> Gravity <input type="checkbox"/> Pressure Grout <input type="checkbox"/> Tremie <input type="checkbox"/> Other (please specify): Not Applicable for Modification
DATE CONSTRUCTION TO BEGIN August 20, 2009	Method of Sealing at Reduction Points CHECK ONE <input checked="" type="checkbox"/> None <input type="checkbox"/> Welded <input type="checkbox"/> Swedged <input type="checkbox"/> Packed <input type="checkbox"/> Other (please specify): Not Applicable for Modification	Surface or Conductor Casing CHECK ONE <input type="checkbox"/> Flush Mount in a vault <input checked="" type="checkbox"/> Extend 1' above grade Well casing and ground surface will be raised 5'

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole			Casing													
DEPTH FROM SURFACE		BOREHOLE DIAMETER (inches)	DEPTH FROM SURFACE		OUTER DIAMETER (inches)	MATERIAL TYPE (T)				PERFORATION TYPE (I)						
FROM (feet)	TO (feet)		FROM (feet)	TO (feet)		STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	LANE OR NONE	WIRE WRAP	JUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY
See attached sheet for full description of casing materials. All casings to be raised 5'. All depths increase 5'. 6" surface casing is new.																

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WATER MGMT

Annular Material											
DEPTH FROM SURFACE		ANNULAR MATERIAL TYPE (T)							FILTER PACK		
FROM (feet)	TO (feet)	NONE	CONCRETE	SAT CEMENT OR JEMENT GROUT	BENT-BENTONITE GROUT	BENTONITE GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	SAND	GRAVEL
See attached sheet for full description of casing materials. All casings to be raised 5' All annular material depths increase 5'. Concrete surface seal is new.											

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WATER MGMT

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS: _____ EXPECTED DEPTH TO WATER: 45 Feet Below Ground Surface

SECTION 7. OPTIONAL BY PROPERTY OWNER AND WELL OWNER ONLY
 By checking this box, I hereby provide ADWR permission to enter the property for the purpose of taking water level measurements at this well. (See instructions.)

SECTION 8. WELL OWNER AND PROPERTY OWNER SIGNATURE

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE Jeffrey Drumm, Environmental Manager	SIGNATURE OF WELL OWNER 	DATE 8/7/09
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS)	DATE

585612

Ground Level to be raised 5 feet. All depths increase by 5 feet.

New 8" Steel Surface Casing

0.5" PVC Probes with 3-foot, 0.02 inch slot screens. Casings to be raised 5'

4" Flush Threaded Sch 80 PVC Casing to be raised 5'. New length

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9 5/8" +/- Borehole

New: 40' (est.)

46' New Total Well Depth

10" Steel Well Cover and, Concrete Pad to be reset at new elevation

New concrete seal 0-5'

Cement Seal with 5% bentonite New Depth: 5'-10'

2' Thick Hydrated Bentonite Pellets Seal, New Depth: 10'-12'

8-12 Colorado Silica Sand New Depth: 12'-17'

Cement Seal with 5% Bentonite New Depth: 17'-20'

2' Thick Bentonite Pellets Seal

8-12 Colorado Silica Sand New Depth: 22'-25'

Cement Seal with 5% Bentonite

3' Thick Hydrated Bentonite Pellets Seal. New Depth: 30'-33'

1/4" Gravel. New Depth 33'-46'

0.060" Slotted, 4" Diameter, Flush Threaded, Sch 80 PVC Well Screen (New Depth 36'-46')

4" Flush Threaded Bottom Cap

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SEP - 4 2009



CITY OF TUCSON ENVIRONMENTAL SERVICES

WR-427A Modification Details
55-585612

WATER MGMT

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Arizona Department of Water Resources
 Information Management Unit
 P.O. Box 33589 Phoenix, Arizona 85067-3589
 (602) 771-8627 • (800) 352-8488
 www.azwater.gov

SEP 2 - 2009

WATER MGMT

Well Driller Report
 and
 Well Log

THIS REPORT MUST BE FILED WITHIN 30 DAYS OF COMPLETING THE WELL.

PLEASE PRINT CLEARLY USING BLACK OR BLUE INK.

FILE NUMBER
WELL REGISTRATION NUMBER 55 - 585612
PERMIT NUMBER (IF ISSUED)

SECTION 1. DRILLING AUTHORIZATION

Drilling Firm	
Mail To:	NAME WDC Exploration & Wells
	ADDRESS 1200 West San Pedro Street
	CITY / STATE / ZIP Gilbert, Arizona 85233
	DWR LICENSE NUMBER 161
	TELEPHONE NUMBER 480-813-4486
	FAX 480-813-5671

SECTION 2. REGISTRY INFORMATION

Well Owner		Location of Well					
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL City of Tucson		WELL LOCATION ADDRESS (IF ANY)					
MAILING ADDRESS P.O. Box 27210		TOWNSHIP (N/S) 14S	RANGE (E/W) 13E	SECTION 14	160 ACRE NE ¼	40 ACRE SW ¼	10 ACRE NE ¼
CITY / STATE / ZIP CODE Tucson, AZ 85726		LATITUDE 110 ° 39 ' 20 " N Degrees Minutes Seconds			LONGITUDE 32 ° 13 ' 00 " W Degrees Minutes Seconds		
CONTACT PERSON NAME AND TITLE Molly Collins		METHOD OF LATITUDE/LONGITUDE (CHECK ONE) <input type="checkbox"/> *GPS: Hand-Held <input type="checkbox"/> *GPS: Survey-Grade					
TELEPHONE NUMBER 520-791-5414	FAX	LAND SURFACE ELEVATION AT WELL Feet Above Sea Level					
WELL NAME (e.g., MW-1, PZ-3, Lot 25 Well, Smith Well, etc.)		METHOD OF ELEVATION (CHECK ONE) <input type="checkbox"/> *GPS: Hand-Held <input type="checkbox"/> *GPS: Survey-Grade *GEOGRAPHIC COORDINATE DATUM (CHECK ONE) <input type="checkbox"/> NAD-83 <input type="checkbox"/> Other (please specify):					
		COUNTY Pima	ASSESSOR'S PARCEL ID NUMBER BOOK		MAP	PARCEL	

SECTION 3. WELL CONSTRUCTION DETAILS

Drill Method	Method of Well Development	Method of Sealing at Reduction Points
CHECK ALL THAT APPLY <input checked="" type="checkbox"/> Air Rotary <input type="checkbox"/> Bored or Augered <input type="checkbox"/> Cable Tool <input type="checkbox"/> Dual Rotary <input type="checkbox"/> Mud Rotary <input type="checkbox"/> Reverse Circulation <input type="checkbox"/> Driven <input type="checkbox"/> Jetted <input type="checkbox"/> Air Percussion / Odex Tubing <input type="checkbox"/> Other (please specify):	CHECK ALL THAT APPLY <input type="checkbox"/> Airlift <input type="checkbox"/> Bail <input type="checkbox"/> Surge Block <input type="checkbox"/> Surge Pump <input type="checkbox"/> Other (please specify):	CHECK ONE <input checked="" type="checkbox"/> None <input type="checkbox"/> Packed <input type="checkbox"/> Swedged <input type="checkbox"/> Welded <input type="checkbox"/> Other (please specify):
	Condition of Well	Construction Dates
	CHECK ONE <input checked="" type="checkbox"/> Capped <input type="checkbox"/> Pump Installed	DATE WELL CONSTRUCTION STARTED February 2001 DATE WELL CONSTRUCTION COMPLETED February 2001

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

SIGNATURE OF QUALIFYING PARTY

[Handwritten Signature]

DATE

February 2001

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 585612

SECTION 4. WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

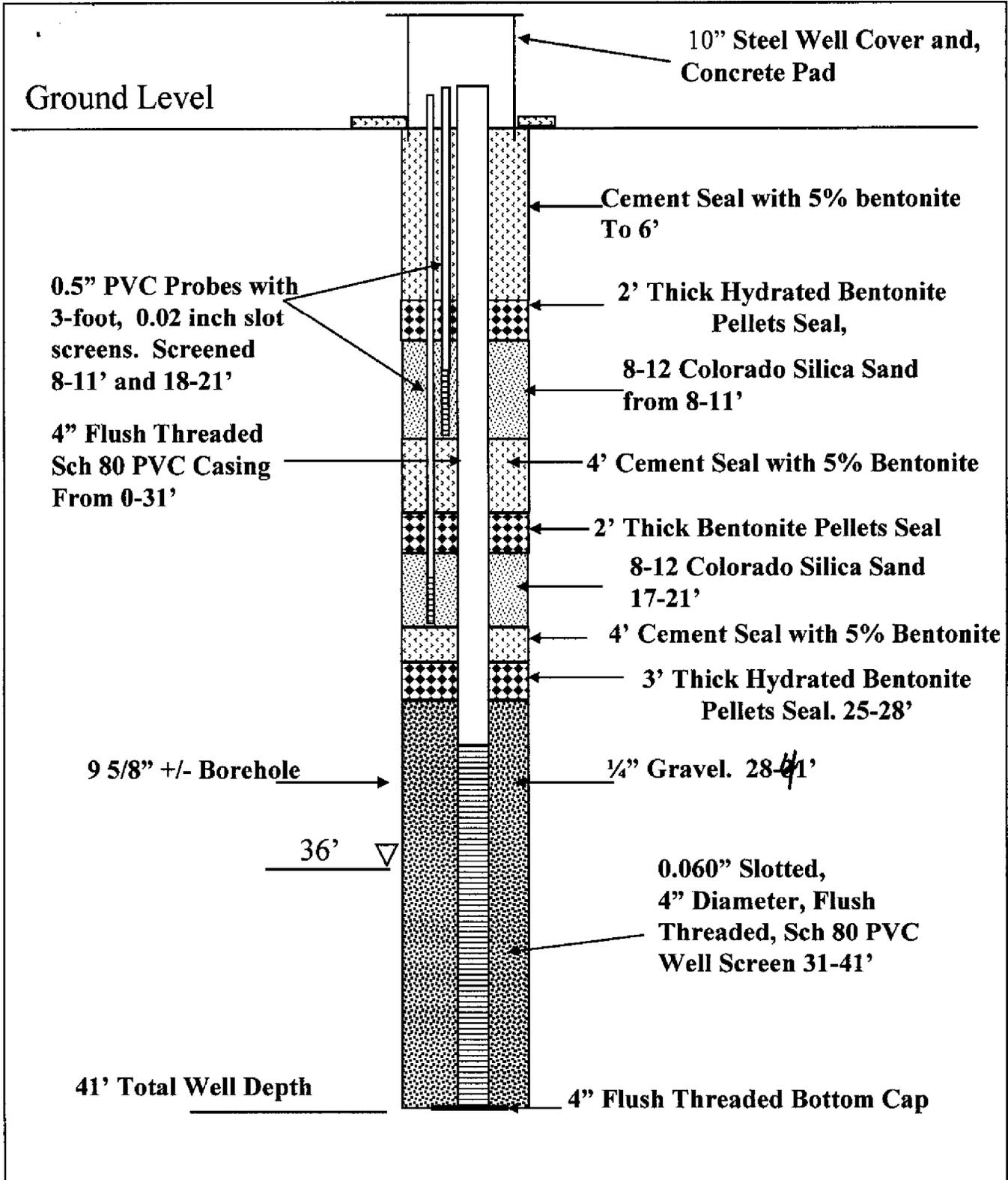
Depth			
DEPTH OF BORING		DEPTH OF COMPLETED WELL	
41	Feet Below Land Surface	41	Feet Below Land Surface

Water Level Information

STATIC WATER LEVEL	DATE MEASURED	TIME MEASURED	IF FLOWING WELL, METHOD OF FLOW REGULATION
26 Feet Below Land Surface			<input type="checkbox"/> Valve <input type="checkbox"/> Other:

Borehole			Installed Casing															
DEPTH FROM SURFACE		BOREHOLE DIAMETER (inches)	DEPTH FROM SURFACE		OUTER DIAMETER (inches)	MATERIAL TYPE (T)				PERFORATION TYPE (T)					SLOT SIZE IF ANY (inches)			
FROM (feet)	TO (feet)		FROM (feet)	TO (feet)		STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED		IF OTHER TYPE, DESCRIBE		
0	41	10	0	31	4.5		✓						✓					
			31	41	4.5		✓											.06
			0	18	.5		✓						✓					
			18	21	.5		✓											.02
			0	8	.5		✓						✓					
			8	11	.5		✓											.02

Installed Annular Material												
DEPTH FROM SURFACE		ANNULAR MATERIAL TYPE (T)							FILTER PACK			
FROM (feet)	TO (feet)	NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE			IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	SAND	GRAVEL	SIZE
						GROUT	CHIPS	PELLETS				
0	6			✓								
6	8						✓					
8	11									✓		8-12
11	15				✓							
15	17						✓					
17	21									✓		8-12
21	25				✓							
25	28						✓					
28	41									✓		.25"



CITY OF TUCSON
ENVIRONMENTAL
SERVICES

WR-427A Details
55-585612

RECEIVED *CK # 5332*



Arizona Department of Water Resources
 Water Management Support Section
 P.O. Box 33589 Phoenix, Arizona 85067-3589
 (602) 771-8500 • (800) 352-8488
 www.azwater.gov

AUG 12 2009 Notice of Intent to *5/50*
Drill, Deepen, or Modify a
Water Meter / Environmental Well
 WR-427A

\$150
 FEE

- ❖ Review instructions prior to completing form in black or blue ink.
- ❖ You must include with your Notice:
 - \$150 check or money order for the filing fee.
 - Well construction diagram, labeling all specifications listed in Section 6.
- ❖ Authority for fee: A.R.S. § 45-596.

AMA / INA	B	SB
RECEIVED DATE	WS	
8-12-09		
ISSUED DATE	WQAR	CERCLA

FILE NUMBER
WELL REGISTRATION NUMBER
55 - 585612

**** PLEASE PRINT CLEARLY ****

SECTION 1: REGISTRY INFORMATION

Well Type	Proposed Action	Location of Well					
CHECK ONE	CHECK ONE	WELL LOCATION ADDRESS (IF ANY)					
<input checked="" type="checkbox"/> Monitor	<input type="checkbox"/> Drill New Well	350 S. Brickyard Lane Tucson, AZ 85745					
<input type="checkbox"/> Piezometer	<input type="checkbox"/> Deepen	TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
<input type="checkbox"/> Vadose Zone	<input checked="" type="checkbox"/> Modify	14S	13E	14	NE ¼	SW ¼	NE ¼
<input type="checkbox"/> Air Sparging	<i>If Deepening or Modifying:</i>	COUNTY ASSESSOR'S PARCEL ID NUMBER					
<input type="checkbox"/> Soil Vapor Extraction	WELL REGISTRATION NUMBER	BOOK 116	MAP 20		PARCEL 138A		
<input type="checkbox"/> Other (please specify):	55 - 585612	COUNTY WHERE WELL IS LOCATED					
		Pima					

SECTION 2: OWNER INFORMATION

Well Owner	Landowner (if different from Well Owner)
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL	FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL
City of Tucson Environmental Services	Same
MAILING ADDRESS	MAILING ADDRESS
100 N. Stone St. 2nd Floor	
CITY / STATE / ZIP CODE	CITY / STATE / ZIP CODE
Tucson, AZ 85701	
CONTACT PERSON NAME AND TITLE	CONTACT PERSON NAME AND TITLE
Molly Collins, Project Coordinator	
TELEPHONE NUMBER	TELEPHONE NUMBER
(520) 429-4986	
FAX	FAX
(520) 791-5417	

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SECTION 3: DRILLING AUTHORIZATION

Drilling Firm	Consultant (if applicable)
NAME	CONSULTING FIRM
Drilling Services, Inc.	Verdad Group, LLC
DWR LICENSE NUMBER	CONTACT PERSON NAME
ROC193358	Matt Wallace
ROC LICENSE CATEGORY	TELEPHONE NUMBER
A-04	(520) 241-0505
TELEPHONE NUMBER	FAX
602-818-8444	(520) 624-1081
E-MAIL ADDRESS	E-MAIL ADDRESS
	matt@verdadgroupllc.com

SECTION 4:

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	X		2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?		X	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?		X	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)	X		IF YES, PLEASE STATE WR-427A
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?		X	IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER
6. For monitor wells, is dedicated pump equipment to be installed?		X	IF YES, PLEASE STATE DESIGN PUMP CAPACITY Gallons per Minute
7. Is this well a new well located in an Active Management Area AND intended to pump water for the purpose of remediating groundwater?		X	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). (See instructions)
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?	X		IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED?

Notice of Intent to Drill, Deepen, or Modify a Monitor / Piezometer / Environmental Well

WELL REGISTRATION NUMBER:
55 - 585612

SECTION 5: WELL CONSTRUCTION DETAILS		
Drill Method CHECK ONE <input type="checkbox"/> Air Rotary <input type="checkbox"/> Bored or Augered <input type="checkbox"/> Cable Tool <input type="checkbox"/> Dual Rotary <input type="checkbox"/> Mud Rotary <input type="checkbox"/> Reverse Circulation <input type="checkbox"/> Driven <input type="checkbox"/> Jetted <input type="checkbox"/> Air Percussion / Odex Tubing <input checked="" type="checkbox"/> Other (please specify): Not Applicable for Modification	Method of Well Development CHECK ONE <input type="checkbox"/> Airlift <input type="checkbox"/> Bail <input type="checkbox"/> Surge Block <input type="checkbox"/> Surge Pump <input type="checkbox"/> Other (please specify): Not Applicable for Modification	Grout Emplacement Method CHECK ONE <input type="checkbox"/> Gravity <input type="checkbox"/> Pressure Grout <input type="checkbox"/> Tremie <input type="checkbox"/> Other (please specify): Not Applicable for Modification
DATE CONSTRUCTION TO BEGIN August 20, 2009	Method of Sealing at Reduction Points CHECK ONE <input checked="" type="checkbox"/> None <input type="checkbox"/> Welded <input type="checkbox"/> Swedged <input type="checkbox"/> Packed <input type="checkbox"/> Other (please specify): Not Applicable for Modification	Surface or Conductor Casing CHECK ONE <input type="checkbox"/> Flush Mount in a vault <input checked="" type="checkbox"/> Extend 1' above grade Well casing and ground surface will be raised 5'

SECTION 6: PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole			Casing													
DEPTH FROM SURFACE		BOREHOLE DIAMETER (Inches)	DEPTH FROM SURFACE		OUTER DIAMETER (Inches)	MATERIAL TYPE (T)				PERFORATION TYPE (T)						
FROM (feet)	TO (feet)		FROM (feet)	TO (feet)		STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	LANK OR NONE	WIPE WRAP	UTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (Inches)
See attached sheet for full description of casing materials. All casings to be raised 5'. All depths increase 5'. 8" surface casing is new.																

RECEIVED
 AUG 12 2009
 WATER MGMT

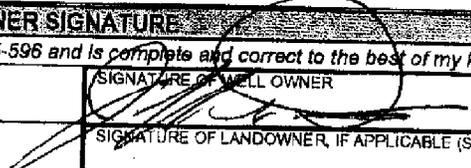
Annular Material												
DEPTH FROM SURFACE		ANNULAR MATERIAL TYPE (T)							FILTER PACK			
FROM (feet)	TO (feet)	NONE	CONCRETE	SAT CEMENT OR JEMENT GROUT	HEAT-BENTONITE GROUT	BENTONITE GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	SAND	GRAVEL	SIZE
See attached sheet for full description of casing materials. All casings to be raised 5'. All annular material depths increase 5'. Concrete surface seal is new.												

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS: _____ EXPECTED DEPTH TO WATER: **45** Feet Below Ground Surface

SECTION 7: OPTIONAL BY PROPERTY OWNER AND WELL OWNER ONLY
 By checking this box, I hereby provide ADWR permission to enter the property for the purpose of taking water level measurements at this well. (See instructions.)

SECTION 8: WELL OWNER AND PROPERTY OWNER SIGNATURE

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE Jeffrey Drumm, Environmental Manager	SIGNATURE OF WELL OWNER 	DATE 8/7/09
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS)	DATE

585612

Section 6. PROPOSED WELL CONSTRUCTION PLAN. Additional Sheet for 55-585612 Modification

Borehole		Casing											
Depth from Surface		Borehole Diameter (in)		Depth from Surface		Outer Diameter (in)		Material Type		Perforation Type		Slot Size (in)	
From (ft)	To (ft)	From (ft)	To (ft)	From (ft)	To (ft)	PVC	ABS	Other	Blank or None	Wire Wrap	Shutter Screen	Mills Knife Slotted	Other
0	46	0	3	4	4				X				
		0	36	4	4	X			X				0.06
		36	46	0	14	X			X				
		0	14	0.5	17	X			X				0.02
		14	17	0.5	22	X			X				
		0	22	0.5	25	X			X				0.02
		22	25	0.5									
Annular Material													
Depth from Surface		Cement or Concrete				Bentonite Grout				Filter Pack			
From (ft)	To (ft)	None	Concrete	Cement Grout	Bentonite Grout	Grout	Bentonite Chips	Fellets	Other	Sand	Gravel	Size	
0	5		X										
5	10			X									
10	12				X							8-12	
12	17			X									
17	20				X								
20	22												
22	25			X									
25	30												
30	33			X									
33	46						X				X	0.25-inch	

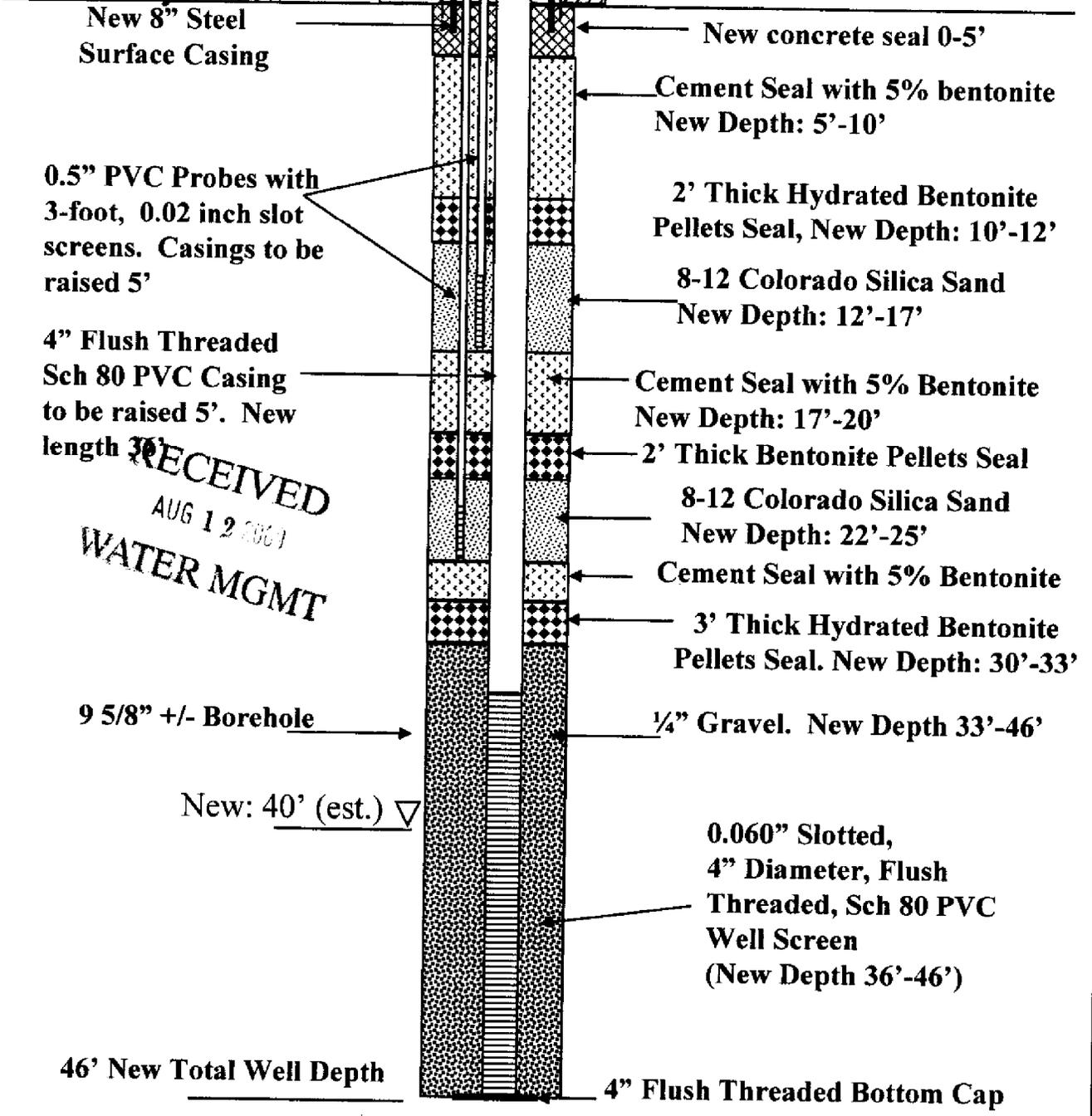
Jeffrey Drumm
8/17/09

Jeffrey Drumm, Environmental Manager

RECEIVED
AUG 12 2009
WATER MGMT

585612

Ground Level to be raised 5 feet. All depths increase by 5 feet.



RECEIVED
AUG 12 2001
WATER MGMT



WR-427A Modification Details
55-585612

Printed: 8/11/2009 12:13:06 PM

Arizona Department of Water Resources

3550 N Central Ave.
Phoenix AZ 85012

Customer:

VERDAD GROUP, LLC
P. O. BOX 85033
TUCSON, AZ 85754

Receipt #: 10-7419
Office: MAIN OFFICE
Receipt Date: 8/11/2009
Sale Type: Mail
Cashier: WRCCC

Item No.	Index	AOBJ	Description	Ref ID	Qty	Unit Price	Ext Price
82	15245	4439-02	NOI TO DEEPEN REPLACE OR MODIFY EXISTING NE WELL I	55-585612	1	150.00	150.00
RECEIPT TOTAL:							150.00

Payment type: CHECK

Amount Paid: \$150.00

Check # 5332

Notes: Well Owner: City of Tucson Environmental Services
Drilling Firm: Drilling Services, Inc

RECEIVED
AUG 12 2009
WATER MGMT

**ARIZONA DEPARTMENT OF WATER RESOURCES
GROUNDWATER MANAGEMENT SUPPORT SECTION**

MAIL TO: P.O. BOX 458, PHOENIX, ARIZONA 85001-0458
FOR INFORMATION: CALL MONICA ORTIZ AT 602-417-2470

FEB - 9 2001
GROUNDWATER MG

NOTICE OF INTENTION TO DRILL MONITOR/PIEZOMETER WELL

PLEASE READ GENERAL INSTRUCTIONS AND CONDITIONS ON REVERSE SIDE OF THIS FORM BEFORE COMPLETING

1. Well/Land Location:

14 N/S 13 E/W 14
Township Range Section
NW 1/4 SW 1/4 NE 1/4
10 Acre 40 Acre 160 Acre

2. Position location of the well on the land:

Latitude 110 ° 39 ' 20 "
Longitude 32 ° 13 ' 00 "

3. County: Pima

4. Owner of the well:

City of Tucson
Name
P.O. Box 27210
Mailing Address Tucson AZ 85726
City State Zip
Telephone No. (520) 791-5414

5. Lessee of the land of wellsite:

Name
Mailing Address
City State Zip
Telephone No.

6. Owner of the Land of Wellsite:

City of Tucson
Name
P.O. Box 27210
Mailing Address Tucson AZ 85726
City State Zip
Telephone No. (520) 791-5414

7. Consulting firm:

Hydro Geo Chem, Inc.
Name Jinshan Tang
Contact Person
Telephone No. (520) 293-1500

8. Purpose of well drilled pursuant to this notice:

Monitor vapor monitoring well
Piezometer

9. If for deepening or modifying, list well registration number:

55-

*** FOR DEPARTMENT USE ONLY**

File No. D(14-3)14 ACB
Filed 2/9/01 By qeb
Input By

DUPLICATE

Mailed 2/10/01 By qeb
Registration 55-585612
AMA/INA TUCSON
W/S 09 S/B 16
NO.

10. Will this proposed well be associated with a permit: Yes No

11. Construction will start:
02 07 2001
Month Day Year

12. Period well will remain in use:
SPECIAL REQUIREMENTS

13. For monitoring wells, is pump equipment to be installed?

Yes No
(a) If yes, design pump capacity:

14. Drilling Firm:

THE Drilling, Inc.
Name 2420 S. 16th Ave.
Mailing Address Phoenix AZ 85007
City State Zip
(602) 254-6586
Telephone No. 611
DWR License Number 099597-A4
ROC License Category

15. Proposed method of abandonment of well after project is completed: surface completion material to be removed, well to be filled and sealed with cement grout, pursuant to R12-15-816.

16. Is this well to monitor existing contamination? No Potential contamination: Use for soil vapor monitoring

17. If construction plans have been coordinated with Arizona Department of Environmental Quality, who is the agency contact? None

18. If construction plans have been coordinated with Arizona Department of Water Resources, who is the agency contact?

**ARIZONA DEPARTMENT OF WATER RESOURCES
GROUNDWATER MANAGEMENT SUPPORT SECTION**

500 North Third Street
Phoenix, Arizona 85004

VARIANCE GRANTED

THIS AUTHORIZATION SHALL BE IN POSSESSION OF THE DRILLER DURING ALL DRILL OPERATIONS

WELL REGISTRATION NO: 55-585612

AUTHORIZED DRILLER: THF DRILLING, INC.

LICENSE NO: 611

NOTICE OF INTENTION TO DRILL A MONITOR WELL(S) HAS BEEN FILED WITH THE DEPARTMENT BY:

WELL OWNER: CITY OF TUCSON PO BOX 27210 TUCSON, AZ 85726

The well(s) is/are to be located in the:

NW ¼ of the SW ¼ of the NE ¼ Section 14 Township 14 SOUTH Range 13 EAST

No. of wells in this project: 1

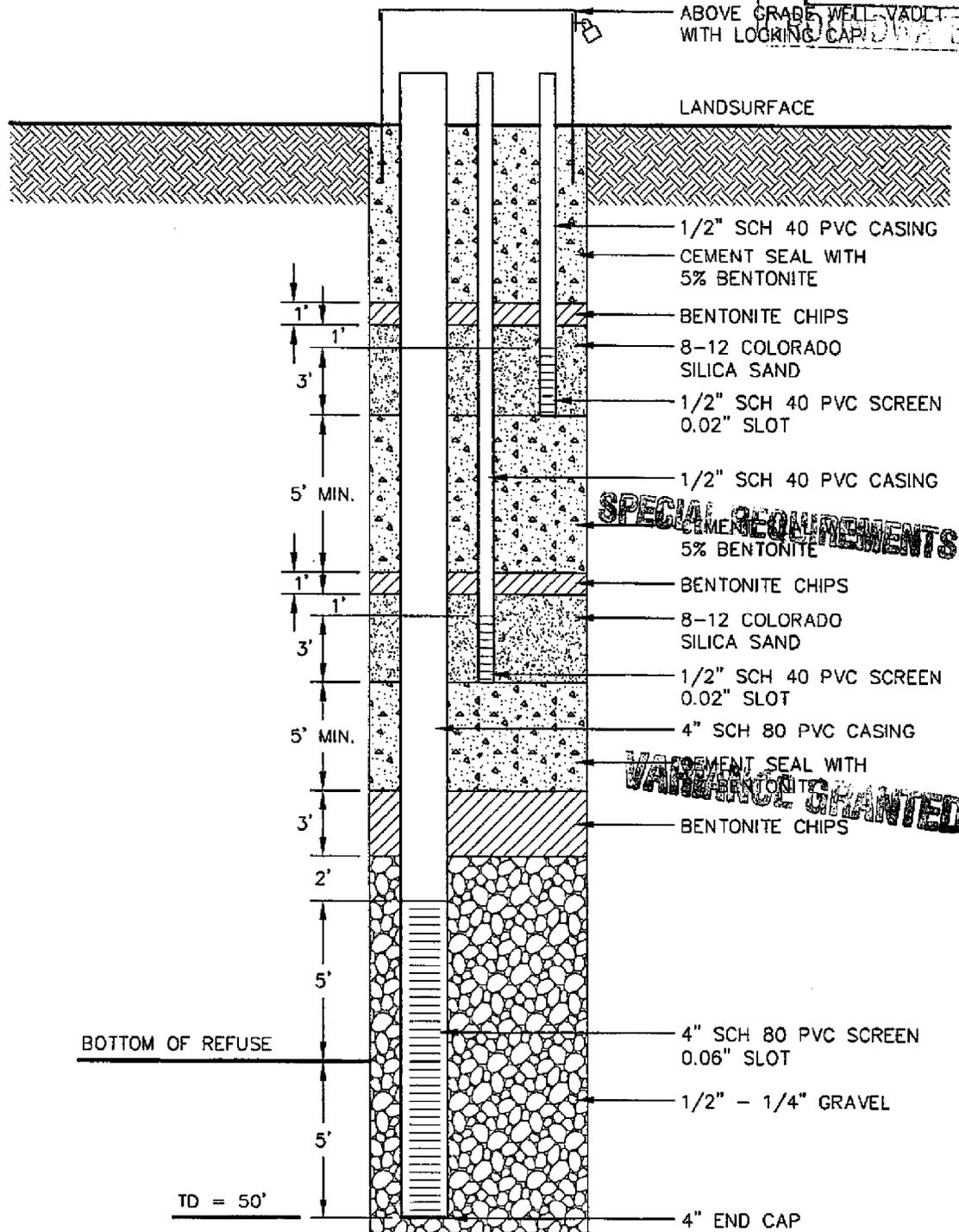
THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 8TH DAY OF FEBRUARY, 2002


GROUNDWATER MANAGEMENT SUPPORT

**THE DRILLER MUST FILE A LOG OF THE WELL
WITHIN 30 DAYS OF COMPLETION OF DRILLING**



RECEIVED
 FEB - 9 2001
 OVER MG



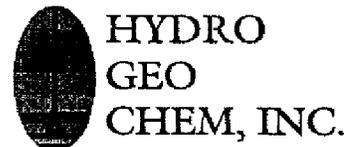
SPECIAL REQUIREMENTS

VARIANCE GRANTED

NOTE:
 REGIONAL WATER TABLE BETWEEN 80' AND 120' BLS.

NOT TO SCALE

NAME: K:\745000\74502001.DWG DATE: FEB 07, 2001 TIME: 8:43 AM



MULTI-PURPOSE WELL CONSTRUCTION DIAGRAM
 AT RIO NUEVO SITE

Approved .IT	Date 9/5/01	Revised	Date	Reference: 74502001	FIG.
-----------------	----------------	---------	------	------------------------	------

ARIZONA DEPARTMENT OF WATER RESOURCES

Hydrology Division

500 North Third Street, Phoenix, Arizona 85004

Telephone 602 417-2448

Fax 602 417-2425



JANE DEE HUL
Governor

RITA PEARSON
MAGUIRE
Director

February 15, 2001

THF Drilling, Inc.
2420 South 16th Avenue
Phoenix, AZ. 85007

Attn: Ray Quintero

**RE: Variances for Construction of Three Vapor Monitor Wells
Registration Numbers 55-585610 through 55-585612**

Dear Mr. Quintero:

The Arizona Department of Water Resources received your request dated February 9, 2001 for construction variances for three vapor monitor wells to be located in Pima County. The purpose of these wells will be to evaluate **potential** groundwater contamination.

The Arizona Department of Water Resources approves this request for the following variances:

- Thermoplastic casing with a water tight cap may be used in lieu of steel (R12-15-811.B.1).
- The length of the surface seal may be reduced to 15 feet below ground surface due to a possible shallow water table (R12-15-811.B.1).

The following *special requirements* are conditions for these variances (R12-15-821.):

- The casing shall comply with ASTM Standard Guide D5092, Section 6.5.
- The wells shall be constructed per the "Variance Granted" Notice of Intention to Drill.
- The wells shall be abandoned (decommissioned) in accordance with A.A.C. R12-15-816.

If you have any questions, contact Bruce Hammett of my staff at 602-417-2400 ext. # 7301.

Sincerely,

Frank Corkhill
Technical Support Section Supervisor

ARIZONA DEPARTMENT OF WATER RESOURCES

500 North 3rd Street, Phoenix, Arizona 85004

Telephone (602) 417-2470

Fax (602) 417-2422

February 20, 2001



JANE DEE HULL
Governor

RITA PEARSON MAGUIRE
Director

CITY OF TUCSON
PO BOX 27210
TUCSON, AZ 85726

Registration No. 55-585612
File No. D(14-13) 14 ACB

Dear Well Owner:

Enclosed for your records is an annotated copy of the Notice of Intention to Drill a well. This is returned to you as evidence of compliance with A.R.S. §45-596. A drilling card has been mailed to your designated driller. Prior to drilling he must have it in his possession.

Since this well is being drilled as a Monitor well, or for Cathodic Protection, Grounding, Geotechnical or Piezometer purposes, our standard driller report form is also being furnished to the driller. He is required to complete it and return it to the Department within 30 days after the completion of the well. A Completion Report form is being furnished for monitor wells where pump installation is authorized. This must be completed within thirty days of installation as required by A.R.S. §45-600.

A Change of Well Information form is enclosed for your future use. If you deem it necessary to change the location of the proposed well, please notify the Department on the enclosed form. A properly amended Drilling Card will then be issued and must be in possession of the driller before drilling begins. During the drilling of a new well, if it is determined that it must be abandoned, then a Well Abandonment Completion Report must be submitted per R12-15-816.F.

Per A.R.S. §45-593, the person to whom a well is registered shall notify this Department of a change of ownership of the well and/or information pertaining to the physical characteristics of the well, in order to keep the well registration file current and accurate.

Sincerely,

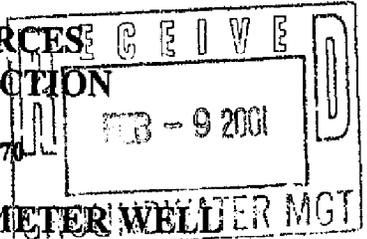
A handwritten signature in cursive script that reads "Toni Bergeman".

Toni Bergeman
Water Resource Technician
Groundwater Management Support Section

Enclosures

**ARIZONA DEPARTMENT OF WATER RESOURCES
GROUNDWATER MANAGEMENT SUPPORT SECTION**

MAIL TO: P.O. BOX 458, PHOENIX, ARIZONA 85001-0458
FOR INFORMATION: CALL MONICA ORTIZ AT 602-417-2470



NOTICE OF INTENTION TO DRILL MONITOR/PIEZOMETER WELL

PLEASE READ GENERAL INSTRUCTIONS AND CONDITIONS ON REVERSE SIDE OF THIS FORM BEFORE COMPLETING

1. Well/Land Location:

14 N 13 W 14
Township Range Section
NW 1/4 SW 1/4 NE 1/4
10 Acre 40 Acre 160 Acre

2. Position location of the well on the land:

Latitude 110 ° 39 ' 22 "
Longitude 32 ° 13 ' 02 "

3. County: Pima

4. Owner of the well:

City of Tucson
Name
P.O. Box 27210
Mailing Address
Tucson AZ 85726
City State Zip
Telephone No. (520) 791-5414

6. Owner of the Land of Wellsite:

City of Tucson
Name
P.O. Box 27210
Mailing Address
Tucson, .. AZ 85726
City State Zip
Telephone No. (520) 791-5414

7. Consulting firm:

Hydro Geo Chem, Inc.
Name
Jinshan Tang
Contact Person
Telephone No. (520) 293-1500

8. Purpose of well drilled pursuant to this notice:

Monitor vapor monitoring wells
Piezometer _____

9. If for deepening or modifying, list well registration number:
55-

10. Will this proposed well be associated with a permit: Yes _____ No X
If yes, Permit No. _____

11. Construction will start:
02 07 2001
Month Day Year

12. Period well will remain in use:
5 Months/Year

13. For monitoring wells, is pump equipment to be installed?
Yes _____ No X

(a) If yes, design pump capacity: _____
(b) What use will be made of the water: _____

14. Drilling Firm:

FOR SECURITY PURPOSES: THIS DOCUMENT CONTAINS MICROPRINTING IN THE BORDER AND AN ARTIFICIAL WATERMARK ON THE REVERSE SIDE - HOLD AT AN ANGLE TO VIEW

HYDRO GEO CHEM, INC.
51 W. WETMORE ROAD UNIT 101
TUCSON, ARIZONA 85705-1678
(520) 293-1500

BY ENDORSEMENT THIS CHECK WHEN PAID IS ACCEPTED AS FULL PAYMENT OF THE FOLLOWING ACCOUNT		

91-170/1221
11206

PAY Thirty and 00/100 DOLLARS

DATE	TO THE ORDER OF	DESCRIPTION	CHECK NO.	NET AMOUNT
<u>2/11/01</u>	<u>Ar Dept of Water Resources</u>	<u>permit</u>	<u>11206</u>	<u>30</u>

BANK OF AMERICA
33 N. STONE TUCSON, ARIZONA 85701

FOR SECURITY PURPOSES: THIS DOCUMENT CONTAINS MICROPRINTING IN THE BORDER AND AN ARTIFICIAL WATERMARK ON THE REVERSE SIDE - HOLD AT AN ANGLE TO VIEW

17. If construction plans have been coordinated with Arizona Department of Environmental Quality, who is the agency contact?
None

18. If construction plans have been coordinated with Arizona Department of Water Resources, who is the agency contact?

VARIANCE CHECKLIST - HYDROLOGY

DATE RECEIVED 2-9-01
 DATE TO HYDRO 2-14-01
 DATE TO GMSS 2-16-01

POTENTIAL REG. Nº 55- _____
55-585610 THRU 55- 585612

FRONT OF N.O.I COMPLETE/CORRECT: YES NO

VARIANCE (?) LETTER RECEIVED YES NO
 WELL DIAGRAM (?) RECEIVED YES NO
 SITE PLAN (?) RECEIVED YES NO

TYPE AND NUMBER OF WELLS:

<u>3</u>	MONITOR		CATHODIC PROTECTION
_____	PIEZOMETER	_____	GROUNDING
_____	GEOTECHNICAL	_____	HEAT PUMP
_____	MINERAL EXPLORATION	_____	
_____	WATER PRODUCTION	_____	OTHER _____

DESCRIBE TYPE OF WELL

VARIANCE:

<input checked="" type="checkbox"/>	REQUIRED	<input checked="" type="checkbox"/>	GRANTED
_____	NOT REQUIRED	_____	NOT GRANTED
_____		_____	LETTER ISSUED

ATTENTION!!! NOTICE OF INTENT TEAM:

_____ HARD COPY OF LETTER TO FOLLOW
 _____ CALL FOR PICKUP

COMMENTS: OK. Gub

JANICE K. BREWER
Governor



HERBERT R. GUENTHER
Director

ARIZONA DEPARTMENT OF WATER RESOURCES
3550 NORTH CENTRAL AVENUE
PHOENIX ARIZONA 85012
PHONE: (602) 771-8500

August 20, 2009

**PLEASE RETURN
ALL PAPERS**

City of Tucson Environmental Services
100 N Stone Street 2nd Floor
Tucson, AZ 85701

Re: Well Registry Number: 55-585612, 575267

File (Location) Number: D(14-13)14 ACA

Dear Applicant:

The Department of Water Resources recently received your Notice of Intent (NOI) to drill, deepen, replace or modify a well. However, our review indicates that the NOI is incomplete under the Groundwater Management Act for the following reasons:

- 55-585612 – Well is cancelled – no drill log received.
- 55-585612 & 55-575267 – Please detail the modification you intend.

**IF YOU HAVE ANY QUESTIONS, PLEASE CALL Toni Bergeman
AT 602-771-8646.**

In accordance with Arizona Revised Statutes (A.R.S.) § 45-596, Paragraph D, the Department is mailing this "statement of determination" as a request for information necessary to make the NOI complete and correct. Please provide the Department with the additional information and resubmit the corrected NOI form and any attachments (if applicable) to ADWR. The Department's substantive review time frame is suspended until all requested information is provided. If the Department does not receive the necessary information within sixty (60) days, the application may be denied. You would then have to re-initiate the NOI process and pay a new filing fee to receive a drilling authority for this location.

**ATTACH THIS NOTICE WHEN RESUBMITTING THE COMPLETED NOI
AND RETURN TO:**

WATER MANAGEMENT SUPPORT SECTION



Printed on recycled paper. Each ton of recycled paper saves 7,000 gallons of water.

Printed: 8/11/2009 12:13:06 PM

Arizona Department of Water Resources

3550 N Central Ave.
Phoenix AZ 85012

Customer:

VERDAD GROUP, LLC
P. O. BOX 85033
TUCSON, AZ 85754

Receipt #: 10-7419
Office: MAIN OFFICE
Receipt Date: 8/11/2009
Sale Type: Mail
Cashier: WRCCC

Item No.	Index	AOBJ	Description	Ref ID	Qty	Unit Price	Ext Price
82	15245	4439-02	NOI TO DEEPEN REPLACE OR MODIFY EXISTING NE WELL I	55-585612	1	150.00	150.00
RECEIPT TOTAL:							150.00

Payment type: CHECK
Amount Paid: \$150.00

Check # 5332

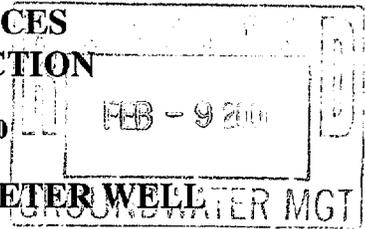
Notes: Well Owner: City of Tucson Environmental Services
Drilling Firm: Drilling Services, Inc

RECEIVED
AUG 12 2009
WATER MGMT

RECEIVED
SEP - 4 2009
WATER MGMT

**ARIZONA DEPARTMENT OF WATER RESOURCES
GROUNDWATER MANAGEMENT SUPPORT SECTION**

MAIL TO: P.O. BOX 458, PHOENIX, ARIZONA 85001-0458
FOR INFORMATION: CALL MONICA ORTIZ AT 602-417-2470



NOTICE OF INTENTION TO DRILL MONITOR/PIEZOMETER WELL

PLEASE READ GENERAL INSTRUCTIONS AND CONDITIONS ON REVERSE SIDE OF THIS FORM BEFORE COMPLETING.

1. Well/land Location:

14 N/S 13 E/W 14
Township Range Section
NW 1/4 SW 1/4 NE 1/4
10 Acre 40 Acre 160 Acre

2. Position location of the well on the land:

Latitude 110 ° 39 ' 20 "
Longitude 32 ° 13 ' 00 "

3. County: Pima

4. Owner of the well:

City of Tucson
Name
P.O. Box 27210
Mailing Address
Tucson AZ 85726
City State Zip
Telephone No. (520) 791-5414

5. Lessee of the land of wellsite:

Name _____
Mailing Address _____
City State Zip _____
Telephone No. _____

6. Owner of the Land of Wellsite:

City of Tucson
Name
P.O. Box 27210
Mailing Address
Tucson AZ 85726
City State Zip
Telephone No. (520) 791-5414

7. Consulting firm:

Hydro Geo Chem, Inc.
Name
Jinshan Tang
Contact Person
Telephone No. (520) 293-1500

8. Purpose of well drilled pursuant to this notice:

Monitor vapor monitoring well
Piezometer _____

9. If for deepening or modifying, list well registration number:

55- _____

10. Will this proposed well be associated with a permit: Yes _____ No x

If yes, Permit No. _____

11. Construction will start:

02 07 2001
Month Day Year

12. Period well will remain in use:

SPECIAL REQUIREMENTS _____ Months/Years

13. For monitoring wells, is pump equipment to be installed?

Yes _____ No X

(a) If yes, design pump capacity: _____

What use will be made of the water: VARIANCE GRANTED

14. Drilling Firm:

THE Drilling, Inc.
Name
2420 S. 16th Ave.
Mailing Address
Phoenix AZ 85007
City State Zip
(602) 254-6586
Telephone No.
611
DWR License Number
099597-A4
ROC License Category

* FOR DEPARTMENT USE ONLY	
File No. <u>D(14-13)14 ACB</u>	
Filed <u>2/9/01</u> By <u>cm</u>	
Input _____ By _____	
DUPLICATE	
Mailed <u>2/20/01</u> By <u>cm</u>	
Registration <u>55-585612</u>	
AMA/INA <u>Tucson</u>	
W/S <u>09</u> S/B <u>16</u>	
No. _____	

15. Proposed method of abandonment of well after project is completed: surface completion material to be removed, well to be filled and sealed with cement grout., pursuant to R12-15-816.

16. Is this well to monitor existing contamination? No Potential contamination: _____ Please explain: Use for soil vapor monitoring.

17. If construction plans have been coordinated with Arizona Department of Environmental Quality, who is the agency contact? _____
None

18. If construction plans have been coordinated with Arizona Department of Water Resources, who is the agency contact? _____

19. WELL CONSTRUCTION PLAN:

- a) Drilling method (mud rotary, hollow-stem auger, etc.) hollow-stem auger
b) Borehole diameters: 10 inches from 0 feet to 50 feet
c) Casing materials (PVC, steel, hollow-stem auger, etc.) material sch 80 PVC diameter 4 inches from -2 feet to 40 feet
d) Method of sealing at reductions None
e) Annular seal materials (cement, grout, etc.); method of placement (tremied, circulated): material Bentonite seal method tremied from 35 feet to 38 feet
f) Filter packs (state material): material gravel (1/2-inch) from 38 feet to 50 feet
g) Perforations or screen specifications: Type PVC, sch 80, 0.06" slot from 40 feet to 50 feet
h) Method of well development (bail, air lift, surge)
i) Will surface or conductor casing extend above grade?: Yes X No

20. Include detailed construction diagram showing expected water depth in feet below land surface, and details of vault, if specified.

I state that this Notice is filed in compliance with Rule A.A.C. R12-15-809, is complete and correct to the best of my knowledge and belief and that I understand the conditions set forth on this form.

Daniel Samorano Manager D. Santamaria Samorano 02/07/01
Typed or Printed Name and Title Signature [X] Land Owner [] Lessee of Wellsite, Title Date

Necessary Steps and Instructions to Obtain Drilling Authority (Monitor/Piezometer Wells)

- 1. Arizona Revised Statutes ("A.R.S.") § 45-596 provides that prior to drilling a monitor or piezometer well, a Notice of Intention to Drill must be filed with the Department. To assist you in understanding the substantive requirements for this application, copies of A.R.S. § 45-596 and Arizona Administrative Code ("A.A.C.") R12-15-810 are available thru the department bookstore.
2. Information to complete items 1, 2, and 3 may be available from your County Tax Receipt or your County Assessors Office.
3. Information to complete item 9 is available from your copy of the original Notice of Intent to Drill or our Records Division at (602)417-2405.
4. Information to complete items 11, 14 and 15 may be available from your driller.
5. If an individual other than the land owner or lessee signs this notice, an original notarized letter of authorization from the land owner/lessee, stating that the individual has permission to sign this specific Notice on his or her behalf, must accompany the Notice of Intention to Drill a Monitor/Piezometer Well.
6. Please complete two original notices with original signatures and include a \$10.00 check or money order for the processing fee, in accordance with A.R.S. § 45-113. Submit them to: P.O. Box 458, Phoenix, Arizona 85001-0458.

TIME FRAME FOR REVIEW OF YOUR APPLICATION

Within 15 days after receipt of your Notice of Intention, the Arizona Department of Water Resources ("Department") will determine whether your application should be granted or denied, unless this time is extended for lack of a complete application. If your application is incomplete, the Department will notify you in writing and will specify what information is necessary to make the application complete. Until the missing information is received, the time frame for review of your application will be suspended. Your application will not be complete until all of the requested information is received. If you do not supply the missing information within sixty (60) days, the Department may deem your application withdrawn and close the file.

At the end of its review, the Department will send you written notice either granting or denying your application for drilling authority. If your application is approved, the Drill Card will be mailed directly to the drilling company. If denied, the Department's notice will state justification for the denial and an explanation of your right to appeal.

Construction and Follow-up Requirements

- 1. Construction and abandonment standards for all wells must be in accordance with Department Rules.
2. A.A.C. Rule R12-15-811(H)(2) requires a monitor well to be identified as such on the vault cover or at the top of the steel casing. Identification information must include the well registration number.
3. Pursuant to A.R.S. § 45-596(E), drilling, deepening or modification of the well must be completed within one year after the date of the Notice of Intent.
4. A Well Driller Report is required within thirty (30) days of completion of drilling. Within thirty (30) days after installation of pumping equipment in monitor wells, a Completion Report must be filed with the Department.
5. Pump equipment may not be installed on a well drilled for piezometer purposes. If a monitor well is pumped, pumping is limited to the maximum amount required for monitor purposes, but in no case may exceed 35 gallons per minute and an annual total volume of 10 acre feet.
6. Special construction standards required pursuant to A.A.C. Rule R12-15-821:

ARIZONA DEPARTMENT OF WATER RESOURCES
GROUNDWATER MANAGEMENT SUPPORT SECTION
500 North Third Street
Phoenix, Arizona 85004

VARIANCE GRANTED

THIS AUTHORIZATION SHALL BE IN POSSESSION OF THE DRILLER DURING ALL DRILL OPERATIONS

WELL REGISTRATION NO: 55-585612

AUTHORIZED DRILLER: THF DRILLING, INC.

LICENSE NO: 611

NOTICE OF INTENTION TO DRILL A MONITOR WELL(S) HAS BEEN FILED WITH THE DEPARTMENT BY:

WELL OWNER: CITY OF TUCSON PO BOX 27210 TUCSON, AZ 85726

The well(s) is/are to be located in the:

NW ¼ of the SW ¼ of the NE ¼ Section 14 Township 14 SOUTH Range 13 EAST

No. of wells in this project: 1

THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 8TH DAY OF FEBRUARY, 2002

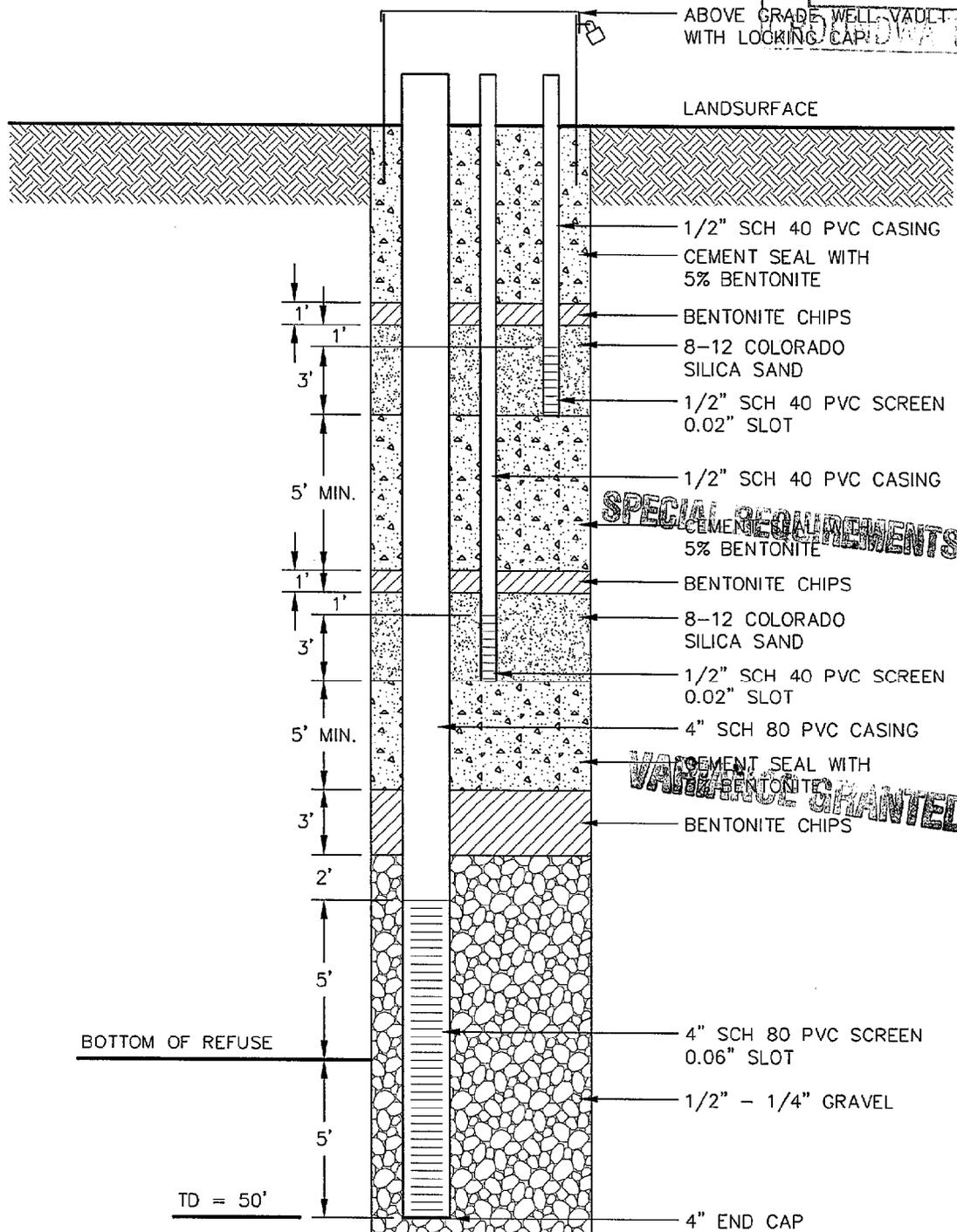
AWA

GROUNDWATER MANAGEMENT SUPPORT

**THE DRILLER MUST FILE A LOG OF THE WELL
WITHIN 30 DAYS OF COMPLETION OF DRILLING**



R E C E I V E D
FEB - 9 2001
 PRODUCTION WATER MGT



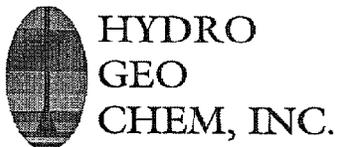
SPECIAL REQUIREMENTS

VARIANCE GRANTED

NOTE:
 REGIONAL WATER TABLE BETWEEN 80' AND 120' BLS.

NAME: K:\745000\74502001.DWG DATE: FEB 07, 2001 TIME: 8:43 AM

NOT TO SCALE



**HYDRO
 GEO
 CHEM, INC.**

**MULTI-PURPOSE WELL CONSTRUCTION DIAGRAM
 AT RIO NUEVO SITE**

Approved JT	Date 2/5/01	Revised	Date	Reference: 74502001	FIG.
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ARIZONA DEPARTMENT OF WATER RESOURCES

Hydrology Division

500 North Third Street, Phoenix, Arizona 85004
Telephone 602 417-2448
Fax 602 417-2425



JANE DEE HULL
Governor

RITA PEARSON
MAGUIRE
Director

February 15, 2001

THF Drilling, Inc.
2420 South 16th Avenue
Phoenix, AZ. 85007

Attn: Ray Quintero

**RE: Variances for Construction of Three Vapor Monitor Wells
Registration Numbers 55-585610 through 55-585612**

Dear Mr. Quintero:

The Arizona Department of Water Resources received your request dated February 9, 2001 for construction variances for three vapor monitor wells to be located in Pima County. The purpose of these wells will be to evaluate **potential** groundwater contamination.

The Arizona Department of Water Resources approves this request for the following variances:

- Thermoplastic casing with a water tight cap may be used in lieu of steel (R12-15-811.B.1).
- The length of the surface seal may be reduced to 15 feet below ground surface due to a possible shallow water table (R12-15-811.B.1).

The following *special requirements* are conditions for these variances (R12-15-821.):

- The casing shall comply with ASTM Standard Guide D5092, Section 6.5.
- The wells shall be constructed per the "Variance Granted" Notice of Intention to Drill.
- The wells shall be abandoned (decommissioned) in accordance with A.A.C. R12-15-816.

If you have any questions, contact Bruce Hammett of my staff at 602-417-2400 ext. # 7301.

Sincerely,

Frank Corkhill
Technical Support Section Supervisor

ARIZONA DEPARTMENT OF WATER RESOURCES

500 North 3rd Street, Phoenix, Arizona 85004

Telephone (602) 417-2470

Fax (602) 417-2422

February 20, 2001



JANE DEE HULL

Governor

RITA PEARSON MAGUIRE

Director

CITY OF TUCSON
PO BOX 27210
TUCSON, AZ 85726

Registration No. 55-585612

File No. D(14-13) 14 ACB

Dear Well Owner:

Enclosed for your records is an annotated copy of the Notice of Intention to Drill a well. This is returned to you as evidence of compliance with A.R.S. §45-596. A drilling card has been mailed to your designated driller. Prior to drilling he must have it in his possession.

Since this well is being drilled as a Monitor well, or for Cathodic Protection, Grounding, Geotechnical or Piezometer purposes, our standard driller report form is also being furnished to the driller. He is required to complete it and return it to the Department within 30 days after the completion of the well. A Completion Report form is being furnished for monitor wells where pump installation is authorized. This must be completed within thirty days of installation as required by A.R.S. §45-600.

A Change of Well Information form is enclosed for your future use. If you deem it necessary to change the location of the proposed well, please notify the Department on the enclosed form. A properly amended Drilling Card will then be issued and must be in possession of the driller before drilling begins. During the drilling of a new well, if it is determined that it must be abandoned, then a Well Abandonment Completion Report must be submitted per R12-15-816.F.

Per A.R.S. §45-593, the person to whom a well is registered shall notify this Department of a change of ownership of the well and/or information pertaining to the physical characteristics of the well, in order to keep the well registration file current and accurate.

Sincerely,

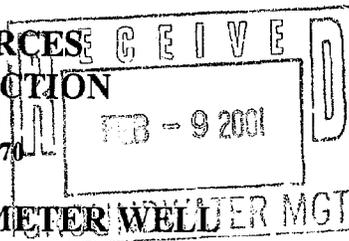
A handwritten signature in cursive script that reads "Toni Bergeman".

Toni Bergeman
Water Resource Technician
Groundwater Management Support Section

Enclosures

**ARIZONA DEPARTMENT OF WATER RESOURCES
GROUNDWATER MANAGEMENT SUPPORT SECTION**

MAIL TO: P.O. BOX 458, PHOENIX, ARIZONA 85001-0458
FOR INFORMATION: CALL MONICA ORTIZ AT 602-417-2470



NOTICE OF INTENTION TO DRILL MONITOR/PIEZOMETER WELL

PLEASE READ GENERAL INSTRUCTIONS AND CONDITIONS ON REVERSE SIDE OF THIS FORM BEFORE COMPLETING.

1. Well/land Location:

14 N S 13 E W 14
Township Range Section
NW 1/4 SW 1/4 NE 1/4
10 Acre 40 Acre 160 Acre

2. Position location of the well on the land:

Latitude 110 ° 39 ' 22 "
Longitude 32 ° 13 ' 02 "

3. County: Pima

4. Owner of the well:

City of Tucson
Name
P.O. Box 27210
Mailing Address
Tucson AZ 85726
City State Zip
Telephone No. (520) 791-5414

6. Owner of the Land of Wellsite:

City of Tucson
Name
P.O. Box 27210
Mailing Address
Tucson, .. AZ 85726
City State Zip

Telephone No. (520) 791-5414

7. Consulting firm:

Hydro Geo Chem, Inc.
Name
Jinshan Tang
Contact Person
Telephone No. (520) 293-1500

8. Purpose of well drilled pursuant to this notice:

Monitor vapor monitoring wells
Piezometer _____

9. If for deepening or modifying, list well registration number:

55-

10. Will this proposed well be associated with a permit: Yes _____ No X

If yes, Permit No. _____

11. Construction will start:

02 07 2001
Month Day Year

12. Period well will remain in use:

5 Months Years

13. For monitoring wells, is pump equipment to be installed?

Yes _____ No X

(a) If yes, design pump capacity: _____

(b) What use will be made of the water: _____

14. Drilling Firm:

FOR SECURITY PURPOSES, THIS DOCUMENT CONTAINS MICROPRINTING IN THE BORDER AND AN ARTIFICIAL WATERMARK ON THE REVERSE SIDE - HOLD AT AN ANGLE TO VIEW

HYDRO GEO CHEM, INC.
51 W. WETMORE ROAD UNIT 101
TUCSON, ARIZONA 85705-1678
(520) 293-1500

BY ENDORSEMENT THIS CHECK WHEN PAID IS ACCEPTED AS FULL PAYMENT OF THE FOLLOWING ACCOUNT		

91-170/1221

11206

PAY <u>Thirty and no/100</u>		DOLLARS	
DATE	TO THE ORDER OF	DESCRIPTION	CHECK NO. NET AMOUNT
<u>2/11/01</u>	<u>Az Dept of Water Resources</u>	<u>permit</u>	<u>11206</u> <u>30</u> <u>00</u>

BANK OF AMERICA
33 N. STONE TUCSON, ARIZONA 85701

FOR SECURITY PURPOSES, THIS DOCUMENT CONTAINS MICROPRINTING IN THE BORDER AND AN ARTIFICIAL WATERMARK ON THE REVERSE SIDE - HOLD AT AN ANGLE TO VIEW

17. If construction plans have been coordinated with Arizona Department of Environmental Quality, who is the agency contact? _____

None

18. If construction plans have been coordinated with Arizona Department of Water Resources, who is the agency contact? _____

VARIANCE CHECKLIST - HYDROLOGY

DATE RECEIVED 2-9-01
DATE TO HYDRO 2-14-01
DATE TO GMSS 2-16-01

POTENTIAL REG. N° 55- _____
55-585610 THRU 55- 585612

FRONT OF N.O.I COMPLETE/CORRECT: YES NO

VARIANCE (?) LETTER RECEIVED YES NO
WELL DIAGRAM (?) RECEIVED YES NO
SITE PLAN (?) RECEIVED YES NO

TYPE AND NUMBER OF WELLS:

<u>3</u> MONITOR	_____	CATHODIC PROTECTION
_____ PIEZOMETER	_____	GROUNDING
_____ GEOTECHNICAL	_____	HEAT PUMP
_____ MINERAL EXPLORATION		
_____ WATER PRODUCTION	_____	OTHER _____

DESCRIBE TYPE OF WELL

VARIANCE:

<input checked="" type="checkbox"/> REQUIRED	<input checked="" type="checkbox"/> GRANTED
_____ NOT REQUIRED	_____ NOT GRANTED
	_____ LETTER ISSUED

ATTENTION!!! NOTICE OF INTENT TEAM:

_____ HARD COPY OF LETTER TO FOLLOW
_____ CALL FOR PICKUP

COMMENTS: OK. Grlh