

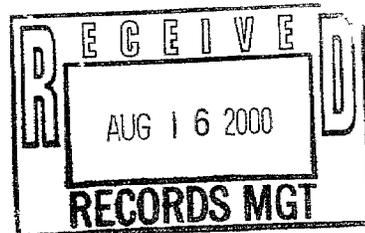
ARIZONA DEPARTMENT OF WATER RESOURCES

500 North Third Street

Phoenix, Arizona 85004

WELL DRILLER REPORT

This report should be prepared by the driller in all detail and filed with the Department within 30 days following completion of the well



1 BOART LONGYEAR COMPANY
7773 WEST SELDON LANE
PEORIA, AZ 85345

2 Owner Name US Environmental Protection Agency
Address 75 Hawthorn St. San Francisco, CA 94105
City State Zip

3 Location 1 N/S Township 3 E/W Range 17 1/4 Section NW 1/4 10-acre NE 1/4 40-acre NE 160-acre

4 Well Registration No 55- 577350 (Required)
5 Permit No (If issued)

DESCRIPTION OF WELL

6 Total depth of hole 92 ft
7 Type of casing PVC Sch 40
8 Diameter and length of casing 2 in from 0 to 80, in from to
9 Method of sealing at reduction points NA
10 Perforated from 80 to 90, from to from to
11 Size of cuts .020 Number of cuts per foot Factory Cut
12 If screen was installed Length 10 ft Diam 2 in Type PVC Sch 40
13 Method of construction Sonic

(drilled, dug, driven, bored, jetted, etc)

14 Date started 10 7 99
Month Day Year
15 Date completed 10 8 99
Month Day Year

16 Depth to water ft (If flowing well, so state)
17 Describe point from which depth measurements were made, and give sea-level elevation if available
Grade
18 If flowing well, state method of flow regulation

19 Remarks

DO NOT WRITE IN THIS SPACE
OFFICE RECORD
Registration No. 55-577350
File No. A(1-3) 17 AAB
Received By
Entered By

**ARIZONA DEPARTMENT OF WATER RESOURCES
GROUNDWATER MANAGEMENT SUPPORT SECTION
500 North Third Street
Phoenix, Arizona 85004-3903**

VARIANCE GRANTED

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

WELL REGISTRATION NO: 55-577350

AUTHORIZED DRILLER: BOART LONGYEAR COMPANY

LICENSE NO: 83

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

CONSULTANT:

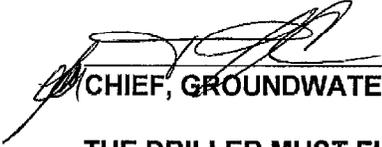
WELL OWNER: US ENVIRONMENTAL PROTECTION AGENCY 75 HAWTHORNE ST SAN FRANCISCO, CA 94105

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

NW 1/4 of the NE 1/4 of the NE 1/4 Section 17 Township 1 NORTH Range 3 EAST

No. of Wells in this project: 1

THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 16TH DAY OF SEPTEMBER, 2000.



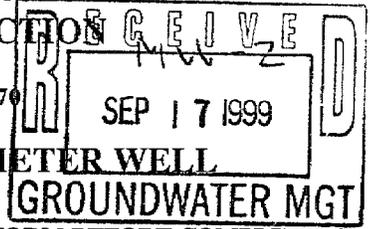
CHIEF, GROUNDWATER MANAGEMENT SUPPORT

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



**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:

IN N/S 3E E/W 17
Township Range Section
NW 1/4 NE 1/4 NE 1/4
10 Acre 40 Acre 160 Acre

2. Position location of the well on the land:

Latitude 33.26.05 " N
Longitude 112.04.13 " W

3. County: Maricopa

4. Owner of the well:

U.S Environmental Protection Agency
Name 75 Hawthorne St.
Mailing Address San Francisco CA 94105
City State Zip
Telephone No. (415) 744 2378

5. Lessee of the land of wellsite:

N/A
Name N/A
Mailing Address N/A N/A N/A
City State Zip
Telephone No. N/A

6. Owner of the Land of Wellsite:

BKO (Wagne & Rosalia Barnes)
Name P.O. Box 15605
Mailing Address Phoenix AZ 85060
City State Zip
Telephone No. N/A Available

7. Consulting firm:

Ecology & Environment, Inc.
Name Jeff White
Contact Person
Telephone No. (415) 931-2311

8. Purpose of well drilled pursuant to this notice:

Monitor
Piezometer

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

55- N/A

FOR DEPARTMENT USE ONLY

File No. A(1-3)17AAB
 Filed 9-17-89 By Gm
 Input 11-5-89 By Gm

DUPLICATE

Mailed 11-5-89 By Gm
 Registration 55- 577350
 AMA/INA Phoenix
 W/S 07 S/B 04

W-XX

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

If yes, Permit No. N/A

11. Construction will start:

10 04 99
Month Day Year

12. Period well will remain in use:

Undetermined Months/Years

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

Yes No

(a) If yes, design pump capacity:

N/A

(b) What use will be made of the water.

tested for chemicals

14. Drilling Firm:

Beant Longyear
Name 7773 W Seldon Ln
Mailing Address Peoria AZ 85345
City State Zip
(602) 436-1881
Telephone No. 853
DWR License Number 073446-A04
ROC License Category

15. Proposed method of abandonment of well after project is completed: abandonment is not proposed. the monitor well will be permanent., pursuant to R12-15-816.

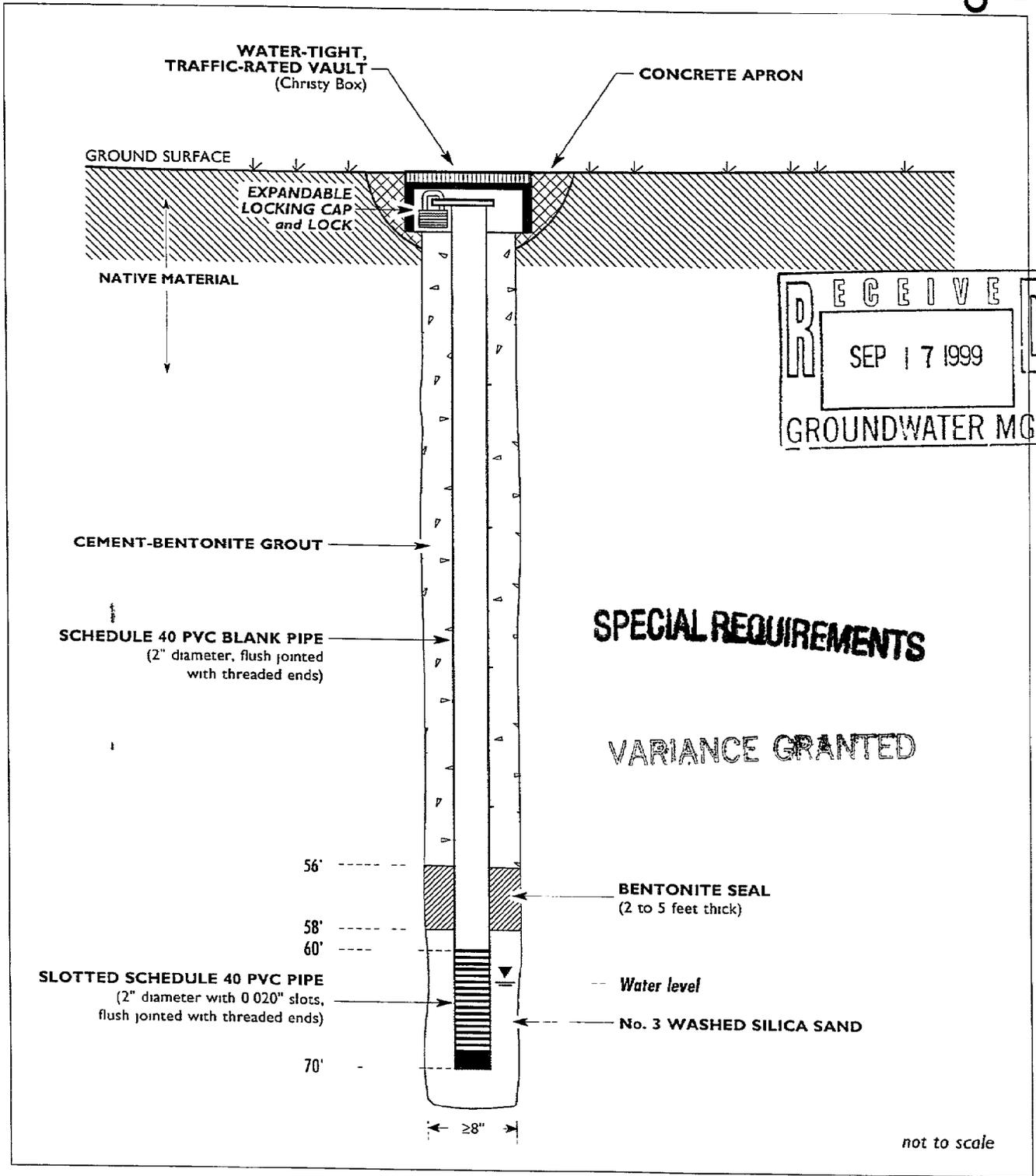
16. Is this well to monitor existing contamination? Potential contamination: Please explain: _____

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

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

N/A - N/A applicable **VARIANCE GRANTED**

SPECIAL REQUIREMENTS



©1999 Ecology and Environment, Inc.

Monitor Wells MW-1, MW-2, MW-3

Monitor Well Construction Diagram

East Washington Fluff Site

433 East Buckeye Road

Phoenix, Arizona

Dr. No. 09 0399 EWST XX a2
TDD 09 9902 0019
PAN 0399 EWST XX
Date 08/24/99
File ST 29



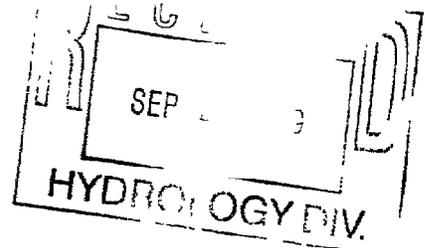
ecology and environment, inc.

International Specialists in the Environment

350 Sansome Street #300,
San Francisco, California 94104
Tel (415) 981-2811, Fax (415) 981-0801

September 22, 1999

Hydrology Division
Arizona Department of Water Resources
500 North 3rd Street
Phoenix, AZ 85004



Attention Kay McNeely

SUBJECT REQUEST FOR MODIFICATION TO NOI

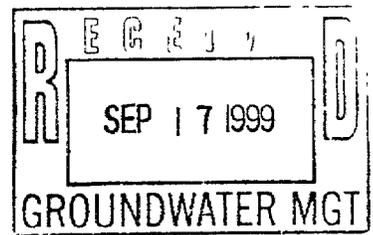
Dear Ms McNeely

In response to our telephone conversation on September 22, 1999, I hereby authorize you to modify Notice of Intent Registration #55-577349, #55 577350, and #55-577351 to accurately reflect the well construction data outlined in the figure attached to the request for variance

Thank you for your attention to this matter If you have any questions I can be reached at (415) 981 2811

Sincerely,

Jason Musante



August 19, 1999

Hydrology Division
Arizona Department of Water Resources
500 North 3rd Street
Phoenix, AZ 85004

Attention: Jim Johnson

SUBJECT: REQUEST FOR VARIANCE

Dear Mr. Johnson:

Ecology and Environment requests a variance in construction of three (3) Groundwater Monitoring wells at 433 E. Buckeye Road, located in the NW $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$ of Section 17, Township 1 North, Range 3 East in Phoenix, Arizona.

1. The wells will be completed with Schedule 40 PVC in the upper 20' in lieu of the required 20' of steel.
2. The above grade portion of two (2) wells will be sheathed in protective steel casing. The third well will be completed in a watertight, traffic rated flush grade vault in lieu of the required above grade type completion.

Thank you for your attention to this request for variance. If you have any questions I can be reached at (415) 981-2811.

Sincerely,

A handwritten signature in black ink that reads "Jason Musante".

Jason Musante

ARIZONA DEPARTMENT OF WATER RESOURCES

Hydrology Division

500 North Third Street, Phoenix, Arizona 85004

Telephone (602) 417-2448

Fax (602) 417-2425



October 6, 1999

JANE DEE HULL
Governor

RITA P PEARSON
Director

U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

Re: Notice of Intent to Drill Three Monitor Wells
Registration Number 55-577349 Through 55-577351

Dear Mr./Ms.:

The Arizona Department of Water Resources received your request dated September 17, 1999 for construction of three monitor wells to be located in Maricopa County.

The Department has reviewed the above referenced application to determine if the applications meet the substantive requirements of A.R.S. §45-596(D) and A.A.C. R12-15-820. Pursuant to A.R.S. §41-1075, the Department has determined that additional information is required and is being requested through Ecology and Environmental, Inc.

The following information must be submitted before the Department can complete its review.

- Requesting Authorization letter that states Ecology and Environmental, Inc. has EPA permission to sign variance request letter.

Failure to submit the information requested within 62 days may result in the denial of the application. The Department's substantive review time frame is suspended until all of the requested information is provided.

If you have any questions, please contact James L. Johnson of my staff at (602)417-2400 extension 7268.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank Corkhill".

Frank Corkhill
Supervisor
Technical Support Section

FC/JLJ/na
502831

ARIZONA DEPARTMENT OF WATER RESOURCES

Water Quality Assurance Revolving Fund
500 North Third Street, Phoenix, Arizona 85004
Telephone (602) 417-2473
Fax (602) 417-2426



September 22, 1999

U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

Dear Applicant: (55-577349 – 55-577351)

The Department of Water Resources recently received your Notice of Intention to drill three monitor wells located in Township 1 North, Range 3 East, Section 17. This cadastral description is located in or near a contaminated groundwater area known as a Water Quality Assurance Revolving Fund (WQARF) or CERCLA site, see attachments.

Special considerations and/or requirements may be applicable when working in these areas to avoid possible cross contamination between aquifers and/or other problems that can be encountered when working in a contaminated area.

Reference, Arizona Administrative Code, R12-15-811, R12-15-812, R12-15-816, A.R.S. § 45-593(D) and A.R.S. § 45-594.

If you have any questions, please contact me at (602) 417-2400, extension 7270.

Sincerely,

A handwritten signature in cursive script that reads "Shannon Reif".

Shannon Reif
WQARF

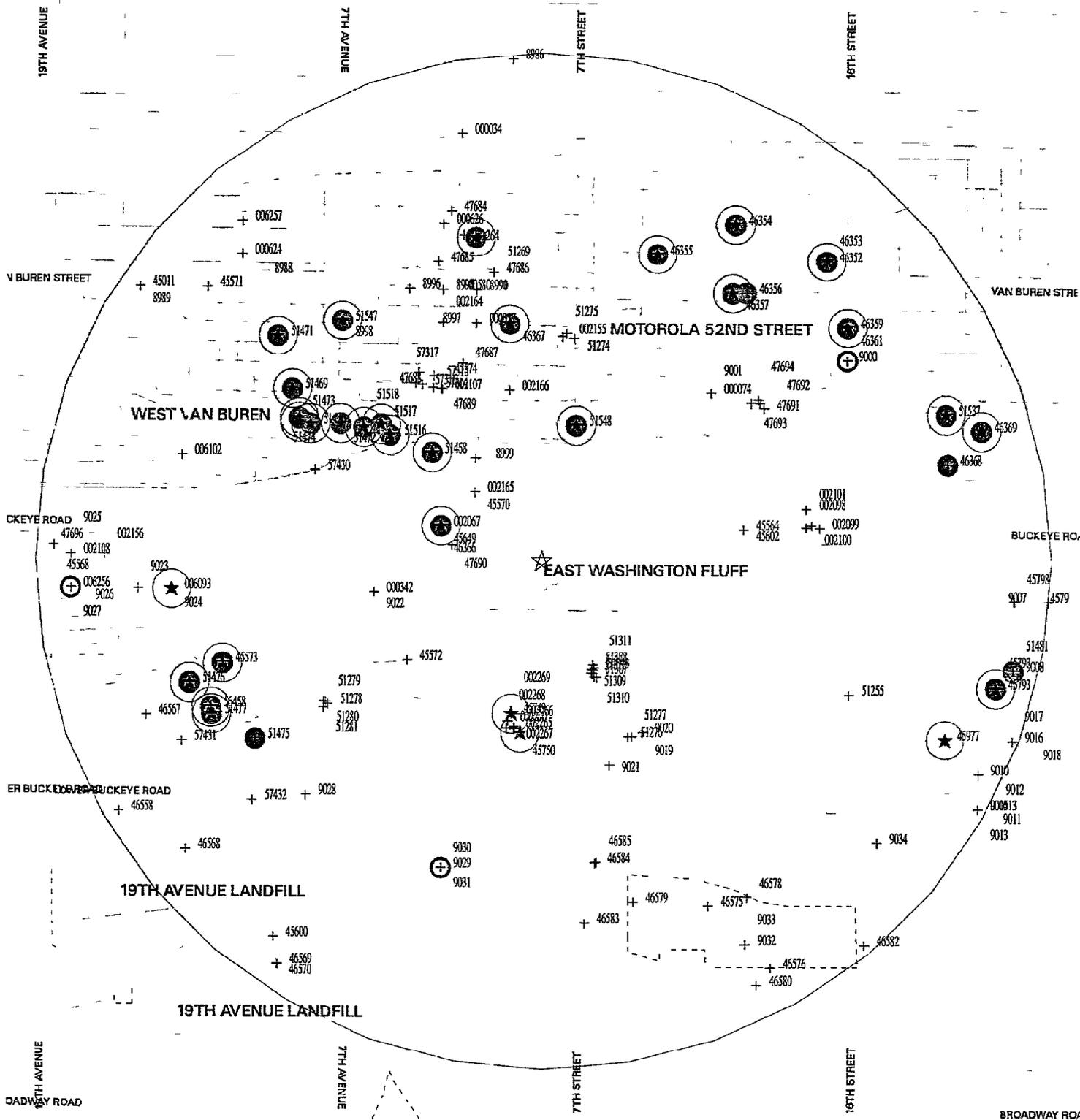
attachments: as stated



Arizona Department of Environmental Quality



ARIZONA DEPARTMENT OF WATER RESOURCES



- Wells > HBGL
- Wells > Secondary MCL
- ★ Wells > MCL
- + No Exceedences or Outside Radius

Water Quality Sample Test Results for
 ADEQ Wells within 10000 Feet of
 T 01.0 N R 03.0 E S 17 AAB
 Printed 09/21/99 Scale 1:auto
 Map Number 990921164553

- ⋮ One Mile Buffer Around WQARF Site
- WQARF Sites
- ⋮ Specified Radius
- ★ Specified Center Point

ARIZONA DEPARTMENT OF WATER RESOURCES

500 North Third Street, Phoenix, Arizona 85004

Telephone (602) 417-2470

Fax (602) 417-2422

November 15, 1999



JANE DEE HULL
Governor

RITA P. PEARSON
Director

US ENVIRONMENTAL PROTECTION AGENCY
75 HAWTHORNE ST
SAN FRANCISCO, CA 94105

RE Registration No 55-577350
File No A(1-3) 17 AAB

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 "Gloria Moss".

Gloria Moss
Water Resource Technician
Groundwater Management Support Section

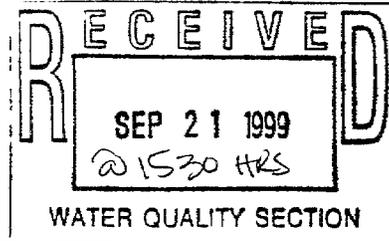
WQARF/CERCLA SITE VERIFICATION CHECKLIST

REGISTRATION NO. 55- 577349-351
DATE RECEIVED 9-17-99
RETURNED TO GWSS 9-24-99

DATE TO WATER QUALITY 9-21-99
DATE TO HYDROLOGY 9-22-99 @ 10:00 AM

CHECK TYPE OF WELL

PRODUCTION WELL _____
NON PRODUCTION WELL ✓ 3 MW's
NOA _____
(A-1-3) 17 AHB EPA



WATER QUALITY ASSURANCE PROGRAM (WQARF) ANALYST COMMENTS ON ACTION TAKEN:

Location of 3 monitor wells is situated in buffer zones of the Motorola 52nd Street CERCLA site and the East Washington Fluff WQARF site
WATQUI Map + AMA Fender + Sample Results attached sent to Hydrology for review

STANDARD LETTER:

REQUIRED _____
NOT REQUIRED _____
LETTER ISSUED _____

DRILL AUTHORIZATION SHOULD BE:

GRANTED ✓
NOT GRANTED _____

SIGNATURE: Shannon Beif

DATE: 9-22-99

HYDROLOGY DIVISION/WQARF HYDROLOGIST COMMENTS ON ACTION TAKEN:

9-22-99 10:45 am Spoke w/ Jason Musante, START. (415) 981-2811. He will fax + mail authorization to add port intervals to 2 MW's to match well diagram.
9-22-99 11:30 am Rec'd fax. Made changes to original. Waiting for letter.
9-24-99 Rec'd mailed authorization.

SPECIAL CONSTRUCTION:

REQUIRED _____
NOT REQUIRED ✓
SPECIAL INSTRUCTIONS ISSUED _____

DRILL AUTHORIZATION SHOULD BE:

GRANTED ✓
NOT GRANTED _____

SIGNATURE Kay McDealy

DATE: 9-24-99

GM

VARIANCE CHECKLIST HYDROLOGY

DATE RECEIVED 9-17-99
 DATE TO HYDRO 9-21-99
 DATE TO GWMSS 11-2-99

POTENTIAL REG NO 55- _____
 55- 577349 THRU 351

FRONT OF NOI COMPLETE/CORRECT:

YES

NO

REQUEST FOR VARIANCE RECEIVED

YES

NO

DIAGRAM/SITE PLAN RECEIVED

YES

NO

TYPE AND NUMBER OF WELLS:

3 MONITOR
 _____ PIEZOMETER
 _____ GEOTECHNICAL
 _____ MINERAL EXPLORATION
 _____ WATER PRODUCTION

_____ CATHODIC PROTECTION
 _____ GROUNDING
 _____ HEAT PUMP
 _____ ABANDONMENT
 _____ OTHER _____

VARIANCE: (PLEASE CHECK APPROPRIATE BLOCKS)

REQUIRED
 _____ NOT REQUIRED

GRANTED
 _____ NOT GRANTED
 _____ LETTER ISSUED

ATTENTION NOTICE OF INTENT TEAM:

_____ HARD COPY OF LETTER TO FOLLOW
 _____ CALL FOR PICKUP

ABANDONMENT ITEM:

#12 _____ #13 _____ #14 _____

_____ SUFFICIENT _____ INSUFFICIENT

COMMENTS REGARDING ACTIONS TAKEN:

10-5-99 CALLED JASON MUSANTE REQUESTED A FAX LETTER STATING THAT
ECOLOGY & ENVIRONMENTAL HAS PERMISSION TO SIGN FOR EPA.
FAX 415-981-0801

JJ INITIALS:

GM