CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
416 W. Congress St., Suite 100
Tucson, Arizona 85701
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

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0149

ADEQ Monthly Report

PBR MINERALS,
INCORPORATED

July 12, 1988

Arizona Department of Environmental Quality
Office of Waste and Water Quality Management
Compliance Section
2005 North Central Avenue
Phoenix, Arizona 85004

RE: Permit No. G-001-02

Dear Sirs:

The following is the field summary for the months of April, May, and June, 1988.

LOCATION	FREE CYANIDE	LAB ANALYSIS
TEI Well No. 1	Mg/L	<0.01
TEI Well No. 2	Mg/L	<0.01
TEI Well No. 3	Mg/L	<0.01
Leak Detection Systems	no moisture detected	

Please be advised that the Method of Analysis for all samples was Hach DR 1/A Colorimeter.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,

Gary A. Lindroos
Technical Superintendent

GAL/cr

3104 EAST CAMELBACK RD.
SUITE 603
PHOENIX, ARIZONA 85016
PHONE 602/457-2282

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 1

Facility Name & Mailing Address

PBR MINERALS, INC.
P.O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary A. Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
L +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	<0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: April, May, and June, 1988. Method of Analysis Hach DR 1/A Colorimeter

Analysis Date _____

Analyst _____

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 2

Facility Name & Mailing Address

PBR MINERALS, INC.
P.O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary A. Lindroos

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate (N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	<0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: April, May, and June, 1988. Method of Analysis Hach DR 1/A Colorimeter

Analysis Date _____

Analyst _____

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 3

Facility Name & Mailing Address

PBR MINERALS, INC.
P.O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary A. Lindroos

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate (N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	<0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: April, May, and June, 1988. Method of Analysis: Hach DR 1/A Colorimeter

Analysis Date _____

Analyst _____

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location LEAK DETECTION SYSTEMS

Facility Name & Mailing Address

PBR MINERALS, INC.
P.O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary A. Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,		,	. ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: April, May, and June, 1988.

NO MOISTURE DETECTED

Analysis Date _____

Analyst _____

PBR MINERALS,
INCORPORATED

April 29, 1988

Arizona Department of Environmental Quality
Office of Waste and Water Quality Management
Compliance Section
2005 North Central Avenue
Phoenix, Arizona 85004

Attention: Mr. Perry Nixon

Re: Permit No. G-0011-02

Dear Mr. Nixon:

The following are the test results of Pad Expansion 1 East and Pad Expansion 1 West, for the month of March 1988.

LOCATION	SAMPLE DATE	TOTAL CYANIDE	LAB ANALYSIS
Pad Expansion 1 East	3-14-88	mg/L	0.01
	3-17-88	mg/L	0.01
	3-25-88	mg/L	0.01
	3-30-88	mg/L	0.01
Pad Expansion 1 West	3-10-88	mg/L	0.01
	3-13-88	mg/L	0.01
	3-18-88	mg/L	0.01
	3-29-88	mg/L	0.01

Should you have any questions concerning these report, please do not hesitate to contact me.

Sincerely,

Gary A. Lindroos
Technical Superintendent

GAL:cr

Enclosures: Lab Test Results

3104 EAST CAMELBACK RD.
SUITE 603
PHOENIX, ARIZONA 85016
PHONE 602/457-2282

Groundwater Quality Protection Permit

Self-Monitoring Report Form

15184
SPECIMEN NO.

03/15/88
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00048

Smith & Smith Environmental Cons.
999 E. Fry Blvd. Suite 202
Sierra Vista, Arizona 85635

ADHS Permit No. _____

Sample Location: Pad Exp 1 East

Facility Name & Mailing Address

P.R.B. Minerals
Attn: Gary Lindroos
950 Skyline Drive. P.O.Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☐ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other _____

Sample Date 03/14/88 Sample Time 0515

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: RVB, GL

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	.
Barium +	P01007,	. ,	Lindane[a]	P39782,	.
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	.
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	.
Lead +	P01051,	. ,	2,4-D[a]	P39730,	.
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	.
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	.
Selenium +	P01147,	. ,		,	.
Silver +	P01077,	. ,		,	.
Fluoride	P00951,	. ,		,	.
	,	. ,	Total Cyanide	,	< 0.01 mg
Alkalinity	P00410,	. ,		,	.
Calcium	P00916,	. ,		,	.
Chloride	P00940,	. ,		,	.
Copper +	P01042,	. ,		,	.
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	.
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	.
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	.
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	.
pH	P00403,	. ,	Cesium-134[b]	P28414,	.
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	.
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	.
TDS	P00500,	. ,	Tritium[b]	P82126,	.
Zinc +	P01092,	. ,	Uranium[b]	P22706,	.

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: _____

Analysis Date 03/21/88

Analyst DHO, RVB

Groundwater Quality Protection Permit
Self-Monitoring Report Form

15 196
SPECIMEN NO.

03/21/88
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00048

Smith & Smith Environmental Cons.
999 E. Fry Blvd. Suite 202
Sierra Vista, Arizona 85635

ADHS Permit No.

Sample Location PAD EXP 1 EAST

Facility Name & Mailing Address

P.R.B. Minerals
Attn: Gary Lindroos
950 Skyline Drive. P.O.Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☐ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other

Sample Date 03/17/88 Sample Time 0511

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: RVB, GL

ADHS Use Only

S C .

Parameter Name*	Stored Parameter Number	Laboratory Analysis Results	Parameter Name*	Stored Parameter Number	Laboratory Analysis Results
Arsenic ♦	P01002,	. ,	Endrin[a]	P39390,	.
Barium ♦	P01007,	. ,	Lindane[a]	P39782,	.
Cadmium ♦	P01027,	. ,	MethoxyChlor[a]	P39480,	.
Chromium ♦	P01034,	. ,	Toxaphene[a]	P39400,	.
Lead ♦	P01051,	. ,	2,4-D[a]	P39730,	.
Mercury ♦	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	.
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	.
Selenium ♦	P01147,	. ,		,	.
Silver ♦	P01077,	. ,		,	.
Fluoride	P00951,	. ,	TOTAL CYANIDE	mg/L ,	< 0 . 0 1
	,	. ,		,	.
Alkalinity	P00410,	. ,		,	.
Calcium	P00916,	. ,		,	.
Chloride	P00940,	. ,		,	.
Copper ♦	P01042,	. ,		,	.
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	.
Iron ♦	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	.
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	.
Manganese ♦	P01055,	. ,	Beta Activity[b]	P03501,	.
pH	P00403,	. ,	Cesium-134[b]	P28414,	.
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	.
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	.
TDS	P00500,	. ,	Tritium[b]	P82126,	.
Zinc ♦	P01092,	. ,	Uranium[b]	P22706,	.

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments:

Analysis Date 03/24/88

Analyst DHO, RVB

Groundwater Quality Protection Permit
Self-Monitoring Report Form

15 239
SPECIMEN NO.

03/30/88
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00048

Smith & Smith Environmental Cons.
999 E. Fry Blvd. Suite 202
Sierra Vista, Arizona 85635

ADHS Permit No.

Sample Location PAD EXP 1 EAST

Facility Name & Mailing Address

P.R.B. Minerals
Attn: Gary Lindroos
950 Skyline Drive. P.O.Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☐ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other

Sample Date 03/25/88 Sample Time 0505

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: RVB, GL

ADHS Use Only

S C

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic ♦	P01002,	. ,	Endrin[a]	P39390,	.
Barium ♦	P01007,	. ,	Lindane[a]	P39782,	.
Cadmium ♦	P01027,	. ,	MethoxyChlor[a]	P39480,	.
Chromium ♦	P01034,	. ,	Toxaphene[a]	P39400,	.
Lead ♦	P01051,	. ,	2,4-D[a]	P39730,	.
Mercury ♦	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	.
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	.
Selenium ♦	P01147,	. ,		,	.
Silver ♦	P01077,	. ,		,	.
Fluoride	P00951,	. ,	TOTAL CYANIDE	mg/L,	< 0.01
	,	. ,		,	.
Alkalinity	P00410,	. ,		,	.
Calcium	P00916,	. ,		,	.
Chloride	P00940,	. ,		,	.
Copper ♦	P01042,	. ,		,	.
Hardness	P00900,	. ,		,	.
Iron ♦	P01045,	. ,	Radium-226/228[b]	P11503,	.
Magnesium	P00927,	. ,	Gross Alpha, Tot[b]	P01501,	.
Manganese ♦	P01055,	. ,	— Count Error[b]	P01502,	.
pH	P00403,	. ,	Beta Activity[b]	P03501,	.
Sodium	P00929,	. ,	Cesium-134[b]	P28414,	.
Sulfate	P00945,	. ,	Iodine-131[b]	P28301,	.
TDS	P00500,	. ,	Strontium-90/89[b]	P01082,	.
Zinc ♦	P01092,	. ,	Tritium[b]	P82126,	.
			Uranium[b]	P22706,	.

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments:

Analysis Date 04/05/8

Analyst DHO, RVB

Groundwater Quality Protection Permit
Self-Monitoring Report Form

IS 258
SPECIMEN NO.

04/04/88
DATE REC'D AT LAB

Lab Name & Address — Lab ID NO. 00048

Smith & Smith Environmental Cons.
999 E. Fry Blvd. Suite 202
Sierra Vista, Arizona 85635

ADHS Permit No. _____

Sample Location PAD EXP 1 EAST

Facility Name & Mailing Address

P.R.B. Minerals
Attn: Gary Lindroos
950 Skyline Drive. P.O.Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☐ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date 03/30/88 Sample Time 0505

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: RVB, GL

ADHS Use Only

S C

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic ♦	P01002,	. ,	Endrin[a]	P39390,	.
Barium ♦	P01007,	. ,	Lindane[a]	P39782,	.
Cadmium ♦	P01027,	. ,	MethoxyChlor[a]	P39480,	.
Chromium ♦	P01034,	. ,	Toxaphene[a]	P39400,	.
Lead ♦	P01051,	. ,	2,4-D[a]	P39730,	.
Mercury ♦	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	.
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	.
Selenium ♦	P01147,	. ,		,	.
Silver ♦	P01077,	. ,		,	.
Fluoride	P00951,	. ,	TOTAL CYANIDE	mg/L,	< 0 . 0 1
	,	. ,		,	.
Alkalinity	P00410,	. ,		,	.
Calcium	P00916,	. ,		,	.
Chloride	P00940,	. ,		,	.
Copper ♦	P01042,	. ,		,	.
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	.
Iron ♦	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	.
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	.
Manganese ♦	P01055,	. ,	Beta Activity[b]	P03501,	.
pH	P00403,	. ,	Cesium-134[b]	P28414,	.
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	.
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	.
TDS	P00500,	. ,	Tritium[b]	P82126,	.
Zinc ♦	P01092,	. ,	Uranium[b]	P22706,	.

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: _____

Analysis Date 04/05/8

Analyst DHO, RVB

KWS

Groundwater Quality Protection Permit

Self-Monitoring Report Form

LS 183
SPECIMEN NO.

03/15/88
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00048

Smith & Smith Environmental Cons.
999 E. Fry Blvd. Suite 202
Sierra Vista, Arizona 85635

ADHS Permit No. _____

Sample Location Pad Exp 1 West

Facility Name & Mailing Address

P.R.B. Minerals
Attn: Gary Lindroos
950 Skyline Drive. P.O.Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☐ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date 03/10/88 Sample Time 0515

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: RVB, GL

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic ♦	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium ♦	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium ♦	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium ♦	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead ♦	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury ♦	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium ♦	P01147,	. ,		,	. ,
Silver ♦	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,	Total Cyanide	,	< 0.01 mg/
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper ♦	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron ♦	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese ♦	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc ♦	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: _____

Analysis Date 03/21/88

Analyst DHO, RVB

KWS

Groundwater Quality Protection Permit

Self-Monitoring Report Form

LS 193
SPECIMEN NO.

03/16/88
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00048

Smith & Smith Environmental Cons.
999 E. Fry Blvd. Suite 202
Sierra Vista, Arizona 85635

ADHS Permit No. _____

Sample Location Pad Exp 1 West

Facility Name & Mailing Address

P.R.B. Minerals
Attn: Gary Lindroos
950 Skyline Drive. P.O.Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☐ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date 03/13/88 Sample Time 0500

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: RVB, GL

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	.
Barium +	P01007,	. ,	Lindane[a]	P39782,	.
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	.
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	.
Lead +	P01051,	. ,	2,4-D[a]	P39730,	.
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	.
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	.
Selenium +	P01147,	. ,		,	.
Silver +	P01077,	. ,		,	.
Fluoride	P00951,	. ,	Total Cyanide	,	< 0.01 mg/
	,	. ,		,	.
Alkalinity	P00410,	. ,		,	.
Calcium	P00916,	. ,		,	.
Chloride	P00940,	. ,		,	.
Copper +	P01042,	. ,		,	.
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	.
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	.
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	.
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	.
pH	P00403,	. ,	Cesium-134[b]	P28414,	.
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	.
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	.
TDS	P00500,	. ,	Tritium[b]	P82126,	.
Zinc +	P01092,	. ,	Uranium[b]	P22706,	.

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: _____

Analysis Date 03/21/88

Analyst DHO, RVB

Groundwater Quality Protection Permit
Self-Monitoring Report Form

18 197
SPECIMEN NO.

03/22/88
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00048

Smith & Smith Environmental Cons.
999 E. Fry Blvd. Suite 202
Sierra Vista, Arizona 85635

ADHS Permit No.

Sample Location PAD EXP 1 WEST

Facility Name & Mailing Address

P.R.B. Minerals
Attn: Gary Lindroos
950 Skyline Drive. P.O.Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☐ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other

Sample Date 03/18/88 Sample Time 0500

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)
Parameter Code: P72019

Collected By: RVB, GL

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic ♦	P01002,	,	Endrin[a]	P39390,	
Barium ♦	P01007,	,	Lindane[a]	P39782,	
Cadmium ♦	P01027,	,	MethoxyChlor[a]	P39480,	
Chromium ♦	P01034,	,	Toxaphene[a]	P39400,	
Lead ♦	P01051,	,	2,4-D[a]	P39730,	
Mercury ♦	P71900,	,	2,4,5-TP Silvex[a]	P39045,	
Nitrate(N)	P00620,	,	TTHM[a]	P82080,	
Selenium ♦	P01147,	,		,	
Silver ♦	P01077,	,		,	
Fluoride	P00951,	,	TOTAL CYANIDE	mg/L,	< 0.01
	,	,		,	
Alkalinity	P00410,	,		,	
Calcium	P00916,	,		,	
Chloride	P00940,	,		,	
Copper ♦	P01042,	,		,	
Hardness	P00900,	,	Radium-226/228[b]	P11503,	
Iron ♦	P01045,	,	Gross Alpha, Tot[b]	P01501,	
Magnesium	P00927,	,	— Count Error[b]	P01502,	
Manganese ♦	P01055,	,	Beta Activity[b]	P03501,	
pH	P00403,	,	Cesium-134[b]	P28414,	
Sodium	P00929,	,	Iodine-131[b]	P28301,	
Sulfate	P00945,	,	Strontium-90/89[b]	P01082,	
TDS	P00500,	,	Tritium[b]	P82126,	
Zinc ♦	P01092,	,	Uranium[b]	P22706,	

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments:

Analysis Date 03/24/

Analyst DHO, RVB

Groundwater Quality Protection Permit
Self-Monitoring Report Form

IS 240
SPECIMEN NO.

03/30/88
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00048

Smith & Smith Environmental Cons.
999 E. Fry Blvd. Suite 202
Sierra Vista, Arizona 85635

ADHS Permit No. _____

Sample Location PAD EXP 1 WEST

Facility Name & Mailing Address

P.R.B. Minerals
Attn: Gary Lindroos
950 Skyline Drive. P.O.Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☐ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other _____

Sample Date 03/29/88 Sample Time 0505

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: RVB, GL

ADHS Use Only

S C

Parameter Name*	Stored Parameter Number	Laboratory Analysis Results	Parameter Name*	Stored Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	.
Barium +	P01007,	. ,	Lindane[a]	P39782,	.
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	.
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	.
Lead +	P01051,	. ,	2,4-D[a]	P39730,	.
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	.
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	.
Selenium +	P01147,	. ,		,	.
Silver +	P01077,	. ,		,	.
Fluoride	P00951,	. ,	TOTAL CYANIDE	mg/L	< 0 .0 1
	,	. ,		,	.
Alkalinity	P00410,	. ,		,	.
Calcium	P00916,	. ,		,	.
Chloride	P00940,	. ,		,	.
Copper +	P01042,	. ,		,	.
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	.
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	.
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	.
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	.
pH	P00403,	. ,	Cesium-134[b]	P28414,	.
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	.
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	.
TDS	P00500,	. ,	Tritium[b]	P82126,	.
Zinc +	P01092,	. ,	Uranium[b]	P22706,	.

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: _____

Analysis Date 04/05/88

Analyst DHO, RVB

PBR MINERALS,
INCORPORATED

April 6, 1988

Arizona Department of Environmental Quality
Office of Waste and Water Quality Management
Compliance Section
2005 North Central Avenue
Phoenix, Arizona 85004

Dear Sirs:

The following is the field summary for the months of January, February, and March, 1988.

LOCATION	FREE CYANIDE	LAB ANALYSIS
TEI Well No. 1	Mg/L	< 0.01
TEI Well No. 2	Mg/L	< 0.01
TEI Well No. 3	Mg/L	< 0.01
Leak Detection Systems	no moisture detected	

Please be advised that the Method of Analysis for all samples was Hach DR 1/A Colorimeter.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,

Gary A. Lindroos /CR

Gary A. Lindroos
Technical Superintendent

GAL:cr

3104 EAST CAMELBACK RD.
SUITE 603
PHOENIX, ARIZONA 85016
PHONE 602/457-2282

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____ DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 1

Facility Name & Mailing Address

PBR Minerals, Inc.
P.O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

XX Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary A. Lindroos

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	< 0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send 2 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: January, February, and March 1988

Method of Analysis: Hach DR 1/A Colorimeter

Analysis Date _____

Analyst _____

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____ DATE REC'D AT LAB _____

Lab Name & Address | LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 2

Facility Name & Mailing Address

PBR Minerals, Inc.
P.O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary A. Lindroos

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	< 0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: January, February, and March 1988
Method of Analysis: Hach DR 1/A Colorimeter

Analysis Date _____

Analyst _____

Groundwater Quality Protection Permit
Self-Monitoring Report Form

SPECIMEN NO. _____ DATE REC'D AT LAB _____

Lab Name & Address — LAB ID NO. _____

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 3

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary A. Lindroos

Facility Name & Mailing Address

PBR Minerals, Inc.
P.O. Box 370
Tombstone, Arizona 85638

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	< 0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send 2 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: January, February and March, 1988. Method of Analysis: Hach DR 1/A Colorimeter

Analysis Date _____

Analyst _____

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location Leak Detection Systems

Facility Name & Mailing Address

PBR Minerals, Inc.
P.O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☐ Groundwater ☐ Vadose ☐ Waste Stream ☒ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary A. Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,		,	. ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: January February, and March 1988.

NO MOISTURE DETECTED

Analysis Date _____

Analyst _____

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 1

Facility Name & Mailing Address

PBR Minerals, Inc.
P. O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	< 0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: October, November December 1987

Method of Analysis: Hach DR 1/A Colorimeter

Analysis Date _____

Analyst Gary Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 2

Facility Name & Mailing Address

PBR Minerals, Inc.
P. O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	< 0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: October, November December 1987

Method of Analysis: Hach DR 1/A Colorimeter

Analysis Date _____

Analyst Gary Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 3

Facility Name & Mailing Address

PBR Minerals, Inc.
P. O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	< 0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send 2 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: October, November, December 1987

Method of Analysis: Hach DR 1/A Colorimeter

Analysis Date _____

Analyst Gary Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location Leak Detection Systems

Facility Name & Mailing Address

PBR Minerals, Inc.
P. O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☐ Groundwater ☐ Vadose ☐ Waste Stream ☒ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,		,	. ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send 2 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: October, November December 1987

NO MOISTURE DETECTED

Analysis Date _____

Analyst Gary Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 1

Facility Name & Mailing Address

PBR Minerals, Inc.
P. O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
L +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	< 0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: October, November December 1987

Method of Analysis: Hach DR 1/A Colorimeter

Analysis Date _____

Analyst Gary Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 2

Facility Name & Mailing Address

PBR Minerals, Inc.
P. O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
L +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	< 0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: October, November December 1987

Method of Analysis: Hach DR 1/A Colorimeter

Analysis Date _____

Analyst Gary Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO.

DATE REC'D AT LAB

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 3

Facility Name & Mailing Address

PBR Minerals, Inc.
P. O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
L +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	<0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: October, November December 1987

Method of Analysis: Hach DR 1/A Colorimeter

Analysis Date

Analyst Gary Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location Leak Detection Systems

Facility Name & Mailing Address

PBR Minerals, Inc.
P. O. Box 370
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☐ Groundwater ☐ Vadose ☐ Waste Stream ☒ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
L +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,		,	. ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary: October, November December 1987

NO MOISTURE DETECTED

Analysis Date _____

Analyst Gary Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location T.E.I. WELL No. 1

Facility Name & Mailing Address

COCHISE SILVER MINES, INC.
P.O. BOX 158
TOMBSTONE, ARIZONA 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary, July, August, September, 1987
Method of Analysis: Hach DR 1/A color/meter

Analysis Date _____

Analyst Gary Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location T.E.I. WELL No. 2

Facility Name & Mailing Address

COCHISE SILVER MINES, INC.
P.O. BOX 158
TOMBSTONE, ARIZONA 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	mg/L ,	0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary July, August September, 1987
Method of Analysis: Hach DR 1/A Color Meter.

Analysis Date _____

Analyst: Gary Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO.

DATE REC'D AT LAB

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location T.E.I. Well No. 3

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P.O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

XX Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	mg/L ,	0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary July August September 1987

Method of Analysis: Hach DR 1/A Color/meter

Analysis Date

Analyst Gary Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location LEAK DETECTION SYSTEMS

Facility Name & Mailing Address

COCHISE SILVER MINES, INC.
P.O. BOX 158
TOMBSTONE, ARIZONA 85638

SAMPLE COLLECTION INFORMATION

☐ Groundwater ☐ Vadose ☐ Waste Stream ☒ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,		,	. ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send 3 copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: NO MOISTURE DETECTED

Analysis Date _____

Analyst Gary Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 1

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P. O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L,	<0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary
April, May & June 1987

Analysis Date _____

Analyst Gary A. Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____ DATE REC'D AT LAB _____

Lab Name & Address — LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 2

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P. O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Le +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L ,	<0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
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Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary
April, May, June 1987

Analysis Date _____

Analyst Gary A. Lindroos

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____ DATE REC'D AT LAB _____

Lab Name & Address LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 3

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P. O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Le +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide	Mg/L,	<0.01 ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Field Summary
April, May & June 1987

Analysis Date _____

Analyst Gary A. Lindroos

Cochise Silver Mines, Inc.
P.O Box 158
Tombstone, Arizona 85638

Arizona Department of Health Services
Water Pollution Compliance Unit
2005 N. Central Ave., Room 413
Phoenix, Arizona 85004

June 9, 1987

Dear Mr. Curlett:

Reference your letter of May 29, 1987 to Mr. Frank Magini, Ref. #145, the the following is submitted:

Water monitoring samples for April, 1987 from TEI wells #1 and #2, Tombstone City Wells #1 and Tombstone Tapwater were not submitted. Explanation can be found in enclosures one (1) and two (2).

TEI Well #3 has been inoperable until this date and future sampling will be taken and analyzed in accordance with Section B.1.b. and Contingency Requirements Part II.C.1. of Groundwater Permit No. G-0011-02.

The field test summaries we submitted were erroneously marked January-April, 1987. Corrected copies are enclosed.

A total of three (3) tailings samples from three (3) different areas of the mine, two (2) tailings samples after processing, nine (9) soil samples at 1,3 and 5 feet of depth beneath old pond and one sample of process water. After charcoal filtration have been collected and shipped to Arizona Testing Laboratories in Phoenix for mercury analysis as per instructions in your letter. Copies of these results will be forwarded to your office upon completion.

Mr. Frank Magini informs me that your hydrologists may want to visit our property and verify these samples. I welcome their arrival and will be glad to resample these or other areas as they suggest.

If you have any questions please contact me at 457-2282. Thank You.

Respectfully Submitted,

Gary A. Lindroos
Cochise Silver Mines, Inc.

GAL/pdd

COCHISE SILVER MINES, INC.
P.O. BOX 158
TOMBSTONE, ARIZONA 85638

June 3, 1987

To Whom It May Concern:

Dear Sirs,

It is with deep regret I must inform you I was negligent in my duties as assayer and chemist and did not submit water samples for testing of TEI Wells No. 1, No. 2, Tombstone City Well No. 1 and Tombstone Tapwater for the month of April, 1987.

My workload at the time was extremely heavy and I did not have assistance in the laboratory. Since that time we have hired a qualified Laboratory Assistant which will lighten my workload considerably.

I neither offer nor intend any excuses and accept full responsibility for my actions. I was simply remiss in my duties and assure everyone, sampling, in the future, will be handled properly and in an expeditious manner.

I have received a written reprimand from my superiors. It is my sincere desire that my actions will not jeopordize the future operations of Cochise Silver Mines.

Sincerely,

Gary A. Lindroos

Gary A. Lindroos

GAL/pdd

Incl 1

COCHISE SILVER MINES, INC.

MEMO

TO: GARY A. LINDROOS
FROM: DUSTIN L. ESCAPULE
REF: REPRIMAND
DATE: JUNE 3, 1987

A written reprimand will be filed for the following reasons:

1.Negligence in duties, failing to take water samples from TEI Wells No. 1, No. 2, Tombstone City Well No. 1 and Tombstone Tapwater for the month of April, 1987.

2. Failing to send samples to Arizona Testing Lab. for the month of April, 1987 from TEI Wells No. 1, No.2, Tombstone City Well No. 1 and Tombstone Tapwater for the month of April, 1987.

Dustin Escapule
DUSTIN ESCAPULE

Gary A. Lindroos
GARY A. LINDROOS

Incl 2

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 1

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P.O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By:

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
L +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide, Mg/L	,	. NIL ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Corrected Copy,
January, February, March, 1987

Analysis Date _____

Analyst _____

Groundwater Quality Protection Permit

Self-Monitoring Report Form

SPECIMEN NO. _____

DATE REC'D AT LAB _____

Lab Name & Address

LAB ID NO.

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 2

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P.O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond

☐ Other _____

Sample Date _____ Sample Time _____

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By:

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
L +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	. ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide Mg/L	,	. NIL ,
Silver +	P01077,	. ,		,	. ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: Corrected Copy,
January, February, March 1987

Analysis Date _____

Analyst _____

ARIZONA TESTING LABS
WELL REPORTS

Arizona Testing Laboratories

817 West Madison Street □ Phoenix, Arizona 85007 □ 602/254-6181

For: Cochise Silver Mines, Inc.
Attn: Mr. Gary Lindroos
Post Office Box 158
Tombstone, Arizona 85638

Date: July 29, 1987

Lab. No.: 4332

Sample: Water

Marked: Sampled: 7-24-87, 0800

Received: 7-27-87

Submitted by: Same

REPORT OF LABORATORY TESTS

Samples Marked:	TEI Well #1	TEI Well #2	Tombstone City, Well #1	Tombstone Tap Water	
Mercury	LT0.001	0.027	LT0.001	LT0.001	mg/L
Nitrate - N	2.6	23.5	11.5	4.2	
Total Cyanide	LT0.01	0.18	LT0.01	LT0.01	
Free Cyanide	LT0.01	0.02	LT0.01	LT0.01	

LT = less than the detection limit given

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Robert J. Drake

Robert J. Drake

COCHISE SILVER MINES, INC.
P. O. Box 158
Tombstone, Arizona 85638

24 July 1987

Arizona Testing Laboratories
817 West Madison Street
Phoenix, Arizona 85007

Dear Sirs:

Enclosed you will find Well Water Samples for TEI Wells No. 1 and No. 2, Tombstone City Well No. 1 and Tombstone Tap Water.

Please run samples for Free and Total Cyanide, Nitrates (as N), and Mercury.

If you have any questions please contact me at 457-2282. Thank you.

Sincerely yours,

Gary A. Lindroos

Gary A. Lindroos
Cochise Silver Mines, Inc.

Duplicate samples to Smith & Smith Labs in Sierra Vista. Ruth Vanden Broeck arrived at 8:00 a.m. the date and we sampled all wells together. GAL

COCHISE SILVER MINES, INC.

CHAIN OF CUSTODY

DATE: 15 May 1987

SAMPLE I.D. See Below

SAMPLE: Gary Lindroos, Cochise Silver Mines, Inc. Gary Lindroos

DELIVERED BY: Harley R Gadsey

RECEIVED BY: Betsy Glauber

SAMPLE I.D. ADDITIONAL INFORMATION:

Tombstone city well No. 1 (3 Bottles)

Tombstone city Tap Water (3 Bottles)

TEI Well No. 1 (3 Bottles)

TEI Well No. 2 (3 Bottles)

COCHISE SILVER MINES, INC.

CHAIN OF CUSTODY

DATE: 15 MAY 1987

SAMPLE I.D. See Below

SAMPLE: GARY LINDROOS, Cochise Silver Mines, INC. Gary Lindroos

DELIVERED BY: Hadley R Godfrey

RECEIVED BY: Betsy Glauber

SAMPLE I.D. ADDITIONAL INFORMATION:

Tombstone City well No. 1	(3 Bottles)
Tombstone City Tap Water	(3 Bottles)
TEI Well No. 1	(3 Bottles)
TEI Well No. 2	(3 Bottles)

Groundwater Quality Protection Permit

Self-Monitoring Report Form

327101
SPECIMEN NO.

18
5/~~15~~/87
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00002

Arizona Testing Laboratories
817 West Madison Street
Phoenix, Arizona 85007

ADHS Permit No. G-0011-02

Sample Location Tombstone City Tap Water

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P.O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other

Sample Date 5-15-87 Sample Time 12:00 Noon

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindroos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	< 0.001 ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	5.0 ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide, mg/L	,	< 0.01 ,
Silver +	P01077,	. ,	Total Cyanide, mg/L	,	< 0.01 ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

Send copies of completed form to:

Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments:

Analysis Date 5/22/87

Analyst SH

226003
Tombstone City Well No. 1
SPECIMEN NO.

Groundwater Quality Protection Permit

Self-Monitoring Report Form
Arizona Department of Health Services

3-13-87
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00002

Arizona Testing Laboratories
817 West Madison Street
Phoenix, Arizona 85007

ADHS Permit No. G-0011-02

Sample Location Tombstone City Well No. 1

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P. O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other

Sample Date 3-13-87 Sample Time 11:55 A.M.

Depth to Water 404.2 Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By:

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	< 0.001 ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	10.0 ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide, mg/L	,	< 0.01 ,
Silver +	P01077,	. ,	Total Cyanide, mg/L	,	< 0.01 ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted. < = less than

[a]Units are µg/l
[b]Units are pCi/l

co Dir. of Public Works, Tombstone, AZ

Send 3 copies of completed form to:
Arizona Department of Health Services
Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments:

Analysis Date 4-6-87

Analyst

26002
Tombstone City Tap Water
SPECIMEN NO.

Groundwater Quality Protection Permit

Self-Monitoring Report Form
Arizona Department of Health Services

3-13-87
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00002

Arizona Testing Laboratories
817 West Madison Street
Phoenix, Arizona 85007

ADHS Permit No. G-0011-02

Sample Location Tombstone City Tap Water

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P. O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☑ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other

Sample Date 3-13-87 Sample Time 11:05 A.M

Depth to Water 518 Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By:

ADHS Use Only

S C

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	< 0.001 ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	6.2 ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide, mg/L	,	< 0.01 ,
Silver +	P01077,	. ,	Total Cyanide, mg/L	,	< 0.01 ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted. < = less than

[a]Units are μg/l
[b]Units are pCi/l

cc: Dir. of Public Works, Tombstone, AZ

Send 3 copies of completed form to:
Arizona Department of Health Services
Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments:

Analysis Date 4-6-87

Analyst

226000

TEI Well No. 1
SPECIMEN NO.

Groundwater Quality Protection Permit

Self-Monitoring Report Form
Arizona Department of Health Services

3-13-87
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00002

Arizona Testing Laboratories
817 West Madison Street
Phoenix, Arizona 85007

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 1

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P. O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other

Sample Date 3-13-87 Sample Time 11:15 A.M.

Depth to Water 518 Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By:

ADHS Use Only

S C .

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	< 0.001 ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	3.0 ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide, mg/L	,	< 0.01 ,
Silver +	P01077,	. ,	Total Cyanide, mg/L	,	< 0.01 ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted. < = less than
co[illegible]ir. of Public Works, Tombstone, AZ

[a]Units are µg/l
[b]Units are pCi/l

Send 3 copies of completed form to:
Arizona Department of Health Services
Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments:

Analysis Date 4-6-87

Analyst RAO

226001
TEI Well No. 2
SPECIMEN NO.

Groundwater Quality Protection Permit

Self-Monitoring Report Form
Arizona Department of Health Services

3-13-87
DATE REC'D AT LAB

L[illegible]ame & Address — LAB ID NO. 00002

Arizona Testing Laboratories
817 West Madison Street
Phoenix, Arizona 85007

ADHS Permit No. G-0011-02

Sample Location TEI Well No. 2

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P. O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other

Sample Date 3-13-87 Sample Time 11:30 A.M.

Depth to Water 52 Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By:

ADHS Use Only

S C

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
C[illegible]mium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	0.025 ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	25. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,	Free Cyanide, mg/L ,		0.01 ,
Silver +	P01077,	. ,	Total Cyanide, mg/L ,		0.16 ,
Fluoride	P00951,	. ,		,	. ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.
[a]Units are μg/l
[b]Units are pCi/l

cc: [illegible]r. of Public Works, Tombstone, AZ

Send 3 copies of completed form to:
Arizona Department of Health Services
Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments:

Analysis Date 4-6-87

Analyst [illegible]

169001
TEI Well No. 1
SPECIMEN NO.

Groundwater Quality Protection Permit

Self-Monitoring Report Form
Arizona Department of Health Services

2-9-87
DATE REC'D AT LAB

L[illegible]ame & Address — LAB ID NO. 00002

Arizona Testing Laboratories
817 West Madison Street
Phoenix, Arizona 85007

ADHS Permit No. G-0011-02

Sample Location: Cochise Silver Mines, Tombstone, ARIZONA

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P. O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other

Sample Date: 2-6-87 Sample Time: 11:10

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindsay

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
C[illegible]mium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	< 0.001 ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	2.9 ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,		,	. ,
Silver +	P01077,	. ,	Free Cyanide, mg/L	,	< 0.01 ,
Fluoride	P00951,	. ,	Total Cyanide, mg/L	,	< 0.01 ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are μg/l
[b]Units are pCi/l

< = less than

cc [illegible] Dir. of Public Works, Tombstone, AZ

Send 3 copies of completed form to:
Arizona Department of Health Services
Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments:

Analysis Date 2-18-87

Analyst RAD

169000
Tombstone City Well No. 1
SPECIMEN NO.

Groundwater Quality Protection Permit

Self-Monitoring Report Form
Arizona Department of Health Services

2-9-87
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00002

Arizona Testing Laboratories
817 West Madison Street
Phoenix, Arizona 85007

ADHS Permit No. G-0011-02

Sample Location Cochise Silver Mines
Tombstone, Arizona

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P. O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other

Sample Date 2-6-87 Sample Time 11:55

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Lindhorst

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	< 0.001 ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	10.5 ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,		,	. ,
Silver +	P01077,	. ,	Free Cyanide, mg/L	,	< 0.01 ,
Fluoride	P00951,	. ,	Total Cyanide, mg/L	,	< 0.01 ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.
[a]Units are µg/l
[b]Units are pCi/l

c Dir. of Public Works, Tombstone, AZ

< = less than

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Arizona Department of Health Services
Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments: _____

Analysis Date 2-18-87

Analyst KAD

169002

TEI Well No. 2
SPECIMEN NO.

Groundwater Quality Protection Permit

Self-Monitoring Report Form
Arizona Department of Health Services

2-9-87
DATE REC'D AT LAB

Lab Name & Address — LAB ID NO. 00002

Arizona Testing Laboratories
817 West Madison Street
Phoenix, Arizona 85007

ADHS Permit No. G-0011-02

Sample Location Cochise Silver Mines Tombstone, ARIZONA

Facility Name & Mailing Address

Cochise, Silver Mines, Inc.
P. O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other

Sample Date 2-6-87 Sample Time 11:25

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary Linhoos

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
Chromium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	0.022 ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	28. ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,		,	. ,
Silver +	P01077,	. ,	Free Cyanide, mg/L	,	0.06 ,
Fluoride	P00951,	. ,	Total Cyanide, mg/L	,	0.27 ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.

[a]Units are µg/l
[b]Units are pCi/l

cc Dir. of Public Works, Tombstone, AZ

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Arizona Department of Health Services
Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments:

Analysis Date 2-18-87

Analyst [illegible]

169003
Tombstone City Tap Water
SPECIMEN NO.

Groundwater Quality Protection Permit

Self-Monitoring Report Form
Arizona Department of Health Services

2-9-87
DATE REC'D AT LAB

L[illegible]ame & Address — LAB ID NO. 00002

Arizona Testing Laboratories
817 West Madison Street
Phoenix, Arizona 85007

ADHS Permit No. G[illegible]011-02

Sample Location Cochise Silver Mines Tombstone, Arizona

Facility Name & Mailing Address

Cochise Silver Mines, Inc.
P. O. Box 158
Tombstone, Arizona 85638

SAMPLE COLLECTION INFORMATION

☒ Groundwater ☐ Vadose ☐ Waste Stream ☐ Pond
☐ Other

Sample Date 2-6-87 Sample Time 12:45

Depth to Water _____ Feet below land surface
(Groundwater Samples Only)

Parameter Code: P72019

Collected By: Gary [illegible]

ADHS Use Only

S C ,

Parameter Name*	Storet Parameter Number	Laboratory Analysis Results	Parameter Name*	Storet Parameter Number	Laboratory Analysis Results
Arsenic +	P01002,	. ,	Endrin[a]	P39390,	. ,
Barium +	P01007,	. ,	Lindane[a]	P39782,	. ,
Cadmium +	P01027,	. ,	MethoxyChlor[a]	P39480,	. ,
C[illegible]mium +	P01034,	. ,	Toxaphene[a]	P39400,	. ,
Lead +	P01051,	. ,	2,4-D[a]	P39730,	. ,
Mercury +	P71900,	< 0.001 ,	2,4,5-TP Silvex[a]	P39045,	. ,
Nitrate(N)	P00620,	5.7 ,	TTHM[a]	P82080,	. ,
Selenium +	P01147,	. ,		,	. ,
Silver +	P01077,	. ,	Free Cyanide, mg/L	,	< 0.01 ,
Fluoride	P00951,	. ,	Total Cyanide, mg/L	,	< 0.01 ,
	,	. ,		,	. ,
Alkalinity	P00410,	. ,		,	. ,
Calcium	P00916,	. ,		,	. ,
Chloride	P00940,	. ,		,	. ,
Copper +	P01042,	. ,		,	. ,
Hardness	P00900,	. ,	Radium-226/228[b]	P11503,	. ,
Iron +	P01045,	. ,	Gross Alpha, Tot[b]	P01501,	. ,
Magnesium	P00927,	. ,	— Count Error[b]	P01502,	. ,
Manganese +	P01055,	. ,	Beta Activity[b]	P03501,	. ,
pH	P00403,	. ,	Cesium-134[b]	P28414,	. ,
Sodium	P00929,	. ,	Iodine-131[b]	P28301,	. ,
Sulfate	P00945,	. ,	Strontium-90/89[b]	P01082,	. ,
TDS	P00500,	. ,	Tritium[b]	P82126,	. ,
Zinc +	P01092,	. ,	Uranium[b]	P22706,	. ,

*Units are mg/l unless otherwise noted.
< = less than
[a]Units are μg/l
[b]Units are pCi/l

c[illegible] Dir. of Public Works, Tombstone, AZ

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Arizona Department of Health Services
Office of Waste and Water Quality Mgmt.
Compliance Section
Room 304
2005 North Central
Phoenix, Arizona 85004

Comments:

Analysis Date 2-18-87

Analyst RAO

FIRE ASSAY WORK SHEETS

Date : 9-2-89
Muffle: 1

	Sample ID	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag	Bottle Roll Au	Bottle Roll Ag	CN	pH
1	9-1-89 EL4696 10025N 10277E 0-10	6.53	.038	6.49				
2	10-17	1.08	.016	1.06				
3	17-23	.44	.009	.43				
4	23-31	.26	.004	.26				
5	31-37	.30	.005	.30				
6	37-44	.19	.003	.19				
7	44-49	.20	.004	.20				
8	49-60	.35	.008	.34				
9	9-1-89 EL4695 10050N 10284E 27-30	.42	.010	.41				
10	30-35	.35	.009	.34				
11	35-39	.48	.010	.47				
12	39-43	.47	.009	.46				
13	43-47	.23	.005	.23				
14	47-50	.21	.004	.21				
15	50-54	.17	.003	.17				
16	54-64	.19	.004	.19				
17	64-71	.17	.004	.17				
18	71-78	.18	.004	.18				
19	78-84	.17	.004	.17				
20	0-9	1.53	.018	1.51				
21	9-14	.52	.012	.51				
22	14-21	.27	.005	.27				
23	21-27	.17	.003	.17				

Date : 9-2-89
Muffle: 2

	Sample ID	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag	Bottle Roll Au	Bottle Roll Ag	CN	pH
1	9-1-89 EL09 10075N 10292E 0-9	1.34	.015	1.33				
2	9-13	.62	.012	.61				
3	13-18	.94	.014	.93				
4	18-23	.29	.004	.29				
5	23-27	.76	.012	.75				
6	27-35	.43	.007	.42				
7	35-43	.52	.009	.51				
8	43-49	TR	N.1	TR				
9	49-55	.20	.004	.20				
10	(9-47ill) EL 4694 10100N 10299E 4-9	6.06	.032	6.03				
11	9-14	4.58	.018	4.56				
12	14-19	1.62	.015	1.61				
13	19-26	1.35	.013	1.34				
14	26-33	.46	.010	.45				
15	33-42	.38	.009	.37				
16	42-49	.29	.005	.28				
17	(53-58ill) 49-53	.65	.011	.64				
18	58-61	.97	.020	.95				
19	9-1-89 EL4694 10125N 10307E 0-7	.94	.022	.92				
20	7-12	6.95	.043	6.91				
21	12-19	1.72	.019	1.70				
22	19-25	1.35	.017	1.33				
23	25-32	.33	.005	.33				
24	32-38	.65	.013	.64				

Date :8-31-89
Muffle: 1

		Fire Assay		Bottle Roll			
Sample ID	Dore'	Au	Ag	Au	Ag	CN	pH
Crusher Head 11:30-1:30 8/30/89	.88	.010		.018	.74		
" "	.99	.011	.98	.019	.74		
" "	.98	.012	.96	—	—		
GRAB 10470N	26.93	.096	25.97	.108	42.84		
✓ Top E Bench 10125N				TR	.12		
✓ Top E Bench 10150N				TR	.06		
✓ Top E Bench 10175N				.004	.22		
✓ South Pit Wastepile				.004	.26		
~~Crusher Hd 8-31-89 12:00~~							
1 Crusher Hd 2-6 8-30-89		.010	1.08	.008	.56		
2 ✓		.009	.88				
3 Crusher Hd 7AM 8-31-89		.013	1.12	.009	.74		
4 ✓ ~~10AM~~		.013	1.16				
5 Crusher Hd ~~5~~ 10 AM 8-31-89		.008	.79	.005	.48		
6 ✓		.008	.74				
7 Crusher Hd 12:00 8-31-89		.017	1.30	.011	.92		
8 ✓		.018	1.33				
9 Crusher Hd 2:00 PM 8-31-89		.035	1.04	.016	.70		
10		.030	1.12				
9 GRAB 10475N E. Bench				TR	.04		

Date : 8-29-89
Muffle: 1

	Sample ID	Dore'	Au	Ag	Au	Ag	CN	pH
		Fire Assay			Bottle Roll			
1	Grab 10360 N	—	—	—	.006	.12		
2	~~MG~~ TEI Tails S.	.45	.008	.44				
3	TEI Tails N.	.31	.007	.30				
4	MG Tails 1	.45	.005	.45				
5	MG Tails 2	.62	.010	.61				
6	Grab 10250 Dike	1.26	.024	1.24				
7	Grab 10265 East	24.51	.034	24.48				
8	Grab 10265 West	1.11	.032	1.08				
9	MG1 NW 0-15 Ft	.62	.014	.61				
10	" 2 W 15-30'	1.73	.041	1.69				
11	" 3 South Corner West	1.49	.052	1.44				
12	" 4 Southwest corner 0-15' East	.80	.011	.79				
13	" 5 South ~~2nd~~ Pile	3.85	.167	3.68				
14	" 6 South 3rd Pile	4.61	.055	4.56				
15	" 7 4th Pile	4.47	.037	4.43				
16	" 8 5th Pile	.97	.052	.92				
17	" 9 6th Pile	1.00	.076	.92				
18	" 10 7th Pile	1.18	.032	1.15				
19	10450N 10414E Elev 4720 (No Fault Axe)	.12	TR	.12				
20	4-7	.68	.009	.67				
21	7-11	1.75	.018	1.73				
22	11-17	.44	.008	.43				
23	10400N Elev 4723 10392E 0-3	.21	.005	.20				
24	3-7	.53	.021	.51				
25	7-15	TR	N.1	TR				
26	10425N Elev 4718 10406E 0-3	.18	.007	.17				
27	3-6	.37	.018	.35				
28	6-12	1.51	.029	1.48				
29	12-15	1.65	.032	1.62				

Date : 8-29-89
Muffle: 1

	Sample ID	Fire Assay Dore'	Au	Ag	Bottle Roll Au	Ag	CN	pH
1	EL 4720 10475N 10427E 0-5	.15	.003	.15				
2	5-10	1.43	.024	1.41				
3	10-5	.65	.018	.63				
4	15-21	.48	.009	.47				
5	21-25	.16	.004	.16				
6	25-30	.11	TR	.11				
7	GRAB 10360N (RR)	39.54	.375	39.17				

Laboratory Analysis
Pad 1 Tailings

Date: 8-23-89

Sample Identification	Fire Assay Au	Fire Assay Ag	As Is Bottle Roll Au	As Is Bottle Roll Ag	As Is + CN Add't Lime" Bottle Roll Au	As Is + CN Add't Lime" Bottle Roll Ag	Pulp Bottle Roll Au	Pulp Bottle Roll Ag
Tail 1	.005	.95	Tr	.08	Tr	.08	.005	.33
2	.005	.86	Tr	.08	Tr	.06	.005	.31
3	.004	.79	Tr	.06	Tr	.02	.004	.28
4	.002	.58	Tr	.02	Tr	.02	.001	.22
5	.002	.58	Tr	.02	Tr	.02	.001	.23
6	.007	.83	Tr	.02	Tr	.02	.005	.40
7	.004	.79	Tr	.02	Tr	.02	.003	.28

REMARKS:

Date : 8-23-89
Muffle: 1

Sample ID	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag	Bottle Roll Au	Bottle Roll Ag	CN	pH
Crusher head 8-22-89	1.67	.024	1.47	.024	1.28		
" (Duplicate) "	1.47	.019	1.45	.018	1.10		
Grab 10240N East				.012	.18		
Crusher head 8-22 (triplicate)	1.67	.022	1.47	.020	1.08		
Grab 10240N North				TR	.38		
" 9900N E Bench (working face)	.23	TR	.23	TR	.08		
9975N waste	.54	.005	.54	.006	.24		
10000N waste	.43	.004	.43	.004	.14		
T-25	.02	TR	.02				
T-26	.18	.001	.18				
T-27	.17	.002	.17				

Date : 8-23-89
Muffle: 1

	Sample ID	Dore'	Fire Assay Au	Fire Assay Ag	Bottle Roll Au	Bottle Roll Ag	CN	pH
1	Crusher Pile Top Aug 22, 1989	.84	.020	.82	.018	.36 ~~.22~~		
2	East	1.49	.032	1.46	.020	1.10		
3	West	2.83	.038	2.79	.022	1.40 ~~.76~~		
4	Center	1.11	.026	1.08	.019	.76		
5	Special	.79	.018	.77	.014	.40		
6	10397E 33-41	.11	.003	.11				
7	41-50	.16	.005	.15				
8	50-59	.21	.008	.20				
9	59-68	.17	.003	.17				
10	68-76	.03	TR	.03				
11	76-84	.13	.002	.13				
12	84-94	.09	.003	.09				
13	94-100	.14	.005	.13				
14	100-106	.20	.008	.19				
15	106-111	.08	.002	.08				
16	111-115	.27	.006	.26				
17	115-119	.08	.003	.08				
18	119-125	TR	N.1	TR				
19	125-130	TR	N.1	TR				
20	130-136	.14	.004	.14				
21	136-145	TR	N.1	TR				
22	145-154	TR	N.1	TR				
23	154-164	TR	N.1	TR				
24	164-173	.67	.018	.65				
25	173-182	2.61	.021	2.59				
26	182-188	TR	N.1	TR				

Date : 8-22-89
Muffle: 1

	Sample ID	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag	Bottle Roll Au	Bottle Roll Ag	CN	pH
1	Grab 9900 N	.66	.008	.65	.008	.26		
2	Grab 10100	1.26	.015	1.25	.014	.85		
3	Grab 10125	.49	.006	.48	.006	.24		
4	GRAB 10150N	.66	.008	.65	.008	.34		
5	" 10160 East	.20	.024	.18	.024	.09		
6	" 10160 West	.24	.021	.22	.020	.06		
7	Grab 10160N Grey	.43	.011	.42	.012	.08	¢	
8	Crusher Head 8-20-89	1.35	.022	1.33	.019	.90		
9	10375N 10382E ~~Crusher Head~~ 8-11	.39	.004	.39				
10	11-18	.26	.002	.26				
11	18-22	.22	.002	.22				
12	22-30	.08	Tr	.08				
13	30-40	.11	Tr	.11				
14	40-44	.17	Tr	.17				
15	Elev 4735 10450N 10430E 0-6	2.73	.039	2.69				
16	6-10	4.85	.056	4.79				
17	10-14	.59	.009	.58				
18	14-20	.17	Tr	.17				
19	20-26	.38	.002	.38				
20	26-38	.16	.001	.16				
21	38-47	.15	Tr	.15				
22	Elev 4736 10475N 10457E 0-7	1.11	.014	1.09				
23	7-13	.29	.004	.29				
24	13-19	.28	.003	.28				
25	19-24	.07	Tr	.07				
26	24-32	.11	Tr	.11				
27	32-40	.09	Tr	.09				
28	40-47	.10	Tr	.10				

Date : 8-22-89
Muffle: 2

	Sample ID	Dore'	Fire Assay Au	Fire Assay Ag	Bottle Roll Au	Bottle Roll Ag	CN	pH
1	Head Comp 8-21-89	1.25	.022	1.23	.022	.92		
2	" "	1.23	.022	1.21	.022	.92		
3	Grab 10100N E. Bench	.14	.023	.12	.024	.11		
4	10050 E. Bench	.07	.005	.06	.005	.06		
5	9925N E Bench	.04	.007	.03	.007	.03		
6	9925N W Bench	.15	.009	.14	.009	.13		
7	9950 E Bench	.08	.005	.07	.004	.05		
8	9975 E Bench	.12	.005	.11	.006	.10		
9	10000N E. Bench	.09	.005	.08	.005	.07		
10	10025N E. Bench	.04	.007	.03	.006	.05		
11	Crusher Pile (R) 8-22-89	199.40	1.096	198.30	.078	.63		
12	" (L) 8-22-89	1.14	.018	1.12	.014	.66		
13	" (C) 8-22-89	1.02	.019	1.00	.008	.64		
14	10400N EL4723 10392E 0-9	.12	.002	.12				
15	9-11	.14	.005	.13				
16	11-17	.05	TR	.05				
17	17-24	5.57	.043	5.53				
18	24-33	Tr	N.I	TR				
19	33-40	Tr	N.I	TR				
20	10425N E14731 10410E 0-6	.07	.002	.07				
21	6-12	.09	.004	.09				
22	12-17	.13	.005	.12				
23	17-24	.42	.010	.41				
24	24-32	1.15	.024	1.13				
25	10397E 10386N E14726 0-12	.02	TR	.02				
26	12-18	Tr	N.I	TR				
27	18-24	.14	.004	.14				
28	24-33	.03	TR	.03				

Date : 8-18-89
Muffle: 2

	Sample ID	Dore'	Fire Assay Au	Fire Assay Ag	Bottle Roll Au	Bottle Roll Ag	CN	pH
1	10100N continuation 30-36	.72	.018	.70	.022	.80		
2	36-42	.43	.014	.42	.014	.36		
3	(46-50 F.11) 42-46	1.34	.018	1.32	.018	.84		
4	50-58	.11	.005	.11	.005	.10		
5	58-68	.07	.003	.07	.003	.06		
6	68-75	.12	.005	.12	.005	.12		
7	GRAB 9975 N	2.02	.034	1.99	.018	.92		
8	GRAB 10000 N	1.10	.019 ~~.053~~	1.05	.010	.41		
9	10125N Continuation 22-31	.31	.004 ~~.036~~	.27	.006	.24		
10	31-38	.59	.006	.58	.006	.30		
11	(42-46 TUNNEL) 38-42	5.02	.014	5.01	.012	1.32		
12	GRAB 10025N EAST	.43	.017	.41	.009	.42		
13	GRAB 10025N WEST	18.40	.084	18.32	.082	10.79		
14	10200N ELEV 4710 10325E 32-39	.56	.006	.55				
15	39-46	.97	TR	.97				
16	10225N ELEV 4710 10334E 6-12	1.06	.002	1.06				
17	(0-6 F.11) 12-19	.56	.013	.55				
18	19-29	.44	.009	.43				
19	29-36	.84	.014	.83				
20	36-45	4.70	.065	4.64				
21	10275N ELEV 4711 10347E 0-3	.73	.028	.70				
22	(3-8 F.11) 8-13	.06	TR	.06				
23	(13-17 F.11) 17-26	1.27	.009	1.26				
24	26-31	14.53	.061	14.47				
25	(39-46 F.11) 31-39	.43	.007 ~~.007~~	.42 ~~.007~~				
26	10300N ELEV 4712 10354E 0-9	.69	.008	.68				
27	(14-19 F.11) 9-14	6.45	.031	6.42				
28	19-28	.42	.004	.42				

Date : 8-21-89
Muffle: 1

	Sample ID	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag	Bottle Roll Au	Bottle Roll Ag	Bottle Roll CN	Bottle Roll pH
1	T 1	.50	.002	.50				
2	T 2	.28	TN	.28				
3	T 3	.51	.003	.51				
4	T 4	.51	.003	.51				
5	T 5	.47	.002	.47				
6	T 6	.42	.003	.42				
7	T 7	.23	.001	.23				
8	T 8	.16	TN	.16				
9	T 9	.42	.004	.42				
10	T 10	.56	.003	.56				
11	T 11	.47	.003	.47				
12	T 12	.12	TN	.12				
13	T 13	4.57	.013	4.56				
14	T 14	.32	.002	.32				
15	T 15	.27	.001	.27				
16	T 16	.14	TN	.14				
17	T 17	.37	.003	.37				
18	T 18	.40	.003	.40				
19	T 19	.32	.002	.32				
20	T 20	.41	.004	.41				
21	T 21	.44	.003	.44				
22	T 22	.31	.001	.31				
23	T 23	.18	TN	.18				
24	T 24	.19	TN	.19				
25	125N Ext 46-56	1.10	.011 ~~[illegible]~~	1.09 ~~.011~~				
26	56-66	.28	.003	.28				
27	10150N Ext 52-59	.03	TN	.03				
28	59-70	.41	.004	.41				

1251.7

Laboratory Analysis

Date: 8-21-89

Bottle Roll

Sample Identification	Au	Ag						
Crushed Head 8-21-89	.018	.89						
" " (DUPLICATE)	.020	.90						

REMARKS:

Date: 8-15-89

Pit Samples

PAGE 2

	Sample Identification	Fire Assay Dore'	Au	Ag		Bottle Roll Au	Ag		
21	ELEV 4713 9975N 10269E 23-29	.68	.008	.67					
	29-34	.52	.009	.51					
23	34-46	.38	.006	.37					
24	46-52	.19	.003	.19					
25	52-66	.60	.009	.59					
26	GRAB 10249 N	6.40	.032	6.37		.038	7.20		
27	GRAB 10285N	.22	.002	.22		.004	.07		
28	" " (DUPLICATE ASSAY)	.30	.005	.30		.004	.07		
1	GRAB 10160N ~~EAST~~ Bench	.12	.005	.11		.003	.06		
2	ELEV 4715 9900N 10239E 0-8	TR	N.1	TR					
3	8-12	TR	N.1	TR					
4	12-16	.08	.002	.08					
5	16-26	.13	.004	.13					
6	26-37	TR	N.1	TR					
7	37-47	.14	.005	.13					
	47-53	.09	.003	.09					
9	53-57	.14	.004	.14					
10	57-64	.13	.004	.13					
11	64-69	.16	.006	.15					
12	69-77	.11	.003	.11					

REMARKS:

muffle 1 (continued) And

muffle 2

Date: 8-15-89

Pit Samples

PAGE 1

	Sample Identification	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
1	ELEV 4712 10000 N 10276 E 0-5	.77	.011	.76					
2	5-11	2.18	.036	2.14					
3	11-15	2.23	.042	2.19					
4	15-21	1.10	.016	1.08					
5	21-28	1.76	.018	1.74					
6	28-39	1.21	.015	1.20					
7	39-43	.88	.012	.87					
8	ELEV 4713 9950 N 10257 E 0-8	.64	.008	.63					
9	8-15	.30	.002	.30					
10	15-20	.99	.012	.98					
11	20-30	.34	.008	.33					
12	30-33	.16	.004	.16					
13	33-39	.20	.004	.20					
14	39-45	.31	.005	.31					
15	45-55	.38	.007	.37					
	55-65	.32	.005	.32					
17	65-75	.31	.005	.31					
18	Elev 4713 9975 N 10269 E 0-6	2.69	.072	2.62					
19	6-13	1.08	.036	1.04					
20	13-23	1.72	.028	1.69					

REMARKS:

muffle 1

Date: 8-14-89

Pit Samples

PAGE 3

	Sample Identification	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
13	GRAB 10200	0.48	.007	.47		.005	.17		
14	ELEV 4714 9925N 10248E 0-4	0.28	.004	.28					
15	4-10	0.24	.005	.24					
16	10-17	0.18	.003	.18					
17	17-22	0.15	.002	.15					
18	22-32	0.03	TN	.03					
19	32-37	0.02	TN	.03					
20	37-42	.36	.002	.36				Ag	
1.	GRAB 10220N	5.91	.138	5.77		.082	[illegible]	5.44	
2	GRAB 10333N	1.07	.032	1.04		.032	[illegible]	.92	
3	GRAB 10372N	.49	.011	.48		.012	[illegible]	.40	
4	Head Ore 8-13-89	2.68	.016	2.66		.010	1.05		
5	" "	2.67	.022	2.65		.016	1.01		
6	" "	2.74	.019	2.72					
7	Elev 4714 9925N 10248E 42-48	.36	.007	.35					
8	48-54	.21	.004	.21					
9	54-61	.30	.005	.30					
10	61-68	1.92	.020	1.90					
11	68-71	1.30	.024	1.28					
12	71-79	2.39	.057	2.33					

REMARKS:

muffle #2 (continued) And
muffle #3

Date: 8-14-89

Pit Samples

	Sample Identification	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
13	Elev 4714. 9925 N 10248E 79-86	.20	.003	.20					
14	86-92	.23	.004	.23					
15	GRAB 10200N East Bench	.21	.004	.21		.004	.07		

REMARKS:

muffle #3 (continued).

Date: 8-14-89

Pit Samples

	Sample Identification	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
1	Head Ore #1 8-12-89 0730	1.58	.015	1.57					
2	✓	1.62	.016	1.60					
3	✓	1.63	.016	1.61					
4	Head Ore #2 8-12-89	1.90	.046	1.85					
5	✓	1.89	.018	1.87					
6	✓	1.85	.022	1.83					
7	Elev 4713 10025N 10283E 0-3	0.44	.004	.44					
8	3-9	39.91	.225	39.69					
9	9-14	4.05	.030	4.02					
10	14-18	5.31	.041	5.27					
11	18-28	4.07	.028	4.04					
12	28-33	5.12	.037	5.08					
13	33-44	.50	.018	.48					
14	44-51	.36	.016	.34					
15	51-62	.71	.010	.70					
16	Elev 4714 10050N 10293E 0-6	.30	.002	.30					
17	6-13	.34	.023	.32					
18	13-25	.33	.015	.32					
19	25-34	.28	.005	.28					
20	34-41	.04	Tr	.04					

REMARKS:

Muffle #1

Date: 8-12-89

Pit Samples

PAGE 2

	Sample Identification	Fire Assay Dore'	Au	Ag		Bottle Roll Au	Ag		
21	10050N 10293E Elev 4714 41-45	.13	Tr	.13					
22	45-51	.12	.002	.12					
23	51-56	.02	Tr	.02					
24	10075N 10310E Elev 4712 0-5	1.14	.030	1.11					
25	5-14	1.02	.011	1.01					
26	14-18	.23	.002	.23					
27	18-23	.25	.001	.25					
28	23-27	.21	.002	.21					
1	10075N 10310E Elev 4712 27-30	.29	.003	.29					
2	30-37	113.22	2.634	110.59					
3	37-41	.23	.007	.22					
4	10100N 10313E Elev 4709 0-5	2.48	.015	2.47					
5	5-9	2.63	.007	2.62					
6	9-14	.74	.008	.73					
7	14-21	.40	.003	.40					
8	21-30	2.31	.048	2.26					
9	10125N 10313E Elev 4710 0-4	1.88	.022	1.86					
10	4-8	5.62	.063	5.56					
11	8-13	0.91	.017	.89					
12	13-22	0.85	.018	.83					

MUFFLE 1

REMARKS: muffle 1 (continued) and muffle 2

Date: 08-11-89

Pit Samples

Sample Identification	Fire Assay Dore'	Au	Ag		Bottle Roll Au	Ag		
GRAB 10110 W of FAULT					.005	.21		
" 10139 N					.003	.20		
" 10130 N					.026	14.05		
" 10150N					.072	2.10		

REMARKS:

Date: 08-10-89

Pit Samples

Sample Identification	Fire Assay Dore'	Au	Ag		Bottle Roll Au	Ag	PH	CN
TAILS PILE #1 FROM H_2O BUCKET					.002	.02	8.5	<0.01
TAILS PILE #1 FROM BUCKET CN	.62	.008	.61		.008	.18	10.5	0.4
TAILS PILE #2 FROM H_2O 2 BAGS					.002	.04	8.5	<0.01
TAILS PILE #2 FROM 2 BAGS CN	.51	.009	.50		.009	.20	11.0	0.3
GRAB 10100N	2.03	.019	2.01		.019	.82		
" 10110N	25.00	.036	24.96		.036	17.20		

REMARKS:

Date: 08-10-89

Pit Samples

Sample Identification	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
GRAB 10000N± TOP EAST Bench	.09	.002	.09		.002	.07		
" 10030N± "	.11	.004	.11		.004	.10		
" 10060N± "	.10	.002	.10		.002	.06		

REMARKS:

Date: 08-09-89

Pit Samples

Sample Identification	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
9970N TOP EAST Bench #1					N.1	.02		
9870 N (E of FLAGS)	.13	.007	.12		.007	.11		
9870 N (W of FLAGS)	.17	.012	.16		.011	.16		
9970N TOP EAST Bench #2	.26	.017	.24		.017	.18		
9880 N AT FLAGS	.25	.016	.23		.015	.22		
9915 N in West Bench	.30	.018	.28		.018	.20		
~~9925N in West Bench~~								
Ore Stockpile 8-9-89 composite	.22	.004	.22		.003	.15		
Mid-GRADE Stockpile 8-9-89 composite	.41	.005	.40		.005	.23		
9925N in West Bench	.57	.007	.56		.007	.36		
10100N Top E Bench	.49	.012	.48		.012	.11		
10175N Top E Bench	.14	.009	.13		.008	.08		
9930 N West Bench Blast fume	.92	.010	.91		.010	.46		
9970 N Grab	1.02	.010	1.01		.010	.40		

REMARKS:

Date: 08-08-89

Pit Samples

Sample Identification	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
10785N GRAB	.19	.007	.18		.008	.12		
11140N "	.92	.015	.91		.014	.68		
11200N "	.49	.012	.48		.010	.28		
Grab 20' SE G.C. Shaft	TN	TN	TN		TN	TN		
Grab 20' S G.C Shaft	TN	TN	TN		TN	TN		
Grab 40' S G.C. Shaft	TN	TN	TN		TN	.03		
Grab 75' W.N. G.C. Shaft	TN	TN	TN		TN	.04		
10750N Grab West Bench Upper Upper	TN	TN	TN		TN	TN		
0.1 AT Sludge Filter Pans	57.41	57.41						
0.1 AT " " "	38.76	38.76						
0.1 AT " " "	132.08	130.08						
15'NE GC Shaft GRAB	.16	.004	.16		.002	.12		
NW Side of GC Shaft GRAB	.13	TR	.13		TR	.12		

REMARKS:

Date: 08-07-89

Pit Samples

Sample Identification	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
9972 N GRAB	.15	T.R	.15		TR	.12		
10057N "	.42	.005	.42		.003	.39		
10090N "	.25	.003	.25		.002	.22		
10110 GRAB	.18	.003	.18		.003	.16		
10630 "	.18	.006	.17		.004	.13		
10650 "	.15	.005	.15		.003	.12		
10670 "	.10	.003	.10		.003	.08		

REMARKS:

Laboratory Analysis

Date: 8-6-89

Sample Identification	Fire Assay DORE	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
Grab 30' East of GC Shaft	.06	TR	.06		TR	.06		

REMARKS:

Date: 08-05-89

Pit Samples

Sample Identification	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
Top E Bench 10420N	.02	TR	.02		TR	.02		
GRAB W. Wall 10420N	.02	TR	.02		TR	.02		
GRAB W. Wall 10450N	TR	N.1	TR		N.1	TR		

REMARKS:

Date: 08-03-89

Pit Samples

Sample Identification	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
10139 GRAB	1.01	.014	.99		.010	.90		
10179 N GRAB East WALL	4.08	.017	4.06		.014	3.60		
10200 N " "	2.03	.010	2.02		.008	1.04		
GRAB "D" W. of FAULT	.19	TR	.19		TR	.09		
" E "	.29	TR	.29		TR	.08		
" F "	.12	.002	.12		.002	.08		
" A "	.24	.002	.24		.002	.14		
" B "	.23	.002	.23		.002	.16		
" C "	.14	TR	.14		TR	.07		
GRAB 10300 N	.43	.004	.42		.002	.14		
" 10350 N	1.49	.008	1.48		.006	.42		
" 10400 N	.11	.001	.11		.001	.09		
" 10450 N	.12	TR	.12		TR	.10		
" 10490 N	.10	Nil	.10		TR	.10		
GRAB 15' S. of G.C. shaft	.09	TR	.09		TN	.08		
Grab 301 W of GC shaft	.08	TR	.08		TN	.09		
Grab E. Wall 10260	.11	.002	.11		.001	.08		
Grab 10520	.08	TR	.08		TN	.06		
Sludge (12.18 gr)								

08-02-89

REMARKS: .159

Mill Precips ~~53.99~~ 54.01

	FA DORE	FA Au	FA Ag		BR Au	BR Ag	
GRAB 10540N	.10	TR	.10		TR	.08	

Date: 7-19-89

Pit Samples

Sample Identification		Fire Assay Dore'	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
10017 N 10021 E	0-11	.42	.012	.41		.010	.46		
	11-23	.22	.002	.22		Tr	.18		
	23-28	.11	Tr	.11		Tr	.09		
	28-36	.07	Tr	.07		Tr	.07		
	36-45	.04	Tr	.04		Tr	.06		
	45-53	.10	.002	.10		.004	.12		
	53-67	.11	Tr	.11		.002	.09		
	67-79	.05	Tr	.05		Tr	.06		
	79-90	Tr	Tr	Tr		Tr	.03		
	90-103	.02	Tr	.02		Tr	.03		
	103-116	.08	Tr	.08		Tr	.07		
	116-132	.11	Tr	.11		Tr	.06		
	132-148	Tr	Tr	Tr		Tr	.04		
	148-164	.09	Tr	.09		Tr	.06		
	164-172	.06	Tr	.06 ~~Tr~~		Tr	.03		
	172-179	.05	Tr	.05 ~~Tr~~		Tr	.03		
	179-196	.06	Tr	.06		Tr	.03		
	196-211	Tr	Tr	Tr		Tr	.05		
9909 N	102-111	.16	.002	Tr		Tr	.10		
10919 N/10774 E	0-8	.22	.004	.22		Tr	.16		

REMARKS:

Date: 7-19-89

Pit Samples

Sample Identification	Fire Assay Dore'	Fire Assay Au	Fire Assay Ag		Bottle Roll Au	Bottle Roll Ag		
10680 N DUMP	.06	.004	.06		.005	.06		
10600 N DUMP	1.17	.011	1.16		.010	1.08		
10582 N DUMP	.97	.006	.97		.004	.84		
10660 N DUMP	.82	.004	.82		.004	.61		
10618 N Dump	.36	TN	.36		TR	.32		
10642 N Dump	.60	.004	.60		.005	1.08		
10705 N Dump	.55	.002	.55		TR	.50		
10720 N Dump	1.54	.007	1.53		.007	1.06		
10742 N Dump	1.57	.010	1.56		.008	1.02		
10764 N Dump	.37	.011	.36		.010	.24		
10785 N Dump	2.72	.029	2.69		.027	2.42		
10817 N Dump	1.39	.012	1.38		.011	1.08		
10854 N Dump	1.55	.012	1.54		.014	1.60		
10901 N Dump	.81	.011	.80		.010	.62		
10939 Dump	1.67	.015	1.65		.012	1.60		
Barrel Test Head	6.07	.018	6.05		.018	6.04		
✓	6.38	.020	6.36					
✓	6.09	.018	6.07					
Ernie #1 1003.0 mg	929.0	.005	929.00					
✓ #2 615.0 mg	581.0	.343	547.0					
REMARKS: #3 398.0 mg	386.0	.002	386.00					

Pority

LP DRILL Hole Samples
1988

Laboratory Analysis
LP6 4T
Totals

Date: 9-14-88

Sample Identification								

REMARKS:

66.15 GRAMS = 2.1267 TROY OZ @ 93.542 % Ag & 4.695 Au
0.2653 TROY OZ 73.032 % Ag & 4.214 Au

7.979 GRAMS =

74.129

2.383 TROY OZ 'DORE'

2.096 Ag 0.0998 Au
0.194 Ag 0.011 Au
2.29 Ag Total ~~0.099~~ 0.1108 Au

0.5725 TROY OZ Ag & 0.0277 TROY OZ / TON ORE

Au RECOVERY 138.5 %
Ag RECOVERY 49.35 %

Laboratory Analysis
LP #6 0'-5' 4 TON TEST
2ND POUR

Date: 9-14-88

Sample Identification	SAMPLE GR	DORE'	AU/%	AG/%				
DORE' PURITY	.973	.758	4.177% 40.645	73.726% 717.355				
" "	.994	.786	4.011% 39.87	75.063% 746.13				
" "	.313	.234	4.454% 13.94	70.307% 220.06				
			AVG 4.214%	AVG 73.032%				

REMARKS:

Laboratory Analysis

Geochem

Date: 8-30-88

Troy oz /Ton

Sample Identification		Au	Ag						
LP 7	0-5'	.036	1.56						
	5-10	.005	.70						
	10-15'	.013	.94						
	15-20	.017	.68						
	20-25'	.012	.66						
LP 8	0-5'	.014	.90						
	5-10	.008	.50						
	10-15'	.004	.48						
	15-20	.018	1.12						
	20-25'	.007	.50						
	25-30	.005	.48						
	30-35'	.007	.54						

REMARKS:

MIBK Extraction - Au

1435 SOUTH 10TH AVENUE
TUCSON, ARIZONA 85713

Jacobs Assay Office
Registered Assayers

PHONE 622-0813

Tucson, Arizona, 8/17/88, 19

Sample Submitted by Mr. P B R MINERALS

Sample Marked	GOLD Ozs. per ton ore	GOLD Value per ton ore*	SILVER Ozs. per ton ore	COPPER Per cent Wet Assay	LEAD Per cent Wet Assay	Per Cent Wet Assay	Per Cent Wet Assay	Per Cent Wet Assay
#10								
0-5	0.008		0.35					
5-10	0.014		0.60					
	0.010		0.45					
10-15	0.012		0.55					
15-20	0.017		0.90					
	0.018		0.95					
20-25	0.018		0.55					
25-30	0.015		0.55					
	0.018		0.60					
30-35	0.017		0.40					

FIRE-ASSAY
<=less than

REGISTERED ASSAYER CERTIFICATE NO. [illegible] ARIZONA DATE SIGNED 8/17/88 Arizona U.S.A.

Charges $ 90.00

Very respectfully,

Laboratory Analysis
Fire Assay - Tailings

Date: 8-16-88

Sample Identification		Au	Ag						
PBR LP 5	35-40	.010	.38						
	40-45	.005	.46						
	45-50	<.005	.33						
	50-55	<.005	.40						
	55-60	<.005	.39						
	60-65	<.005	.79						
PBR LP 3	30-35	.005	.34						
PBR LP 4	35-40	.005	.28						
PBR LP 6	45-50	<.005	.46						
	50-53	.005	.51						
PBR LP 1	0-5	<.005	.22						
	5-10	<.005	.24						
	10-15	.005	.52						
PBR LP 2	0-5	<.005	.34						
	5-10	<.005	.46						
	10-15	.005	.44						
	15-20	.010	.46						
	20-25	.005	.38						
PBR LP 7	0-5	.015	.41						
	5-10	<.005	.37						
	10-15	<.005	.24						

REMARKS:

Laboratory Analysis

Fire Assay - Tailings

Date: 8-16-88

Sample Identification		Au	Ag						
PBR LP 7	15-20	.010	.29						
	20-25	<.005	.58						
	25-30	<.005	.58						
	30-35	<.005	.40						
	35-40	<.005	.44						
	40-45	<.005	.32						
	45-46	.005	.58						
PBR LP 8	0-5	<.005	.24						
	5-10	.005	.41						
	10-15	.005	.54						
	15-20	<.005	.42						
	20-25	<.005	.30						
	25-30	.005	.40						
	35-40 ~~30-35~~	<.005	.44						
PBR LP 9	0-5	.006	.49						
	5-10	.018	1.28						

REMARKS:

Laboratory Analysis

Date: 8-11-88

Fire Assay - Tailings

Sample Identification		Au	Ag						
PBR LP 2	25-30	<.005	.55						
	30-35	.005	.32						
PBR LP 3A	48-50	<.005	.44						
	50-55	<.005	.52						
	55-60	<.005	.42						
	60-65	<.005	.34						
	65-66.5	<.005	.57						
PBR LP 5	0-5	.005	.47						
	5-10	<.005	.68						
	10-15	<.005	.65						
	15-20	.016	1.52						
	20-25	.005	.54						
	25-30	<.005	.46						
	30-35	<.005	.18						

REMARKS:

Laboratory Analysis

Geochem LP Head Assays

Date: 8-22-88

Sample Identification		Au (Troy oz/ton)	Ag (Troy oz/ton)						
LP 1	0-5	.009	.26						
✓	0-5	.007	.28						
LP 1	5-10	.012	.38						
✓	5-10	.012	.48						
LP1	10-15	.016	.68						
✓	10-15	.018	.68						
LP 2	0-5	.013	.96						
✓	0-5	.011	.96						
LP-2	5-10	.008	.58						
✓	5-10	.010	.64						
LP 2	10-15	.022	.48						
✓	10-15	.022	.48						
LP 2	15-20	.026	.74						
✓	15-20	.022	.76						
LP 2	20-25	.016	.56 ~~.38~~						
	20-25	.016	.38 ~~.40~~						
LP 2	25-30	.021	.40						
	25-30	.020	.30						
LP 2	30-35	.012	.52						
	30-35	.012	.48						

REMARKS:

Au - MIBK Extraction

Laboratory Analysis
Fire Assay
Tailings

(1)

Date: 8-9-88

	Sample Identification		Dore'	Au	Ag					
1	PBR LP#3 Tails	0-5	.48	.005	.48					
2	✓	5-10	.48	<.005	.48					
3	✓	10-15	.68	<.005	.68					
4	✓	15-20	.58	<.005	.58					
5	✓	20-25	.44	.007	.43					
6	✓	25-30	.52	.010	.51					
7	✓	30-35	—	—	—	Lost Bead - RERUN TOMORROW				
8	✓	35-40	.60	.007	.59					
9	✓	40-45	.35	.005	.35					
10	✓	45-48	.58	.010	.57					
11	PBR LP#4 Tails	0-5	.42	.007	.41					
12	✓	5-10	.54	.005	.54					
13	✓	10-15	.51	<.005	.51					
14	✓	15-20	.46	.005	.46					
15		20-25	.76	.010	.75					

REMARKS:

Laboratory Analysis

Fire Assay

Tailings

(2)

Date: 8-9-88

	Sample Identification	Doré	Au	Ag						
1	PBR LP# 4 Tails 25-30	.62	.007	.61						
2	30-35	.50	.012	.49						
3	35-40	–	–	–	No Bead - RERUN					
4	40-45	.36	.010	.35						
5	45-50	.48	.010	.47						
6	50-54	.64	.017	.62						
7	PBR LP#6 Tails 0-5	.74	<.005	.74						
8	5-10	.56	.005	.56						
9	10-15	.41	.005	.41						
10	15-20	.36	<.005	.36						
11	20-25	.30	.010	.29						
12	25-30	.42	<.005	.42						
13	30-35	.66	.005	.66						
14	35-40	.84	.010	.83						
15	40-45	.38	.005	.38						

REMARKS:

Averages

Hole #	Feet	Jacobs Au	Jacobs Ag	PBR Au	PBR Ag	Variation Au	Variation Ag
1	(15')	.017	.61667	.009	.47667	+ .008	+ .14
2	(35')	.01721	.85	.01714	.68571	+ .00007	<-.11806>
3	(66.5')	.00945	.5683	.0207	.68636	<-.01125>	<-.11806>
4	(54')	.00860	.75909	.01833	.90667	<.00973>	<-.14758>
5	(65')	.01062	.68846	.012	.35	<-.00138>	+.33846
6	(53')	.00945	.5772	.01418	.76	<.00473>	<-.1828>
7	(46')	.0066	.675	.01518	.788	<-.00858>	<-.113>
8	(40')	.00688	.45	.013	.91625	<-.00612>	<-.46625>
9	(35')	.00957	.5464	.00857	.76286	+.001	<-.21646>
10	(35')	.01371	.5535	.05771	1.28857	<-.044>	<-.73507>
Ton		(.108898)	(6.28462)				
Totals Averages		.0108898	.628462	.01846	.8129	<.00757>	<.184438>
Recovery		.00566	.25138	.009599	.32516	<.003939>	<.07378>

Au	Ag
52%	40%

Jacobs Fire Assays

ID		Au	Ag
LP	0-5	.011	.45
		.013	.60
	5-10	.010	.40
	10-15	.033	.90
		.025	.95
LP2	0-5	.007	.70
	5-10	.013	.65
		.020	.70
	10-15	.044	2.05
	15-20	.016	.85
		.015	.95
	20-25	.009	.50
	25-30	.018	.30
		.021	.55
	30-35	.009	.60
LP3	0-5	.013	.45
		.013	.50
	5-10	.012	.60
	10-15	.015	1.05
		.019	.95
	15-20	.008	.65
	20-25	.010	.80
		.013	.80
	25-30	.009	.65
	30-35	.008	.40
		.011	.45
	35-40	.009	.60
	40-45	.011	.30
		.007	.35
	45-48	.012	.35
LP4	0-5	.007	.45
	5-10	.012	.65
		.011	.65
	10-15	.010	1.05
	15-20	.010	.55
		.012	.80
	20-25	.010	.75
	25-30	.014	.95
		.019	.95
	30-35	.013	1.00
	35-40	.005	.60
		.002	.55

ID		Au	Ag
LP4	40-45	.002	.45
	45-50	.007	.60
		.010	.50
	50-54	TR	1.25
		TR	.50
LP5	0-5	TR	.60
	5-10	.008	.65
	10-15	.053	2.05
		.046	2.10
	15-20	.010	1.25
	20-25	.009	1.15
		.010	1.10
	✓ 25-30	.016	.75
	30-35	.004	.15
		.004	.05
	35-40	.003	.25
	40-45	.005	.35
		.003	.35
	45-50	.018	.40
	✓ 50-55	.009	.25
		.007	.35
	✓ 55-60	.006	.75
	✓ 60-65	.006	.45
		.005	.35
3A	48-50	.014	.80
		.011	.75
	50-55	.009	.75
	55-60	.007	.45
		.006	.45
	60-65	.002	.30
	65-66.5	.006	.40
		.004	.35

Jacobs Fire Assays

ID		Au	Ag
LP 6	0-5	.009	.75
		.005	.55
	5-10	.008	.60
	10-15	.005	.70
		.004	.50
	15-20	.005	.45
	20-25	.004	.35
		.013	.65
	25-30	.009	.65
	30-35	.012	.85
		.015	.75
	35-40	.013	.70
	40-45	.010	.45
		.015	.30
	45-50	.011	.35
	50-53	.015	.40
		.005	.45
LP7	0-5	.007	.50
	5-10	.010	.60
		.012	.75
	10-15	.012	.65
	15-20	.006	.50
	20-25	.006	.55
		.009	.45
	25-30	.012	.40
		.003	.30
	30-35	.005	.30
	35-40	.005	.35
	40-45	.001	.35
		.005	.40
	45-46	Tr	.30
		.015	.90
LP8	0-5	.015	.90
	5-10	.005	.50
		.002	.25
	10-15	.003	.30
	15-20	.002	.40
		.007	.35
	20-25	.005	.45
	25-30	.009	.15
	30-35	.008	.60
		.007	.55
	35-40	.008	.40

ID		Au	Ag
		.007	.48
LP 9	0-5	.009	.40
	5-10	.010	.40
		.008	.70
	10-15	.010	.55
	15-20	.007	.65
		.014	.55
	20-25	.010	.50
	25-30	.011	.50
		.011	.75
	30-35	.009	.70
LP 10	0-5	.008	.35
		.010	.45
	5-10	.014	.60
	10-15	.012	.55
		.018	.75
	15-20	.017	.90
	20-25	.018	.55
		.018	.60
	25-30	.015	.55
	30-35	.017	.40

Jacobs Fire Assays

ID		Au	Ag
LP1	0-5	.011	.45
		.013	.60
	5-10	.010	.40
	10-15	.033	.90
		.025	.95
LP2	0-5	.007	.70
	5-10	.013	.65
		.020	.70
	10-15	.044	2.05
	15-20	.016	.85
		.015	.95
	20-25	.009	.50
	25-30	.018	.30
		.021	.55
	30-35	.009	.60
LP3	0-5	.013	.45
		.013	.50
	5-10	.012	.60
	10-15	.015	1.05
		.019	.95
	15-20	.008	.65
	20-25	.010	.80
		.013	.80
	25-30	.009	.65
	30-35	.008	.40
		.011	.45
	35-40	.009	.60
	40-45	.011	.30
		.067	.35
	45-48	.012	.35
LP4	0-5	.007	.45
	5-10	.012	.65
		.011	.65
	10-15	.010	1.05
	15-20	.010	.55
		.012	.80
	20-25	.010	.75
	25-30	.014	.95
		.019	.95
	30-35	.013	1.00
	35-40	.005	.60
		.002	.55

ID		Au	Ag
LP4	40-45	.002	.45
	45-50	.007	.60
		.010	.50
	50-54	TR	1.25
		TR	.50
LP5	0-5	TR	.60
	5-10	.008	.65
	10-15	.053	2.05
		.046	2.10
	15-20	.010	1.25
	20-25	.009	1.15
		.010	1.10
	25-30	.010	.75
	30-35	.004	.15
		.004	.05
	35-40	.003	.25
	40-45	.005	.35
		.003	.30
	45-50	.018	.40
	50-55	.009	.25
		.007	.35
	55-60	.006	.75
	60-65	.006	.45
		.005	.35
3A	48-50	.014	.80
		.011	.75
	50-55	.009	.75
	55-60	.007	.45
		.006	.45
	60-65	.002	.30
	65-66.5	.006	.40
		.004	.35

Jacobs Fire Assays

ID		Au	Ag
LP 6	0-5	.009	.75
		.005	.55
	5-10	.008	.60
	10-15	.005	.70
		.004	.50
	15-20	.005	.45
	20-25	.004	.35
		.013	.65
	25-30	.009	.65
	30-35	.012	.85
		.015	.75
	35-40	.013	.70
	40-45	.010	.45
		.015	.30
	45-50	.011	.35
	50-53	.015	.40
		.005	.45
LP7	0-5	.007	.50
	5-10	.010	.60
		.012	.75
	10-15	.012	.65
	15-20	.006	.50
		.006	.55
	20-25	.009	.45
	25-30	.012	.40
		.003	.30
	30-35	.005	.30
	35-40	.005	.35
		.001	.35
	40-45	.005	.40
	45-46	Tr	.30
		.015	.90
LP8	0-5	.015	.90
	5-10	.005	.50
		.002	.25
	10-15	.003	.30
	15-20	.002	.40
		.007	.35
	20-25	.005	.40
	25-30	.009	.15
		.008	.60
	30-35	.007	.55
	35-40	.008	.40

ID		Au	Ag
		.007	.48
LP 9	0-5	.009	.40
	5-10	.010	.40
		.008	.70
	10-15	.010	.55
	15-20	.007	.65
		.014	.55
	20-25	.010	.50
	25-30	.011	.50
		.011	.75
	30-35	.009	.70
LP 10	0-5	.008	.35
		.010	.45
	5-10	.014	.60
	10-15	.012	.55
		.018	.95
	15-20	.017	.90
	20-25	.018	.55
		.018	.60
	25-30	.015	.55
	30-35	.017	.40

1435 SOUTH 10TH AVENUE
TUCSON, ARIZONA 85713

Jacobs Assay Office
Registered Assayers

PHONE 622-0813

Tucson, Arizona, 8/9, 1988

Sample Submitted by Mr. PBR MINERALS INC

Sample Marked	GOLD Ozs. per ton ore		~~GOLD Value per ton ore*~~		SILVER Ozs. per ton ore		~~COPPER Per cent Wet Assay~~		~~LEAD Per cent Wet Assay~~		~~Per Cent Wet Assay~~		~~Per Cent Wet Assay~~		~~Per Cent Wet Assay~~	
PBR																
LP3																
0'-10'	0.	006			0.	40										
45'-48'	0.	008			0.	50										
LP#4																
40'-50'	0.	007			0.	50										
50-55	0.	012			1.	70										
FIRE ASSAY																

REGISTERED ASSAYER
CERTIFICATE NO.
ISSUED
MICHAEL G.
JACOBS
DATE SIGNED 8/9/88
Arizona U. S. A.

Charges $ 36.00

Very respectfully,

1435 S. 10th AVE.

Jacobs Assay Office

Registered Assayers

PHONE 622-0813

TUCSON, ARIZONA 85713 8/17/88 19

Certificate No.

Sample Submitted By Mr. P B R MINERALS

SAMPLE MARKED	GOLD OZ. PER TON	SILVER OZ. PER TON
#6 0-5	0.009	0.75
5-10	0.008	0.60
	0.005	0.55
10-15	0.005	0.70
15-20	0.005	0.45
	0.004	0.50
20-25	0.004	0.35
25-30	0.009	0.65
	0.013	0.65
30-35	0.012	0.85
35-40	0.013	0.70
	0.015	0.75
40-45	0.010	0.45
45-50	0.011	0.35
	0.015	0.30
50-53	0.015	0.40
#7 0-5	0.007	0.50
	0.005	0.45
5-10	0.010	0.60
10-15	0.012	0.65
	0.012	0.75
15-20	0.006	0.50
>20-25	0.009	0.45
25-30	0.012	0.40
30-35	0.005	0.30
	0.003	0.30
35-40	0.005	0.35
40-45	0.005	0.40
	0.001	0.35
45-46	TRACE	0.40
#8 0-5	0.015	0.90
	0.015	0.90
5-10	0.005	0.50
10-15	0.003	0.30
	0.002	0.25
15-20	0.002	0.40
20-25	0.005	0.45
	0.007	0.35
#8 25-30	0.009	0.15
30-35	0.007	0.55
	0.008	0.60
#9 0-5	0.009	0.40
	0.007	0.40
5-10	0.010	0.40
10-15	0.010	0.55
	0.008	0.70
15-20	0.007	0.65
20-25	0.010	0.50
	0.014	0.55
25-30	0.011	0.50
30-35	0.009	0.70
>#7 20-25 dupl	0.006	0.55
#8 35-40	0.008	0.40
#9 30-35 dupl	0.011	0.75

REGISTERED ASSAYER CERTIFICATE NO. ASSAYED MICHAEL G. JACOBS DATE SIGNED 8/17/88 Arizona U. S. A.

FIRE-ASSAY
<=less than

Very respectfully,

Charges $ 486.00

1435 S. 10th AVE.

Jacobs Assay Office

Registered Assayers

PHONE 622-0813

Certificate No.

TUCSON, ARIZONA 85713 8/16/88 19

Sample Submitted By Mr. P B R MINERALS

SAMPLE MARKED	GOLD OZ. PER TON	SILVER OZ. PER TON	SAMPLE MARKED	GOLD OZ. PER TON	SILVER OZ. PER TON
#1 0-5	0.011	0.45	#4 0-5	0.007	0.45
	0.013	0.60	5-10	0.011	0.65
5-10	0.010	0.40		0.012	0.65
10-15	0.033	0.90	10-15	0.010	1.05
	0.025	0.95	15-20	0.010	0.55
#2 0-5	0.007	0.70		0.012	0.80
5-10	0.013	0.65	20-25	0.010	0.75
	0.020	0.70	25-30	0.014	0.95
10-15	0.044	2.05		0.019	0.95
15-20	0.016	0.85	30-35	0.013	1.00
	0.015	0.95	35-40	0.006	0.55
20-25	0.009	0.50		0.005	0.60
25-30	0.018	0.50	40-45	0.002	0.45
	0.021	0.55	45-50	0.010	0.50
30-35	0.009	0.60		0.007	0.60
#3 0-5	0.013	0.45	50-54	TRACE	1.25
	0.013	0.50	#5 0-5	TRACE	0.60
5-10	0.016	0.60		TRACE	0.50
10-15	0.019	0.95	5-10	0.008	0.65
	0.015	1.05	10-15	0.053	2.05
15-20	0.008	0.65		0.046	2.10
20-25	0.010	0.80	15-20	0.010	1.25
	0.013	0.80	20-25	0.010	1.10
25-30	0.009	0.65		0.009	1.15
30-35	0.008	0.40	25-30	0.010	0.75
	0.011	0.45	30-35	0.004	0.05
35-40	0.009	0.60		0.004	0.15
40-45	0.011	0.30	35-40	0.003	0.25
	0.007	0.35	40-45	0.005	0.35
45-48	0.012	0.35		0.003	0.35
#3A 48-50	0.011	0.75	45-50	0.018	0.40
	0.014	0.80	50-55	0.009	0.25
50-55	0.009	0.75		0.007	0.35
55-60	0.006	0.45		0.006	0.75
	0.007	0.45	60-65	0.005	0.35
60-65	0.002	0.30		0.006	0.45
65-66.5	0.004	0.35			
	0.006	0.40			

REGISTERED ASSAYER CERTIFICATE NO. 1169 MICHAEL R. JACOBS DATE SIGNED 8/16/88 Arizona U.S.A.

FIRE-ASSAY
<=less than

Very respectfully,

Charges $ 666.00

1435 S. 10th AVE.

Jacobs Assay Office

Registered Assayers

PHONE 622-0813

Certificate No.....

TUCSON, ARIZONA 85713 8/16/88 19

Sample Submitted By Mr. P B R MINERALS

SAMPLE MARKED	GOLD OZ. PER TON	SILVER OZ. PER TON	SAMPLE MARKED	GOLD OZ. PER TON	SILVER OZ. PER TON
#1 0-5	0.011	0.45	#4 0-5	0.007	0.45
	0.013	0.60	5-10	0.011	0.65
5-10	0.010	0.40		0.012	0.65
10-15	0.033	0.90	10-15	0.010	1.05
	0.025	0.95	15-20	0.010	0.55
#2 0-5	0.007	0.70		0.012	0.80
5-10	0.013	0.65	20-25	0.010	0.75
	0.020	0.70	25-30	0.014	0.95
10-15	0.044	2.05		0.019	0.95
15-20	0.016	0.85	30-35	0.013	1.00
	0.015	0.95	35-40	0.006	0.55
20-25	0.009	0.50		0.005	0.60
25-30	0.018	0.50	40-45	0.002	0.45
	0.021	0.55	45-50	0.010	0.50
30-35	0.009	0.60		0.007	0.60
#3 0-5	0.013	0.45	50-54	TRACE	1.25
	0.013	0.50	#5 0-5	TRACE	0.60
5-10	0.016	0.60		TRACE	0.50
10-15	0.019	0.95	5-10	0.008	0.65
	0.015	1.05	10-15	0.053	2.05
15-20	0.008	0.65		0.046	2.10
20-25	0.010	0.80	15-20	0.010	1.25
	0.013	0.80	20-25	0.010	1.10
25-30	0.009	0.65		0.009	1.15
30-35	0.008	0.40	25-30	0.010	0.75
	0.011	0.45	30-35	0.004	0.05
35-40	0.009	0.60		0.004	0.15
40-45	0.011	0.30	35-40	0.003	0.25
	0.007	0.35	40-45	0.005	0.35
45-48	0.012	0.35		0.003	0.35
#3A 48-50	0.011	0.75	45-50	0.018	0.40
	0.014	0.80	50-55	0.009	0.25
50-55	0.009	0.75		0.007	0.35
55-60	0.006	0.45		0.006	0.75
	0.007	0.45		0.005	0.35
60-65	0.002	0.30		0.006	0.45
65-66.5	0.004	0.35			
	0.006	0.40			

REGISTERED ASSAYER CERTIFICATE No. 60-[illegible] SIGNED MICHAEL R. JACOBS DATE SIGNED 8/16/88 Arizona U.S.A.

FIRE-ASSAY
<=less than

Very respectfully,

Charges $ 666.00

1435 S. 10th AVE.

Jacobs Assay Office

Registered Assayers

PHONE 622-0813

Certificate No.....

TUCSON, ARIZONA 85713 8/17/88 19

Sample Submitted By Mr. P B R MINERALS

SAMPLE MARKED	GOLD OZ. PER TON	SILVER OZ. PER TON	SAMPLE MARKED	GOLD OZ. PER TON	SILVER OZ. PER TON
#6 0-5	0.009	0.75	#8 25-30	0.009	0.15
5-10	0.008	0.60	30-35	0.007	0.55
	0.005	0.55		0.008	0.60
10-15	0.005	0.70	#9 0-5	0.009	0.40
15-20	0.005	0.45		0.007	0.40
	0.004	0.50	5-10	0.010	0.40
20-25	0.004	0.35	10-15	0.010	0.55
25-30	0.009	0.65		0.008	0.70
	0.013	0.65	15-20	0.007	0.65
30-35	0.012	0.85	20-25	0.010	0.50
35-40	0.013	0.70		0.014	0.55
	0.015	0.75	25-30	0.011	0.50
40-45	0.010	0.45	30-35	0.009	0.70
45-50	0.011	0.35	> #7 20-25		
	0.015	0.30	dupl	0.006	0.55
50-53	0.015	0.40			
#7 0-5	0.007	0.50	#8 35-40	0.008	0.40
	0.005	0.45			
5-10	0.010	0.60	#9 30-35		
10-15	0.012	0.65	dupl	0.011	0.75
	0.012	0.75			
15-20	0.006	0.50			
> 20-25	0.009	0.45			
25-30	0.012	0.40			
30-35	0.005	0.30			
	0.003	0.30			
35-40	0.005	0.35			
40-45	0.005	0.40			
	0.001	0.35			
45-46	TRACE	0.40			
#8 0-5	0.015	0.90			
	0.015	0.90			
5-10	0.005	0.50			
10-15	0.003	0.30			
	0.002	0.25			
15-20	0.002	0.40			
20-25	0.005	0.45			
	0.007	0.35			

REGISTERED ASSAYER CERTIFICATE NO. 8780 MICHAEL G. JACOBS DATE SIGNED 8/18/88 Arizona U.S.A.

FIRE-ASSAY
<=less than

Very respectfully,

Charges $ 486.00

PBR JACOBS FIRE ASSAYS

	FIRE ASSAY Au	FIRE ASSAY Ag	JACOBS LABS ASSAY Au	JACOBS LABS ASSAY Ag	SUM OF JACOBS ASSAYS SUBTRACTED FROM PBR ASSAYS Au	SUM OF JACOB ASSAYS SUBTRACTED FROM PBR ASSAYS Ag
PBRLP1						
0-5	0.00500	0.32000	0.01200	0.52500	-0.00700	-0.20500
5-10	0.00500	0.17000	0.01000	0.40000	-0.00500	-0.23000
10-15	0.01700	0.94000	0.02900	0.92500	-0.01200	0.01500
AVERAGE	0.00900	0.47667	0.01700	0.61667	-0.00800	-0.14000
PBRLP2						
0-5	0.01200	1.18000	0.00700	0.70000	0.00500	0.48000
5-10	0.00700	0.74000	0.01650	0.67500	-0.00950	0.06500
10-15	0.01000	0.72000	0.04400	2.05000	-0.03400	-1.33000
15-20	0.03000	0.76000	0.01550	0.90000	0.01450	-0.14000
20-25	0.02700	0.47000	0.00900	0.50000	0.01800	-0.03000
25-30	0.02000	0.42000	0.01950	0.52500	0.00050	-0.10500
30-35	0.01400	0.51000	0.00900	0.60000	0.00500	-0.09000
AVERAGE	0.01714	0.68571	0.01721	0.85000	-0.00007	-0.16429
PBRLP3						
0-10	0.010	0.45	0.01400	0.51700	-0.00400	-0.06700
10-20	0.005	0.85	0.01400	0.88300	-0.00900	-0.03300
20-30	0.010	0.57	0.01100	0.75000	-0.00100	-0.18000
30-40	0.020	0.80	0.00900	0.48330	0.01100	0.31670
40-45	0.015	0.49	0.00900	0.32500	0.00600	0.16500
45-48	0.09400	0.76000	0.01200	0.35000	0.08200	0.41000
48-50	0.02000	1.02000	0.01250	0.77500	0.00750	0.24500
50-55	0.02200	1.06000	0.00900	0.75000	0.01300	0.31000
55-60	0.00500	0.47000	0.00650	0.45000	-0.00150	0.02000
60-65	0.00700	0.44000	0.00200	0.30000	0.00500	0.14000
65-65.5	0.02000	0.64000	0.00500	0.37500	0.01500	0.26500
AVERAGE	0.0207273	0.68636	0.00945	0.54166	0.01127	0.14470
PBRLP4						
0-10	0.01500	0.74000	0.01000	0.58300	0.00500	0.15700
10-20	0.01000	0.54000	0.01100	0.80000	-0.00100	-0.26000
20-30	0.01500	1.00000	0.01430	0.88300	0.00070	0.11700
30-40	0.02000	0.76000	0.00800	0.71660	0.01200	0.04340
40-50	0.02000	1.19000	0.00630	0.51660	0.01370	0.67340
50-54	0.03000	1.21000	0.00200	1.25000	0.02800	-0.04000
AVERAGE	0.01833	0.90667	0.00860	0.79153	0.00973	0.11513
PBRLP5						
0-5	0.00700	0.68000	0.00200	0.55000	0.00500	0.13000
5-10	0.01500	1.60000	0.00800	0.65000	0.00700	0.95000
10-15	0.02000	1.21000	0.04950	2.07500	-0.02950	-0.86500
15-20	0.01000	1.64000	0.01000	1.25000	0.00000	0.39000
20-25	0.02000	1.50000	0.01000	1.12500	0.01000	0.37500
25-30	0.00700	0.69000			0.00700	0.69000
30-35	0.00500	0.48000	0.00400	0.10000	0.00100	0.38000
35-40	0.00500	0.43000	0.00300	0.25000	0.00200	0.18000
40-45	0.00500	0.54000	0.00400	0.35000	0.00100	0.19000
45-50	0.00500	0.46000	0.01800	0.40000	-0.01300	0.06000
50-55	0.00500	0.43000			0.00500	0.43000
55-60	0.02000	1.03000			0.02000	1.03000
60-65	0.01200	0.35000			0.01200	0.35000

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PBR JACOBS FIRE ASSAYS

(THROUGH LP#4)

PBR AU .01796 — JACOBS AU .01211 — J = 67% OF PBR AU

PBR AG .71185 — AG .68546 — J = 96% OF PBR AG

	FIRE ASSAY Au	FIRE ASSAY Ag	A.A.S. BOTTLE ROLL RECOVERY Au	A.A.S. BOTTLE ROLL RECOVERY Ag	PERCENT RECOVERY BOTTLE ROLL Au	PERCENT RECOVERY BOTTLE ROLL Ag	FIRE ASSAY TAILS Au	FIRE ASSAY TAILS Ag	PERCENT RECOVERY OF HEAD ASSAY vs TAIL Au	PERCENT RECOVERY OF HEAD vs TAIL ASSAY Ag
20-25	0.04000	0.86000	0.02200	0.48000	0.55000	0.55814	0.00300	0.40000	0.07500	0.46512
25-30	0.28000	4.94000	0.05400	0.78000	0.19286	0.15789	0.00300	0.39000	0.01071	0.07895
30-35	0.03500	0.59000	0.01800	0.40000	0.51429	0.67797	0.00300	0.36000	0.08571	0.61017
AVERAGE	0.05771	1.28857	0.01771	0.44714	0.30693	0.34701	0.00300	0.46000	0.05198	0.35698
AVERAGES										
PBRLP1	0.00900	0.47667	0.00800	0.35000	0.88889	0.73426	0.00367	0.32667	0.40778	0.68532
PBRLP2	0.01714	0.68571	0.01663	0.43635	0.97053	0.63635	0.00486	0.42143	0.28355	0.61459
PBRLP3	0.02072	0.68630	0.01815	0.43817	0.87596	0.63845	0.00445	0.48818	0.21477	0.71132
PBRLP4	0.01830	0.90660	0.01433	0.49417	0.78306	0.54508	0.00917	0.53500	0.50109	0.59012
PBRLP5	0.01040	0.84920	0.00692	0.64385	0.66538	0.75818	0.00500	0.45615	0.48077	0.53715
PBRLP6	0.01400	0.76900	0.00627	0.29182	0.44786	0.37948	0.00491	0.56000	0.35071	0.72822
PBRLP7	0.01580	0.78800	0.00970	0.16730	0.61392	0.21231	0.00510	0.42100	0.32278	0.53426
PBRLP8	0.01300	0.91620	0.00938	0.23250	0.72154	0.25377	0.003865	0.39286	0.29731	0.42879
PBRLP9	0.00857	0.76280	0.00914	0.28286	1.06651	0.37082	0.00300	0.46000	0.35006	0.60304
PBRLP10	0.05771	1.28850	0.01771	0.44714	0.30688	0.34702	0.00386	0.39286	0.06689	0.30490
7OTAL AVERAGE	0.01846	0.81290	0.01162	0.37842	0.62952	0.46551	0.00479	0.44542	0.25934	0.54793

ERROR

FIRE ASSAYS OF HEADS & TAILS & PERCENT RECOVERY

	FIRE ASSAY Au	FIRE ASSAY Ag	A.A.S. BOTTLE ROLL RECOVERY Au	A.A.S. BOTTLE ROLL RECOVERY Ag	PERCENT RECOVERY BOTTLE ROLL Au	PERCENT RECOVERY BOTTLE ROLL Ag	FIRE ASSAY TAILS Au	FIRE ASSAY TAILS Ag	PERCENT RECOVERY OF HEAD ASSAY vs TAIL Au	PERCENT RECOVERY OF HEAD vs TAIL ASSAY Ag
PBRLP6										
0-5	0.01000	1.00000	0.00300	0.42000	0.30000	0.42000	0.00200	0.74000	0.20000	0.74000
5-10	0.010	0.54	0.01200	0.21000	1.20000	0.38889	0.00500	0.56000	0.50000	1.03704
10-15	0.014	0.68	0.01500	0.25000	1.07143	0.36765	0.00500	0.41000	0.35714	0.60294
15-20	0.010	0.42	0.00300	0.11000	0.30000	0.26190	0.00200	0.36000	0.20000	0.85714
20-25	0.014	0.70	0.00300	0.19000	0.21429	0.27143	0.01000	0.83000	0.71429	1.18571
25-30	0.010	0.65	0.00600	0.42000	0.60000	0.64615	0.00200	0.42000	0.20000	0.64615
30-35	0.020	0.83	0.00600	0.62000	0.30000	0.74699	0.00500	0.66000	0.25000	0.79518
35-40	0.020	1.42	0.00900	0.47000	0.45000	0.33099	0.01000	0.83000	0.50000	0.58451
40-45	0.014	0.63	0.00600	0.11000	0.42857	0.17460	0.00500	0.38000	0.35714	0.60317
45-50	0.020	0.82	0.00300	0.21000	0.15000	0.25610	0.00300	0.46000	0.15000	0.56098
50-53	0.01400	0.67000	0.00300	0.20000	0.21429	0.29851	0.00500	0.51000	0.35714	0.76119
AVERAGE	0.01418	0.76000	0.00627	0.29182	0.44231	0.38397	0.00491	0.56000	0.34615	0.73684
PBRLP7										
0-5	0.06000	1.74000	0.04000	0.26000	0.66667	0.14943	0.01500	0.41000	0.25000	0.23563
5-10	0.00500	0.73000	0.00600	0.30000		0.41096	0.00300	0.37000	0.60000	0.50685
10-15	0.01400	0.93000	0.00300	0.34000	0.21429	0.36559	0.00300	0.24000	0.21429	0.25806
15-20	0.02000	0.64000	0.00600	0.06000	0.30000	0.09375	0.01000	0.29000	0.50000	0.45312
20-25	0.01000	0.74000	0.00900	0.21000	0.90000	0.28378	0.00300	0.58000	0.30000	0.78378
25-30	0.00500	0.59000	0.01200	0.18000	2.40000	0.30508	0.00300	0.58000	0.60000	0.98305
30-35	0.01000	0.46000	0.00300	0.00300	0.30000	0.00652	0.00300	0.40000	0.30000	0.86957
35-40	0.01400	0.55000	0.00600	0.08000	0.42857	0.14545	0.00300	0.44000	0.21429	0.80000
40-45	0.01000	0.69000	0.00600	0.12000	0.60000	0.17391	0.00300	0.32000	0.30000	0.46377
45-46	0.01000	0.81000	0.00600	0.12000	0.60000	0.14815	0.00500	0.58000	0.50000	0.71605
AVERAGE	0.01580	0.78800	0.00970	0.16730	0.61392	0.21231	0.00510	0.42100	0.32278	0.53426
PBRLP8										
0-5	0.00700	0.82000	0.01800	0.67000	2.57143	0.81707	0.00300	0.24000	0.42857	0.29268
5-10	0.00500	0.55000	0.01500	0.15000	3.00000	0.27273	0.00500	0.41000	1.00000	0.74545
10-15	0.05000	2.61000	0.00600	0.03000	0.12000	0.01149	0.00500	0.54000	0.10000	0.20690
15-20	0.02000	1.19000	0.00600	0.31000	0.30000	0.26050	0.00300	0.42000	0.15000	0.35294
20-25	0.00500	0.68000	0.00900	0.10000	1.80000	0.14706	0.00300	0.30000	0.60000	0.44118
25-30	0.00500	0.50000	0.00900	0.14000	1.80000	0.28000	0.00500	0.40000	1.00000	0.80000
30-35	0.00500	0.54000	0.00600	0.26000	1.20000	0.48148			0.00000	0.00000
35-40	0.00700	0.44000	0.00600	0.20000	0.85714	0.45455	0.00300	0.44000	0.42857	1.00000
AVERAGE	0.01300	0.91625	0.00938	0.23250	0.72115	0.25375	0.00386	0.39286	0.29670	0.42877
PBRLP9										
0-5	0.00500	0.50000	0.00600	0.24000	1.20000	0.48000	0.00600	0.49000	1.20000	0.98000
5-10	0.01000	0.62000	0.00300	0.18000	0.30000	0.29032	0.01800	1.28000	1.80000	2.06452
10-15	0.00700	0.73000	0.02800	0.22000	4.00000	0.30137			0.00000	0.00000
15-20	0.00700	0.74000	0.01200	0.30000	1.71429	0.40541			0.00000	0.00000
20-25	0.01000	0.81000	0.00300	0.43000	0.30000	0.53086	0.00300	0.34000	0.30000	0.41975
25-30	0.00700	0.67000	0.00600	0.33000	0.85714	0.49254	0.00300	0.40000	0.42857	0.59701
30-35	0.01400	1.27000	0.00600	0.28000	0.42857	0.22047	0.01000	0.54000	0.71429	0.42520
AVERAGE	0.00857	0.76286	0.00914	0.28286	1.06667	0.37079	0.00850	0.64000	0.99167	0.83895
PBRLP10										
0-5	0.00700	0.65000	0.00300	0.42000	0.42857	0.64615	0.00300	0.48000	0.42857	0.73846
5-10	0.01000	0.68000	0.00600	0.24000	0.60000	0.35294	0.00300	0.50000	0.30000	0.73529
10-15	0.01700	0.57000	0.00900	0.29000	0.52941	0.50877	0.00300	0.37000	0.17647	0.64912
15-20	0.01500	0.73000	0.01200	0.52000	0.80000	0.71233	0.00300	0.72000	0.20000	0.98630

PBR JACOBS FIRE ASSAYS

PBR JACOBS FIRE ASSAYS

FRED PEEL ~~888~~

303-988-8902

	FIRE ASSAY Au	FIRE ASSAY Ag	JACOBS LABS ASSAY Au	JACOBS LABS ASSAY Ag	SUM OF JACOBS ASSAYS SUBTRACTED FROM PBR ASSAYS Au	SUM OF JACOB ASSAYS SUBTRACTED FROM PBR ASSAYS Ag
PBRLP1						
0-5	0.00500	0.32000	0.01200	0.52500	-0.00700	-0.20500
5-10	0.00500	0.17000	0.01000	0.40000	-0.00500	-0.23000
10-15	0.01700	0.94000	0.02900	0.92500	-0.01200	0.01500
AVERAGE	0.00900	0.47667	0.01700	0.61667	-0.00800	-0.14000
PBRLP2						
0-5	0.01200	1.18000	0.00700	0.70000	0.00500	0.48000
5-10	0.00700	0.74000	0.01650	0.67500	-0.00950	0.06500
10-15	0.01000	0.72000	0.04400	2.05000	-0.03400	-1.33000
15-20	0.03000	0.76000	0.01550	0.90000	0.01450	-0.14000
20-25	0.02700	0.47000	0.00900	0.50000	0.01800	-0.03000
25-30	0.02000	0.42000	0.01950	0.52500	0.00050	-0.10500
30-35	0.01400	0.51000	0.00900	0.60000	0.00500	-0.09000
AVERAGE	0.01714	0.68571	0.01721	0.85000	-0.00007	-0.16429
PBRLP3						
0-10	0.010	0.45	0.01400	0.51700	-0.00400	-0.06700
10-20	0.005	0.85	0.01400	0.88300	-0.00900	-0.03300
20-30	0.010	0.57	0.01100	0.75000	-0.00100	-0.18000
30-40	0.020	0.80	0.00900	0.48330	0.01100	0.31670
40-45	0.015	0.49	0.00900	0.32500	0.00600	0.16500
45-48	0.09400	0.76000	0.01200	0.35000	0.08200	0.41000
48-50	0.02000	1.02000	0.01250	0.77500	0.00750	0.24500
50-55	0.02200	1.06000	0.00900	0.75000	0.01300	0.31000
55-60	0.00500	0.47000	0.00650	0.45000	-0.00150	0.02000
60-65	0.00700	0.44000	0.00200	0.30000	0.00500	0.14000
65-65.5	0.02000	0.64000	0.00500	0.37500	0.01500	0.26500
AVERAGE	0.0207273	0.68636	0.00945	0.54166	0.01127	0.14470
PBRLP4						
0-10	0.01500	0.74000	0.01000	0.58300	0.00500	0.15700
10-20	0.01000	0.54000	0.01100	0.80000	-0.00100	-0.26000
20-30	0.01500	1.00000	0.01430	0.88300	0.00070	0.11700
30-40	0.02000	0.76000	0.00800	0.71660	0.01200	0.04340
40-50	0.02000	1.19000	0.00630	0.51660	0.01370	0.67340
50-54	0.03000	1.21000	0.00200	1.25000	0.02800	-0.04000
AVERAGE	0.01833	0.90667	0.00860	0.79153	0.00973	0.11513
PBRLP5						
0-5	0.00700	0.68000	0.00200	0.55000	0.00500	0.13000
5-10	0.01500	1.60000	0.00800	0.65000	0.00700	0.95000
10-15	0.02000	1.21000	0.04950	2.07500	-0.02950	-0.86500
15-20	0.01000	1.64000	0.01000	1.25000	0.00000	0.39000
20-25	0.02000	1.50000	0.01000	1.12500	0.01000	0.37500
25-30	0.00700	0.69000			0.00700	0.69000
30-35	0.00500	0.48000	0.00400	0.10000	0.00100	0.38000
35-40	0.00500	0.43000	0.00300	0.25000	0.00200	0.18000
40-45	0.00500	0.54000	0.00400	0.35000	0.00100	0.19000
45-50	0.00500	0.46000	0.01800	0.40000	-0.01300	0.06000
50-55	0.00500	0.43000			0.00500	0.43000
55-60	0.02000	1.03000			0.02000	1.03000
60-65	0.01200	0.35000			0.01200	0.35000

FIRE ASSAYS OF HEADS & TAILS & PERCENT RECOVERY

	FIRE ASSAY Au	FIRE ASSAY Ag	A.A.S. Au	BOTTLE ROLL RECOVERY Au	A.A.S. Ag	BOTTLE ROLL RECOVERY Au	PERCENT RECOVERY BOTTLE ROLL Ag	FIRE ASSAY TAILS Au	FIRE ASSAY TAILS Ag	PERCENT RECOVERY OF HEAD ASSAY vs TAIL Au	PERCENT RECOVERY OF HEAD vs TAIL ASSAY Ag
	Jacobs		Jacobs								
PBRLP1											
0-5	.012	0.00500	0.32000	.52	0.00300	0.08000	0.60000	0.25000	0.00300	0.22000	0.60000	0.68750
5-10	.010	0.00500	0.17000	.40	0.00600	0.12000	1.20000	0.70588	0.00300	0.24000	0.60000	1.41176
10-15	.029	0.01700	0.94000	.92	0.01500	0.85000	0.88235	0.90426	0.00500	0.52000	0.29412	0.55319
AVERAGE		0.00900	0.47667		0.00800	0.35000	0.88889	0.73427	0.00367	0.32667	0.40741	0.68531
PBRLP2											
0-5	.007	0.01200	1.18000	.70	0.00300	0.12000	0.25000	0.10169	0.00300	0.34000	0.25000	0.28814
5-10	.0165	0.00700	0.74000	.675	0.00600	0.42000	0.85714	0.56757	0.00300	0.46000	0.42857	0.62162
10-15	.044	0.01000	0.72000	2.05	0.00900	0.26000	0.90000	0.36111	0.00500	0.44000	0.50000	0.61111
15-20	.0155	0.03000	0.76000	.90	0.00600	0.28000	0.20000	0.36842	0.01000	0.46000	0.33333	0.60526
20-25	.009	0.02700	0.47000	.50	0.00300	0.16000	0.11111	0.34043	0.00500	0.38000	0.18519	0.80851
25-30	.019	0.02000	0.42000	.525	0.00300	0.14000	0.15000	0.33333	0.00300	0.55000	0.15000	1.30952
30-35	.009	0.01400	0.51000	.60	0.00300	0.16000	0.21429	0.31373	0.00500	0.32000	0.35714	0.62745
AVERAGE		0.01714	0.68571		0.00471	0.22000	0.27500	0.32083	0.00486	0.42143	0.28333	0.61458
PBRLP3											
0-10	.014	0.010	0.45	.517	0.00750	0.30000	0.75000	0.66667	0.00400	0.48000	0.40000	1.06667
10-20	.014	0.005	0.85	.883	0.00750	0.31500	1.50000	0.37059	0.00300	0.62000	0.60000	0.72941
20-30	.011	0.010	0.57	.75	0.00600	0.23500	0.60000	0.41228	0.00500	0.47000	0.50000	0.82456
30-40	.009	0.020	0.80	.4833	0.00750	0.30000	0.37500	0.37500	0.00700	0.59000	0.35000	0.73750
40-45	.009	0.015	0.49	.325	0.00600	0.24000	0.40000	0.48980	0.00500	0.35000	0.33333	0.71429
45-48	.012	0.09400	0.76000	.35	0.01200	0.30000	0.12766	0.39474	0.01000	0.57000	0.10638	0.75000
48-50	.0125	0.02000	1.02000	.775	0.00600	0.18000	0.30000	0.17647	0.00300	0.44000	0.15000	0.43137
50-55	.009	0.02200	1.06000	.75	0.00900	0.80000	0.40909	0.75472	0.00300	0.52000	0.13636	0.49057
55-60	.0065	0.00500	0.47000	.45	0.00600	0.15000	1.20000	0.31915	0.00300	0.42000	0.60000	0.89362
60-65	.002	0.00700	0.44000	.80	0.00600	0.12000	0.85714	0.27273	0.00300	0.34000	0.42857	0.77273
65-65.5	.005	0.02000	0.64000	.575	0.00900	0.12000	0.45000	0.18750	0.00300	0.57000	0.15000	0.89062
AVERAGE		0.0207273	0.68636		0.00750	0.27818	0.36184	0.40530	0.00445	0.48818	0.21491	0.71126
PBRLP4											
0-10	.010	0.01500	0.74000	.583	0.00900	0.35500	0.60000	0.47973	0.00600	0.47000	0.40000	0.63514
10-20	.011	0.01000	0.54000	.80	0.00900	0.44000	0.90000	0.81481	0.00400	0.48000	0.40000	0.88889
20-30	.014	0.01500	1.00000	.883	0.01350	0.29000	0.90000	0.29000	0.00800	0.68000	0.53333	0.68000
30-40	.008	0.02000	0.76000	.7166	0.02750	0.57000	1.37500	0.75000	0.01000	0.49000	0.50000	0.64474
40-50	.0063	0.02000	1.19000	.5166	0.01200	0.34000	0.60000	0.28571	0.01000	0.47000	0.50000	0.39496
50-54	.002	0.03000	1.21000	1.25	0.01500	0.97000	0.50000	0.80165	0.01700	0.62000	0.56667	0.51240
AVERAGE		0.01833	0.90667		0.01433	0.49417	0.78182	0.54504	0.00917	0.53500	0.50000	0.59007
PBRLP5											
0-5	.002	0.00700	0.68000	.55	0.00900	0.20000	1.28571	0.29412	0.00500	0.47000	0.71429	0.69118
5-10	.008	0.01500	1.60000	.65	0.00600	0.44000	0.40000	0.27500	0.00300	0.68000	0.20000	0.42500
10-15	.0495	0.02000	1.21000	2.075	0.00900	0.52000	0.45000	0.42975	0.00300	0.65000	0.15000	0.53719
15-20	.010	0.01000	1.64000	1.25	0.01200	0.85000	1.20000	0.51829	0.01600	0.20000	1.60000	0.12195
20-25	.010	0.02000	1.50000	1.125	0.00600	0.32000	0.30000	0.21333	0.00500	0.54000	0.25000	0.36000
25-30		0.00700	0.69000		0.00600	0.25000	0.85714	0.36232	0.00300	0.46000	0.42857	0.66667
30-35	.004	0.00500	0.48000	.10	0.00300	0.04000	0.60000	0.08333	0.00300	0.18000	0.60000	0.37500
35-40	.003	0.00500	0.43000	.25	0.00300	5.00000	0.60000	11.62791	0.01000	0.38000	2.00000	0.88372
40-45		0.00500	0.54000		0.00600	0.03000	1.20000	0.05556	0.00500	0.46000	1.00000	0.85185
45-50	.004	0.00500	0.46000	.35	0.00600	0.06000	1.20000	0.13043	0.00300	0.33000	0.60000	0.71739
50-55	.018	0.00500	0.43000	.40	0.00600	0.08000	1.20000	0.18605	0.00300	0.40000	0.60000	0.93023
55-60		0.02000	1.03000		0.01200	0.52000	0.60000	0.50485	0.00300	0.39000	0.15000	0.37864
60-65		0.01200	0.35000		0.00600	0.06000	0.50000	0.17143	0.00300	0.79000	0.25000	2.25714
AVERAGE		0.01046	0.84923		0.00692	0.64385	0.66176	0.75815	0.00500	0.45615	0.47794	0.53714

Permit Applic. 1988

Senate Engrossed House Bill

ISSUED BY
JIM SHUMWAY
SECRETARY OF STATE

State of Arizona
House of Representatives
Thirty-ninth Legislature
First Regular Session
1989

Chapter 177

HOUSE BILL 2203

AN ACT

RELATING TO PUBLIC HEALTH AND SAFETY; PROVIDING FOR THE LICENSURE OF ENVIRONMENTAL LABORATORIES BY THE DEPARTMENT OF HEALTH SERVICES; PRESCRIBING DEFINITIONS; PRESCRIBING ADOPTION OF RULES; PRESCRIBING LICENSURE REQUIREMENTS; PRESCRIBING EXEMPTIONS TO LICENSURE; PRESCRIBING LICENSE APPLICATION, ISSUANCE AND EXPIRATION; PRESCRIBING DUTIES OF LABORATORY DIRECTORS; PROVIDING FOR PROVISIONAL LICENSES; PRESCRIBING FEES; PRESCRIBING INSPECTIONS AND INVESTIGATIONS; PRESCRIBING REPORTS; PRESCRIBING LICENSE SUSPENSION, REVOCATION OR DENIAL; PRESCRIBING A HEARING; PROHIBITING OPERATION OF AN UNLICENSED LABORATORY; PROVIDING FOR CEASE AND DESIST ORDERS, INJUNCTIONS AND A LETTER OF BELIEF OF VIOLATION; PRESCRIBING THE DEFINITION AND CLASSIFICATION OF A CRIMINAL OFFENSE; PROVIDING FOR CIVIL PENALTIES; PRESCRIBING DUTIES OF THE DIRECTOR; PROVIDING FOR LICENSURE RECIPROCITY AGREEMENTS; ESTABLISHING AN ENVIRONMENTAL LABORATORY LICENSURE REVOLVING FUND; PRESCRIBING USE OF FUND; PRESCRIBING A PUBLIC NUISANCE; PROVIDING FOR THE CONTINUING VALIDITY OF CURRENT LICENSES; MAKING A CONFORMING CHANGE; AMENDING SECTIONS 36-132 AND 36-601, ARIZONA REVISED STATUTES, AND AMENDING TITLE 36, ARIZONA REVISED STATUTES, BY ADDING CHAPTER 4.3.

Be it enacted by the Legislature of the State of Arizona:

Section 1. Section 36-132, Arizona Revised Statutes, is amended to read:

36-132. <u>Department of health services; functions; contracts</u>

A. The department shall, in addition to other powers and duties vested in it by law:

1. Protect the health of the people of the state.

2. Promote the development, maintenance, efficiency and effectiveness of local health departments or districts of sufficient population and area that they can be sustained with reasonable economy and efficient administration, provide technical consultation and assistance to local health departments or districts, provide financial assistance to

1 local health departments or districts and services which meet minimum
2 standards of personnel and performance and in accordance with a plan and
3 budget submitted by the local health department or districts to the
4 department for approval, and recommend the qualifications of all
5 personnel.
6 3. Collect, preserve, tabulate and interpret all information
7 required by law in reference to births, deaths and all vital facts, and
8 obtain, collect and preserve information relating to the health of the
9 people of the state and the prevention of diseases as may be useful in the
10 discharge of functions of the department not in conflict with the
11 provisions of chapter 3 of this title, and sections 36-693, 36-694 and
12 39-122.
13 4. Operate such sanitariums, hospitals or other facilities assigned
14 to the department by law or by the governor.
15 5. Conduct a statewide program of health education relevant to the
16 powers and duties of the department, prepare educational materials and
17 disseminate information as to conditions affecting health, including basic
18 information for the promotion of good health on the part of individuals
19 and communities, and prepare and disseminate technical information
20 concerning public health to the health professions, local health officials
21 and hospitals. In cooperation with the state department of education,
22 prepare and disseminate materials and give technical assistance for the
23 purpose of education of children in hygiene, sanitation and personal and
24 public health, and provide consultation and assistance in community
25 organization to counties, communities and groups of people.
26 6. Administer or supervise a program of public health nursing,
27 prescribe the minimum qualifications of all public health nurses engaged
28 in official public health work, and encourage and aid in coordinating
29 local public health nursing services.
30 7. Encourage and aid in coordinating local programs concerning
31 control of preventable diseases in accordance with statewide plans which
32 shall be formulated by the department.
33 8. Encourage and aid in coordinating local programs concerning
34 maternal and child health, including midwifery, antepartum and postpartum
35 care, infant and preschool health and the health of school children,
36 including special fields such as the prevention of blindness and
37 conservation of sight and hearing.
38 9. Encourage and aid in the coordination of local programs
39 concerning nutrition of the people of the state.
40 10. Encourage and aid in coordinating local programs concerning
41 dental health, in cooperation with the Arizona dental association.
42 11. Establish and maintain adequate serological, bacteriological,
43 parasitological, entomological and chemical laboratories with qualified
44 assistants and facilities necessary for routine examinations and analyses
45 and for investigations and research in matters affecting public health.

12. Supervise, inspect and enforce the rules concerning the operation of public bathing places and public and semipublic swimming pools adopted pursuant to section 36-136, subsection H, paragraph 11.

13. Take all actions necessary or appropriate to ensure that bottled water sold to the public and water used to process, store, handle, serve and transport food and drink are free from filth, disease-causing substances and organisms and unwholesome, poisonous, deleterious or other foreign substances. All state agencies and local health agencies involved with water quality shall provide to the department any assistance requested by the director to ensure that this paragraph is effectuated.

~~14. Establish and enforce rules which provide for the operation of analytical laboratory facilities that perform compliance testing of public drinking water supplies and wastewater.~~

~~15.~~ 14. Enforce the state food, caustic alkali and acid laws in accordance with chapter 2, article 2 of this title, chapter 8, article 1 of this title, chapter 9, article 4 of this title and sections 3-612, 3-614 and 24-931, and collaborate in the enforcement of the federal food, drug and cosmetic act.

~~16.~~ 15. Recruit and train personnel for state, local and district health departments.

~~17.~~ 16. Conduct continuing evaluation of state, local and district public health programs, study and appraise state health problems and develop broad plans for use by the department and for recommendation to other agencies, professions and local health departments for the best solution of these problems.

~~18.~~ 17. Conduct the state hospital survey and construction program, in accordance with the provisions of chapter 10, article 1 of this title, and license hospitals according to chapter 4 of this title.

~~19.~~ 18. License and regulate health care institutions according to chapter 4 of this title.

~~20.~~ 19. Issue or direct the issuance of licenses and permits required by law.

~~21.~~ 20. Participate in the state civil defense program and develop the necessary organization and facilities to meet wartime or other disasters.

~~22.~~ 21. Subject to the availability of funds, develop and administer programs in perinatal health care, including:

(a) Screening in early pregnancy for detecting high risk conditions.

(b) Comprehensive prenatal health care.

(c) Maternity, delivery and postpartum care.

(d) Perinatal consultation, including transportation of the pregnant woman to a perinatal care center when medically indicated.

(e) Perinatal education oriented toward professionals and consumers, focusing on early detection and adequate intervention to avert premature labor and delivery.

B. The department may accept from the state or federal government, or any agency of the state or federal government, and from private donors, trusts, foundations or eleemosynary corporations or organizations grants or donations for or in aid of the construction or maintenance of any program, project, research or facility authorized by this title, or in aid of the extension or enforcement of any program, project or facility authorized, regulated or prohibited by this title, and enter into contracts with the federal government, or an agency of the federal government, and with private donors, trusts, foundations or eleemosynary corporations or organizations, to carry out such purposes. All funds made available under the provisions of this section shall be considered special project grants. The department may also expend such funds to further applicable scientific research within this state.

C. The department, in establishing fees authorized by this section, shall comply with title 41, chapter 6. The department shall not set a fee at more than the department's cost of providing the service for which the fee is charged. State agencies are exempt from all fees imposed pursuant to this section.

D. The department may enter into contracts with private, nonprofit organizations that primarily assist in the management of end stage renal disease and related problems to provide, as payors of last resort, prescription medications necessary to supplement treatment and transportation to and from treatment facilities. The contracts may provide for department payment of administrative costs it specifically authorizes.

Sec. 2. Title 36, Arizona Revised Statutes, is amended by adding chapter 4.3, to read:

CHAPTER 4.3

ENVIRONMENTAL LABORATORIES

ARTICLE 1. GENERAL PROVISIONS

36-495. Definitions

IN THIS CHAPTER, UNLESS THE CONTEXT OTHERWISE REQUIRES:

1. "COMPLIANCE TESTING" MEANS LABORATORY ANALYSIS OF ANY MATTER, POLLUTANT, CONTAMINANT, HAZARDOUS SUBSTANCE OR OTHER SUBSTANCE SUBJECT TO REGULATION PURSUANT TO:

(a) TITLE 49 OR RULES ADOPTED OR ENFORCED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY FOR THE PURPOSE OF DETERMINING COMPLIANCE WITH TITLE 49.

(b) FEDERAL ENVIRONMENTAL STATUTES OR REGULATIONS ADMINISTERED OR ENFORCED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

2. "DEPARTMENT" MEANS THE DEPARTMENT OF HEALTH SERVICES.

3. "DIRECTOR" MEANS THE DIRECTOR OF THE DEPARTMENT OF HEALTH SERVICES.

4. "ENVIRONMENTAL LABORATORY" OR "LABORATORY" MEANS A FACILITY WHERE COMPLIANCE TESTING IS PERFORMED.

5. "FACILITY" MEANS A PLACE, BUILDING, INSTALLATION, STRUCTURE OR VEHICLE.

6. "GOVERNMENT AGENCY" MEANS AN AGENCY OF THE UNITED STATES GOVERNMENT, THIS STATE OR A POLITICAL SUBDIVISION OF THIS STATE.

7. "LABORATORY DIRECTOR" MEANS AN INDIVIDUAL WHO ADMINISTERS THE TECHNICAL AND SCIENTIFIC OPERATION OF AN ENVIRONMENTAL LABORATORY AND WHO IS RESPONSIBLE FOR REPORTING LABORATORY TEST RESULTS AS SPECIFIED IN THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER.

8. "LICENSE" MEANS A REGULAR LICENSE, RENEWAL LICENSE OR PROVISIONAL LICENSE ISSUED BY THE DEPARTMENT PURSUANT TO THIS CHAPTER.

9. "PERSON" MEANS AN INDIVIDUAL, EMPLOYEE, OFFICER, MANAGING BODY, TRUST, FIRM, JOINT STOCK COMPANY, CONSORTIUM, CORPORATION, PARTNERSHIP, ASSOCIATION, STATE OR POLITICAL SUBDIVISION OF A STATE OR THE UNITED STATES GOVERNMENT.

36-495.01. Licensure program; rules

A. ON OR BEFORE JULY 1, 1991, THE DEPARTMENT SHALL LICENSE ENVIRONMENTAL LABORATORIES ENGAGED IN COMPLIANCE TESTING. UPON APPLICATION FOR AN ENVIRONMENTAL LABORATORY LICENSE, THE DEPARTMENT SHALL ISSUE THE LICENSE IF, AFTER INVESTIGATION, THE DEPARTMENT DETERMINES THAT THE APPLICATION CONFORMS WITH THE STANDARDS ESTABLISHED BY THE DEPARTMENT.

B. THE DIRECTOR OF THE DEPARTMENT SHALL PRESCRIBE RULES PROVIDING FOR MINIMUM STANDARDS OF PROFICIENCY, METHODOLOGY, QUALITY ASSURANCE, OPERATION AND SAFETY FOR ENVIRONMENTAL LABORATORIES AND MAY PRESCRIBE THE MANNER AND FORM IN WHICH COMPLIANCE TESTING RESULTS ARE REPORTED. THE RULES SHALL BE DEVELOPED IN COOPERATION WITH THE DIRECTOR OF THE DEPARTMENT OF ENVIRONMENTAL QUALITY AND SHALL BE CONSISTENT WITH TITLE 49 AND RULES ADMINISTERED OR ENFORCED BY THE DIRECTOR OF ENVIRONMENTAL QUALITY.

C. FROM AND AFTER THE EFFECTIVE DATE OF THIS ACT AND UNLESS EXEMPTED BY SECTION 36-495.02, NO PERSON MAY OPERATE OR MAINTAIN AN ENVIRONMENTAL LABORATORY WITHOUT A LICENSE ISSUED BY THE DEPARTMENT PURSUANT TO THIS CHAPTER.

36-495.02. Exemptions

A. THIS CHAPTER DOES NOT APPLY TO AN ENVIRONMENTAL LABORATORY IN THIS STATE THAT IS:

1. CERTIFIED OR DESIGNATED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AS THE LABORATORY WHICH PROVIDES ANALYTICAL SERVICES TO THIS STATE REQUIRED FOR THE DELEGATION OF PRIMARY ENFORCEMENT RESPONSIBILITY UNDER A FEDERAL LAW OR REGULATION ADMINISTERED BY THAT AGENCY.

2. OPERATED BY THE COMMISSION OF AGRICULTURE AND HORTICULTURE AND THE RADIATION REGULATORY AGENCY.

3. PERFORMING COMPLIANCE TESTING OF PARAMETERS WHICH REQUIRE ANALYSIS AT THE TIME OF SAMPLE COLLECTION AS LONG AS THE ANALYTICAL PROCEDURES EMPLOYED ARE APPROVED BY THE DIRECTOR OF THE DEPARTMENT OF HEALTH SERVICES OR THE DEPARTMENT OF ENVIRONMENTAL QUALITY.

4. LICENSED TO PERFORM THOSE ANALYSES FOR WHICH IT IS LICENSED OR CERTIFIED BY ANOTHER AGENCY OF THIS STATE.

5. ACCREDITED BY A NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM ADMINISTERED BY THE NATIONAL BUREAU OF STANDARDS APPROVED BY THE DEPARTMENT.

B. IN ADDITION TO THE EXEMPTIONS ESTABLISHED IN SUBSECTION A, THE DIRECTOR MAY ALSO EXEMPT BY RULE CERTAIN CLASSES OF ENVIRONMENTAL LABORATORIES AND TYPES OF COMPLIANCE TESTING WITHIN AN ENVIRONMENTAL LABORATORY IF THE DIRECTOR DETERMINES THAT THE EXEMPTIONS WILL NOT ADVERSELY AFFECT THE PUBLIC HEALTH OR THE ENVIRONMENT. THE RULES SHALL BE DEVELOPED IN COOPERATION WITH THE DIRECTOR OF THE DEPARTMENT OF ENVIRONMENTAL QUALITY AND THE DIRECTOR OF THE COMMISSION OF AGRICULTURE AND HORTICULTURE.

36-495.03. License application; issuance; expiration

A. UNLESS EXEMPTED PURSUANT TO SECTION 36-495.02, A PERSON WHO OPERATES OR MAINTAINS AN ENVIRONMENTAL LABORATORY LOCATED IN THIS STATE SHALL FILE AN APPLICATION WITH THE DEPARTMENT AT LEAST THIRTY DAYS BEFORE THE ANTICIPATED OPERATION OF A NEW LABORATORY FOR AN ENVIRONMENTAL LABORATORY LICENSE ACCOMPANIED BY THE LICENSE APPLICATION FEE ESTABLISHED BY THIS CHAPTER. A PERSON SHALL OBTAIN A LICENSE FOR EACH LABORATORY, EXCEPT THAT ONLY ONE LICENSE IS REQUIRED FOR CONTIGUOUS OR COTERMINOUS LABORATORIES UNDER THE SAME OWNERSHIP. THE DIRECTOR, BY RULE, SHALL PRESCRIBE WHEN NONCONTIGUOUS LABORATORIES WITH THE SAME OWNERS MAY BE OPERATED UNDER A SINGLE LICENSE.

B. THE APPLICATION SHALL BE ON A FORM PRESCRIBED AND FURNISHED BY THE DEPARTMENT. THE APPLICATION SHALL BE UNDER OATH AND SHALL CONTAIN:

1. THE NAME AND LOCATION OF THE ENVIRONMENTAL LABORATORY.

2. THE NAME OF THE PERSON OWNING THE FACILITY AND THE NAME OF THE INDIVIDUAL DIRECTING THE LABORATORY.

3. A DESCRIPTION OF THE SERVICES AND TESTS PROVIDED BY THE ENVIRONMENTAL LABORATORY.

4. OTHER INFORMATION THE DEPARTMENT DEEMS NECESSARY TO CARRY OUT ITS POWERS AND DUTIES UNDER THIS CHAPTER.

C. THE DEPARTMENT SHALL ISSUE A REGULAR LICENSE TO AN APPLICANT TO OPERATE AN ENVIRONMENTAL LABORATORY TO PROVIDE THE SERVICES AND TESTS DESCRIBED IN THE APPLICATION IF THE DEPARTMENT DETERMINES THAT THE APPLICANT IS IN COMPLIANCE WITH THE PROVISIONS OF THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER.

D. IF THE OWNER IS NOT THE LABORATORY DIRECTOR, THE DIRECTOR SHALL ISSUE A LICENSE JOINTLY TO THE OWNER AND THE LABORATORY DIRECTOR WHO ARE JOINTLY RESPONSIBLE FOR THE MAINTENANCE AND OPERATION OF THE LABORATORY AND FOR VIOLATIONS OF THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER.

E. A LICENSE ISSUED BY THE DEPARTMENT IS VALID ONLY IN THE NAME OF THE PERSONS TO WHOM IT IS ISSUED AND CANNOT BE SOLD, ASSIGNED OR TRANSFERRED. A LICENSE IS VALID ONLY FOR THE FACILITY OR FACILITIES FOR WHICH IT IS ISSUED. IF THERE IS A CHANGE IN THE LABORATORY NAME, DIRECTORSHIP, OWNERSHIP OR APPOINTMENT OF AN ACTING LABORATORY DIRECTOR, THE LICENSE AUTOMATICALLY EXPIRES, UNLESS WITHIN TWENTY BUSINESS DAYS

AFTER THE CHANGE THE DEPARTMENT IS NOTIFIED IN WRITING OF THE CHANGE AND AN APPLICATION FOR A NEW LICENSE IS SUBMITTED TO THE DEPARTMENT. A FEE SHALL NOT BE CHARGED FOR THIS APPLICATION. THE DIRECTOR SHALL ISSUE A NEW LICENSE REFLECTING THE CHANGE IF THE LABORATORY IS STILL IN COMPLIANCE WITH THE PROVISIONS OF THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER.

F. A REGULAR LICENSE EXPIRES ONE YEAR AFTER THE DATE OF ISSUANCE AND SHALL BE RENEWED ON SUBMISSION OF A RENEWAL APPLICATION AND PAYMENT OF THE RENEWAL APPLICATION FEE PRESCRIBED IN SECTION 36-495.06, AT LEAST THIRTY DAYS BEFORE EXPIRATION OF THE LICENSE, UNLESS THE DIRECTOR DETERMINES PURSUANT TO SECTION 36-495.09 THAT GROUNDS EXIST TO DENY THE APPLICATION.

36-495.04. Laboratory director; duties

THE DIRECTOR OF AN ENVIRONMENTAL LABORATORY SHALL:

1. ENSURE THAT ALL SERVICES AND TESTS PROVIDED BY THE LABORATORY ARE PERFORMED IN COMPLIANCE WITH THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER.

2. DIRECT AND SUPERVISE SERVICES AND TESTS PROVIDED BY THE LABORATORY AND BE RESPONSIBLE FOR THE WORK OF ALL PERSONNEL IN THE LABORATORY.

3. BE RESPONSIBLE FOR SAFETY AND HAZARDOUS SUBSTANCE CONTROL IN THE LABORATORY.

36-495.05. Provisional licenses

A. THE DEPARTMENT MAY ISSUE A PROVISIONAL LICENSE FOR A PERIOD OF NOT MORE THAN TWELVE MONTHS AT THE TIME IT ISSUES A NOTICE OF SUSPENSION OF A REGULAR LICENSE. THE DEPARTMENT MAY SUSPEND A REGULAR LICENSE IF AN INSPECTION OR INVESTIGATION OF A LABORATORY REVEALS A VIOLATION OF THE RULES ADOPTED BY THE DIRECTOR PURSUANT TO THIS CHAPTER AND THE DIRECTOR BELIEVES THAT THE IMMEDIATE INTERESTS OF THE PUBLIC ARE BEST SERVED BY AFFORDING THE LABORATORY THE OPPORTUNITY TO CORRECT THE DEFICIENCIES. THE DIRECTOR SHALL ISSUE A PROVISIONAL LICENSE ONLY IF THE LICENSEE AGREES TO CARRY OUT A PLAN ACCEPTABLE TO THE DEPARTMENT TO ELIMINATE THE DEFICIENCIES WITHIN THE TERM OF THE PROVISIONAL LICENSE OR PERIOD OF TIME SPECIFIED BY THE DEPARTMENT.

B. A LICENSEE'S AGREEMENT TO CARRY OUT A PLAN OF CORRECTION DOES NOT CONSTITUTE A WAIVER OF ITS RIGHT TO HAVE A HEARING ON THE NOTICE OF SUSPENSION. A HEARING ON THE NOTICE OF SUSPENSION MAY INCLUDE REVIEW OF THE APPROPRIATENESS OF THE LABORATORY'S PLAN OF CORRECTION.

C. AN APPLICATION FOR A REGULAR LICENSE MAY BE SUBMITTED THIRTY DAYS BEFORE THE EXPIRATION OF A PROVISIONAL LICENSE ISSUED PURSUANT TO THIS SECTION. THE DEPARTMENT SHALL CONDITION ITS ISSUANCE OF A REGULAR LICENSE AT THE EXPIRATION OF THE TERM OF THE PROVISIONAL LICENSE ON THE LICENSEE BEING IN FULL COMPLIANCE WITH THE CORRECTION PLAN AND THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER.

36-495.06. Fees

A. THE DEPARTMENT SHALL CHARGE AND COLLECT A NONREFUNDABLE FEE FOR A REGULAR OR A RENEWAL LICENSE.

B. THE DIRECTOR SHALL ESTABLISH BY RULE A FEE SCHEDULE THAT DOES NOT EXCEED THE COST TO THE DEPARTMENT TO CONDUCT AN ON-SITE INSPECTION AND OTHER ACTIVITIES RELATED TO LICENSURE PURSUANT TO THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER. THE FEE SCHEDULE FOR APPLICATION FOR A REGULAR OR RENEWAL LICENSE SHALL BE BASED ON THE TYPES OF COMPLIANCE TESTING THAT THE LABORATORY IS LICENSED TO PROVIDE.

36-495.07. Inspection; investigations

A. THE DEPARTMENT MAY MAKE AN INITIAL INSPECTION, AND THEREAFTER AN ANNUAL INSPECTION, OF EACH LABORATORY TO DETERMINE COMPLIANCE WITH THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER.

B. AN APPLICATION FOR LICENSURE PURSUANT TO THIS CHAPTER CONSTITUTES PERMISSION FOR THE DEPARTMENT'S ENTRY OR INSPECTION OF THE LABORATORY DURING THE PENDENCY OF THE APPLICATION AND, IF LICENSED, DURING THE TERM OF THE LICENSE FOR THE PURPOSE OF DETERMINING COMPLIANCE WITH THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER.

C. THE DEPARTMENT MAY REQUIRE, AS PART OF ITS INSPECTIONS, THAT THE LABORATORY DEMONSTRATE PROFICIENCY IN PERFORMING TESTS THAT IT OFFERS BY EXAMINING SPECIMENS SUBMITTED BY THE DEPARTMENT, THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY OR OTHER PROFICIENCY TESTING SERVICES APPROVED BY THE DEPARTMENT.

D. IN ADDITION TO THE INSPECTIONS PROVIDED FOR IN SUBSECTION A OF THIS SECTION, THE DEPARTMENT, ON ITS OWN INITIATIVE OR ON THE RECEIPT OF A WRITTEN COMPLAINT FROM A PERSON SETTING FORTH FACTS WHICH, IF PROVEN, CONSTITUTE A VIOLATION OF THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER, MAY MAKE AN INVESTIGATION OF THE LABORATORY'S OPERATIONS, TECHNIQUES AND PROCEDURES. IF THE INVESTIGATION OR AN INSPECTION CONDUCTED PURSUANT TO THIS SECTION DISCLOSES PAST OR CURRENT NONCOMPLIANCE WITH STATUTES AND RULES, THE DIRECTOR, IN ACCORDANCE WITH SECTION 36-495.09, MAY DENY, SUSPEND OR REVOKE A LICENSE ISSUED BY THE DEPARTMENT PURSUANT TO THIS CHAPTER.

E. AT ANY TIME THE DEPARTMENT MAY CONDUCT AN INVESTIGATION OF THE OPERATION OF AN UNLICENSED LABORATORY PERFORMING COMPLIANCE TESTING AND MAY CONDUCT ON-SITE INSPECTIONS OF THE LABORATORY, RECORDS, PROCEDURES AND METHODS TO DETERMINE WHETHER THE LABORATORY MUST BE LICENSED PURSUANT TO THIS CHAPTER.

36-495.08. Reports by laboratories

A LABORATORY SHALL MAKE AVAILABLE TO THE DEPARTMENT ON WRITTEN REQUEST INFORMATION AND DATA CONCERNING ITS OPERATION, TECHNIQUES AND PROCEDURES. THE DEPARTMENT MAY REQUIRE THAT THE INFORMATION BE SUBMITTED UNDER OATH AND SIGNED BY THE OWNER OR DIRECTOR OF THE LABORATORY. THE DEPARTMENT MAY REQUIRE THE LABORATORY DIRECTOR OR OWNER TO SUBMIT OTHER REPORTS OR INFORMATION THAT IT DEEMS NECESSARY TO ADMINISTER THIS CHAPTER.

36-495.09. Suspension, revocation or denial of license; hearing

A. PURSUANT TO TITLE 41, CHAPTER 6 THE DIRECTOR MAY DENY, REVOKE OR SUSPEND THE LICENSE OF A LABORATORY IF ITS OWNERS, OFFICERS, AGENTS OR EMPLOYEES DO ANY OF THE FOLLOWING:

1. VIOLATE A PROVISION OF THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER.

2. ISSUE OR CAUSE TO BE ISSUED A REPORT ON ENVIRONMENTAL LABORATORY WORK PERFORMED IN ANOTHER LABORATORY WITHOUT DESIGNATING THE NAME AND ADDRESS OF THE LABORATORY THAT PERFORMED THE TEST.

3. COMMIT A FELONY UNDER THE LAWS OF ANY STATE OR OF THE UNITED STATES ARISING OUT OF OR IN CONNECTION WITH THE OPERATION OF A LABORATORY. THE RECORD OF CONVICTION OR A CERTIFIED COPY IS CONCLUSIVE EVIDENCE OF CONVICTION.

4. KNOWINGLY AID, PERMIT OR ABET THE SUBMISSION OF FALSE OR INACCURATE INFORMATION REQUIRED BY THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER.

5. VIOLATE THE REQUIREMENTS FOR LICENSURE OF THE LABORATORY PURSUANT TO THIS CHAPTER.

B. IF THE DIRECTOR REASONABLY BELIEVES THAT A VIOLATION OF SUBSECTION A, PARAGRAPH 5 OF THIS SECTION HAS OCCURRED AND THAT THE LIFE OR SAFETY OF THE PUBLIC IS IMMEDIATELY AFFECTED, ON WRITTEN NOTICE TO THE OWNER OR DIRECTOR OF THE LABORATORY, HE MAY ORDER THE IMMEDIATE TERMINATION OF SPECIFIC TESTING SERVICES, PROCEDURES OR PRACTICES.

C. EXCEPT AS PROVIDED IN SUBSECTION B OF THIS SECTION AND SECTION 41-1064, SUBSECTION C, THE DIRECTOR SHALL NOT SUSPEND, REVOKE OR DENY A LICENSE WITHOUT AFFORDING THE LICENSEE NOTICE AND AN OPPORTUNITY FOR A HEARING AS PROVIDED IN TITLE 41, CHAPTER 6.

D. A PERSON WHOSE APPLICATION FOR A LICENSE IS DENIED BY THE DIRECTOR OR WHO HAS BEEN ORDERED PURSUANT TO SUBSECTION B OF THIS SECTION TO IMMEDIATELY TERMINATE SPECIFIC SERVICES, PROCEDURES OR PRACTICES, AT ANY TIME WITHIN THIRTY DAYS AFTER NOTICE OF THE DENIAL OR ORDER, MAY REQUEST IN WRITING A HEARING BEFORE THE DIRECTOR OR A PERSON DESIGNATED BY THE DIRECTOR TO REVIEW THE DIRECTOR'S ACTION. THE HEARING SHALL BE HELD WITHIN THIRTY DAYS AFTER THE WRITTEN REQUEST.

E. ALL HEARINGS SHALL BE HELD IN ACCORDANCE WITH TITLE 41, CHAPTER 6.

36-495.10. <u>Operation of unlicensed laboratory; cease and desist order; injunction; letter</u>

A. THE OPERATION OR MAINTENANCE OF AN ENVIRONMENTAL LABORATORY THAT DOES NOT HOLD A CURRENT OR VALID LICENSE OR THAT EXCEEDS THE RANGE OF THE SERVICES OR TESTS AUTHORIZED BY A LICENSE ISSUED PURSUANT TO THIS CHAPTER IS A PUBLIC NUISANCE. THE DIRECTOR, IN ADDITION TO OTHER REMEDIES PROVIDED IN THIS CHAPTER, MAY ISSUE A CEASE AND DESIST ORDER PURSUANT TO SECTION 36-601 OR, IN THE NAME OF THE PEOPLE OF THIS STATE, THROUGH THE ATTORNEY GENERAL, MAY BRING AN ACTION FOR AN INJUNCTION TO RESTRAIN THE VIOLATION OR TO ENJOIN THE FUTURE OPERATION OR MAINTENANCE OF THE ENVIRONMENTAL LABORATORY UNTIL THE LABORATORY COMPLIES WITH THE PROVISIONS OF THIS CHAPTER.

B. BEFORE ISSUING A CEASE AND DESIST ORDER OR BRINGING AN ACTION FOR INJUNCTION PURSUANT TO THIS SECTION, THE DEPARTMENT MAY ISSUE A CERTIFIED LETTER TO A LICENSED OR UNLICENSED FACILITY IN WHICH IT STATES

THE FACTUAL BASIS FOR THE DEPARTMENT'S BELIEF THAT THE LABORATORY IS OPERATING IN VIOLATION OF THIS CHAPTER OR RULES ADOPTED PURSUANT TO THIS CHAPTER. THE DEPARTMENT MAY INCLUDE WITHIN THE LETTER THE ENFORCEMENT OPTIONS AVAILABLE TO THE DEPARTMENT IF THE VIOLATIONS CONTINUE.

36-495.11. Violation; classification

A. A PERSON IS GUILTY OF A CLASS 3 MISDEMEANOR IF HE:

1. OPERATES, MAINTAINS, DIRECTS OR ENGAGES IN THE BUSINESS OF OPERATING AN ENVIRONMENTAL LABORATORY WITHOUT A LICENSE ISSUED BY THE DEPARTMENT.

2. KNOWINGLY VIOLATES A PROVISION OF THIS CHAPTER OR A RULE ADOPTED PURSUANT TO THIS CHAPTER.

B. EACH DAY THAT A VIOLATION CONTINUES CONSTITUTES A SEPARATE OFFENSE.

36-495.12. Violations; civil penalties

A. THE DEPARTMENT MAY ASSESS A CIVIL PENALTY IN AN AMOUNT OF NOT MORE THAN THREE HUNDRED DOLLARS FOR EACH VIOLATION OF THIS CHAPTER AFTER A HEARING IS CONDUCTED PURSUANT TO TITLE 41, CHAPTER 6. EACH DAY THAT A VIOLATION CONTINUES CONSTITUTES A SEPARATE VIOLATION.

B. THE ATTORNEY GENERAL OR THE COUNTY ATTORNEY SHALL BRING ACTIONS TO ENFORCE THE COLLECTION OF PENALTIES ASSESSED PURSUANT TO SUBSECTION A IN THE NAME OF THIS STATE IN THE JUSTICE COURT OR THE SUPERIOR COURT IN THE COUNTY IN WHICH THE VIOLATION OCCURS.

C. PENALTIES ASSESSED UNDER THIS SECTION ARE IN ADDITION TO OTHER PENALTIES IMPOSED PURSUANT TO THIS CHAPTER.

D. THE DIRECTOR SHALL TRANSMIT PENALTIES COLLECTED PURSUANT TO THIS SECTION TO THE STATE TREASURER FOR DEPOSIT IN THE STATE GENERAL FUND.

36-495.13. Powers of the director

A. IN ADDITION TO THE RULES REQUIRED BY SECTION 36-495.01, THE DIRECTOR MAY ADOPT OTHER RULES AND PRESCRIBE FORMS THAT ARE NECESSARY FOR THE ADMINISTRATION AND ENFORCEMENT OF THIS CHAPTER.

B. THE DIRECTOR MAY ISSUE INTERPRETIVE GUIDELINES ON SUBJECTS RELATING TO THE RULES ADOPTED UNDER THIS CHAPTER.

C. THE DIRECTOR MAY ENTER INTO INTERGOVERNMENTAL AGREEMENTS WITH OTHER AGENCIES OF THIS STATE FOR THE PURPOSE OF LICENSING ENVIRONMENTAL LABORATORIES PERFORMING COMPLIANCE TESTING.

36-495.14. Out-of-state laboratories; licensure; reciprocity

A. EXCEPT AS PROVIDED IN THIS SECTION, A LABORATORY LOCATED OUTSIDE OF THIS STATE THAT PERFORMS COMPLIANCE TESTING SHALL BE LICENSED PURSUANT TO THIS CHAPTER. THE LABORATORY SHALL PAY ALL APPLICABLE FEES AND IS SUBJECT TO THE SAME INVESTIGATORY AND DISCIPLINARY POWERS OF THE DEPARTMENT. IN ADDITION, THE DEPARTMENT, BY RULE, MAY REQUIRE THAT THE LABORATORY POST A BOND WITH THE DEPARTMENT TO COVER THE TRAVEL COSTS OF PRELICENSURE AND POSTLICENSURE INSPECTIONS AND EVALUATIONS.

B. A LABORATORY WHICH IS LOCATED OUTSIDE OF THIS STATE AND IS LICENSED BY THIS STATE SHALL RENEW THE LICENSE BY SUBMITTING AN APPLICATION AND FEE AT LEAST SIXTY DAYS BEFORE THE EXPIRATION OF THE

LICENSE. THE DEPARTMENT, BY RULE, MAY ALSO PRESCRIBE THAT AN OUT-OF-STATE APPLICATION BE ACCOMPANIED BY AN ADDITIONAL FEE TO COVER THE COSTS OF PRERELICENSURE ON-SITE EVALUATION AND INSPECTION.

C. THE DIRECTOR SHALL DESIGNATE THE LOCATION OF HEARINGS HELD IN RELATION TO DISCIPLINARY MATTERS OR THE ISSUANCE OF A LICENSE.

D. THE DIRECTOR MAY ENTER INTO A RECIPROCITY AGREEMENT WITH THE LICENSING AGENCY OF ANOTHER STATE IF THE DIRECTOR DETERMINES THAT THE LICENSING REQUIREMENTS OF THAT STATE ARE SUBSTANTIALLY EQUAL TO THOSE OF THIS STATE. THE AGREEMENT SHALL PROVIDE THAT THE LICENSING AGENCIES OF BOTH STATES SHALL RECOGNIZE A CURRENT LICENSE ISSUED BY THE OTHER STATE FOR THE PURPOSE OF MEETING THE LICENSURE REQUIREMENTS OF EITHER STATE. THE AGREEMENT SHALL ALSO PROVIDE THAT BOTH STATES, ON THE REQUEST OF EITHER STATE, SHALL CONDUCT NECESSARY INVESTIGATIONS TO DETERMINE COMPLIANCE AND SHALL ALLOW ON-SITE INSPECTIONS BY INVESTIGATORS FROM EITHER STATE.

E. IF A RECIPROCAL STATE REVOKES, SUSPENDS OR REFUSES TO RENEW THE LICENSE OF A LABORATORY LOCATED IN THAT STATE, THIS STATE SHALL RECOGNIZE THAT ACTION UNLESS THE LABORATORY NOTIFIES THE DEPARTMENT WITHIN FIVE BUSINESS DAYS OF THE ACTION THAT IT WISHES THIS STATE TO UNDERTAKE AN INDEPENDENT REVIEW AND INVESTIGATION AND POSTS A BOND AS PRESCRIBED BY THE DEPARTMENT TO CONDUCT THE REVIEW. IF, AT THE CONCLUSION OF THAT REVIEW, THIS STATE DETERMINES THAT THE LABORATORY MEETS THE LICENSURE REQUIREMENTS OF THIS STATE, IT SHALL ISSUE A LICENSE TO THAT LABORATORY ON PAYMENT OF ALL FEES REQUIRED BY THIS CHAPTER. NOTWITHSTANDING THE TERMS OF A RECIPROCITY AGREEMENT, IF EITHER STATE TAKES ACTION CONTRARY TO THE ACTION OF THE OTHER, NEITHER STATE HAS TO RECOGNIZE THE LICENSE ISSUED BY THE OTHER.

36-495.15. <u>Environmental laboratory licensure revolving fund; use</u>

A. THE ENVIRONMENTAL LABORATORY LICENSURE REVOLVING FUND IS ESTABLISHED IN THE DEPARTMENT WHICH CONSISTS OF MONIES FROM GIFTS, GRANTS, DONATIONS, FEES DERIVED FROM DEPARTMENT SPONSORED WORKSHOPS, CONFERENCES AND SEMINARS AND FEES COLLECTED PURSUANT TO THIS CHAPTER.

B. MONIES IN THE FUND SHALL BE USED TO SUPPORT THE ADMINISTRATION OF THIS CHAPTER AND FOR THE COSTS INCURRED IN ADMINISTERING THIS CHAPTER AND RULES ADOPTED FOR THE IMPLEMENTATION OF THIS CHAPTER.

C. MONIES IN THE FUND ARE EXEMPT FROM SECTION 35-190. INTEREST EARNED ON MONIES IN THE FUND SHALL BE CREDITED TO THE FUND.

Sec. 3. Section 36-601, Arizona Revised Statutes, is amended to read:

36-601. <u>Public nuisances dangerous to public health</u>

A. The following conditions are specifically declared public nuisances dangerous to the public health:

1. Any condition or place in populous areas which constitutes a breeding place for flies, rodents, mosquitoes and other insects which are capable of carrying and transmitting disease-causing organisms to any person or persons.

2. Any spoiled or contaminated food or drink intended for human consumption.

3. Any restaurant, food market, bakery or other place of business or any vehicle where food is prepared, packed, processed, stored, transported, sold or served to the public which is not constantly maintained in a sanitary condition.

4. Any place, condition or building controlled or operated by any governmental agency, state or local, which is not maintained in a sanitary condition.

5. All sewage, human excreta, wastewater, garbage or other organic wastes deposited, stored, discharged or exposed so as to be a potential instrument or medium in the transmission of disease to or between any person or persons.

6. Any vehicle or container used in the transportation of garbage, human excreta or other organic material which is defective and allows leakage or spillage of contents.

7. The presence of ectoparasites such as bedbugs, lice, mites and others in any place where sleeping accommodations are offered to the public.

8. The maintenance of any overflowing septic tank or cesspool, the contents of which may be accessible to flies.

9. The pollution or contamination of any domestic waters.

10. The use of the so-called common drinking cup used for drinking purposes by more than one person, but this shall not apply to receptacles properly washed and sanitized after each service.

11. The presence of common towels for use of the public in any public or semipublic place unless properly washed and sanitized following each use.

12. Buildings or any parts thereof which are in a filthy condition and which may endanger the health of persons living in the vicinity.

13. Spitting or urinating upon sidewalks, or floors or walls of a public building or buildings used for public assemblage, or a building used for manufacturing or industrial purposes, or upon the floors or platforms or any part of a railroad or other public conveyance.

14. The use of the contents of privies, cesspools or septic tanks or the use of sewage or sewage plant effluents for fertilizing or irrigation purposes for crops or gardens except by specific approval of the department of health services or the department of environmental quality.

15. The maintenance of public assemblage or places of assemblage without providing adequate sanitary facilities, but open surface privies shall be deemed adequate sanitary facilities if they are outside populous areas and meet reasonable health requirements.

16. Hotels, tourist courts and other lodging establishments that are not kept in a clean and sanitary condition, or for which suitable and adequate toilet facilities are not provided.

17. The storage, collection, transportation, disposal and reclamation of garbage, trash, rubbish, manure and other objectionable wastes other than as provided and authorized by law and rule.

18. Water, other than that used by irrigation, industrial or similar systems for nonpotable purposes, sold to the public, distributed to the public or used in production, processing, storing, handling, servicing or transportation of food and drink which is unwholesome, poisonous or contains deleterious or foreign substances or filth or disease causing substances or organisms.

19. The emission of mercaptan in a concentration level which causes endangerment to the health or safety of any considerable number of persons of a neighborhood or community.

20. THE OPERATION OF AN ENVIRONMENTAL LABORATORY IN VIOLATION OF CHAPTER 4.3, ARTICLE 1 OF THIS TITLE.

B. When the director has reasonable cause to believe from information furnished him or from investigation made by him that any person is maintaining a nuisance or engaging in any practice contrary to the health laws or rules of the state, he shall forthwith serve upon such person by certified mail a cease and desist order requiring the person, upon receipt of the order, forthwith to cease and desist from such act. Within fifteen days after receipt of the order, the person to whom it is directed may request the director to hold a hearing. The director, as soon as practicable, shall hold a hearing, and if he determines the order is reasonable and just and that the practice engaged in is contrary to the health laws or rules of the state, the director shall order such person to comply with the cease and desist order.

C. Upon the failure or refusal of a person to comply with the order of the director, or if a person to whom the order is directed does not request a hearing and fails or refuses to comply with the cease and desist order served by mail under the provisions of subsection B, the director may file an action in the superior court in the county in which a violation has occurred, restraining and enjoining the person from engaging in further acts. The court shall proceed as in other actions for injunctions.

D. Notwithstanding the provisions of subsection A, paragraph 19, the emission of mercaptan as a by-product of a pesticide is not a nuisance when applied according to state and federal restrictions.

Sec. 4. <u>Applicability of current rules; implementation of adopted rules</u>

Department rules relating to the licensing of environmental water laboratories are continued until superceded by rules adopted by the director of the department of health services pursuant to this act. A person who is in compliance with the rules relating to environmental laboratories before the effective date of this act is in compliance with this act until the director of the department of health services adopts new or modified rules as provided by this act. In adopting new or

modified rules relating to licensure the director shall provide a reasonable period of time to the person to comply with the new rules.

Sec. 5. Emergency

To preserve the public peace, health and safety it is necessary that this act become immediately operative. It is therefore declared to be an emergency measure, to take effect as provided by law.

Approved by the Governor May 11, 1989.

Filed in the Office of the Secretary of State May 11, 1989.

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GROUNDWATER QUALITY PROTECTION
Permit No. G-0020-02

STATE OF ARIZONA

GROUNDWATER QUALITY PROTECTION PERMIT

PART I. AUTHORIZATION FOR FACILITY OPERATION SUCH THAT GROUNDWATER QUALITY OF THE STATE OF ARIZONA IS NOT ADVERSELY IMPACTED.

In compliance with the provisions of A.R.S. 36-1851 et seq; A.A.C. Title 9, Chapter 20, Article 2; A.A.C. Title 9, Chapter 21, Article 4; and conditions set forth in this permit:

Facility Name:

Grand Central Leaching

Owner:

Tombstone Development Co.

Lessee/Operator:

PBR Minerals, Inc.
950 Skyline Drive
P. O. Box 370
Tombstone, Arizona 85638

is authorized to operate the Grand Central Leaching facility located approximately one (1) mile south of Tombstone, Arizona, in Cochise County over groundwater of the Upper San Pedro Basin in Township 20 South; Range 22 East; Section 11, 12, 13, 14 - Gila and Salt River Base Line and Meridian.

This permit shall become effective on the date of the Director's signature and shall be valid for the operational life of the facility provided that the facility is operated and maintained in compliance with the specific conditions, general conditions, information documented or referenced in PART I, II, III and IV of this Permit, and the Groundwater Quality Standards and Aquifer Water Quality Standards are not violated (PART V).

Rough Draft Redline Copy for Review Rob Jonson 10/17/88

Gary A. Lindroos
Facility Manager
PBR Minerals, Inc.

Signed this ____ day of

_____ 19 ___

William H. Shafer, Jr., P.E.
Acting Assistant Director
Arizona Department of Environmental Quality

Signed this ____ day of

_____ 19 ___

PART II. SPECIFIC CONDITIONS (R9-20-208.C.)

A. Containment/Disposal Requirements

1. Containment

The permittee is authorized to operate a hydrometallurgical precious metal recovery facility utilizing the cyanide heap leach process. Components of the facility's operation shall include an impervious lined leach pad, impervious lined leach solution continment ponds, a final recovery circuit, a lined neutralized tailings disposal area, an impervious lined cyanide mixing and container rinsing area and a storm water diversion system. The facility shall be constructed and maintained in such a manner as to prevent discharge of pollutants to the land surface or subsurface which may have an adverse impact on groundwater.

a. Heap Leach Process

Material (ore) to be processed at the facility shall be from on-site mining activities. It is anicipated that the mining will produce 350,000 tons of ore per year which will be processed by the heap leaching method. Crushed ore shall be loaded on an impervious lined pad and leached with a dilute solution of sodium cyanide with an expected 600 gpm circulation rate. "Pregnant" leach solution is treated for recovery of precious metals then returned to the leaching circuit. There shall be no surface or subsurface disposal of leach solution. All leach solution shall be contained in impervious devices and recycled within the process.

b. Leach Pad Design with Leak Detection/Collection

The leach pad shall cover an area of approximately 200,000 square feet (4.5 acres). The leach pad will be divided into four (4) equally sized segments by the installation of two (2)-foot high berms which run north to south across the leach pad. The segment berms will be installed to assist in drainage and removal of leach solution by placing a six (6)-inch perforated HDPE pipe running along the toe of the berms. The entire pad will be graded from southeast to the northwest.

The leach pad shall be lined with a flexible synthetic membrane which will be placed over a compacted clay subliner. The compacted clay subliner shall have a minimum thickness of two (2)-feet and shall be compacted to a minimum of 95 percent of maximum density as determined by ASTM 0698 Method. The frequency of the field density test shall be not less than one (1) test for each 500 cubic yards of placed subliner material. There shall be at least one (1) field density test for

each lift of subliner material placed and compacted. Written records shall be maintained for each construction day, covering the subject construction activities. The written records and reports shall be in accordance with the respective Quality Control (QC) Procedures Plan as submitted and documented in the Notice of Disposal file and shall include results of all tests conducted. The original records of all daily construction testing shall be kept on-site and available for Departmental review.

The leach pad leak detection/collection system shall consist of four (4) perforated two (2)-inch HDPE pipes bedded in sand and gravel filled trenches running beneath the toe of the segment berms on the south side of the berms. The HDPE collection and conveyance pipes shall be plumbed to the leak detection manholes located on the north edge of the leach pad. All sand and gravel utilized in the leak detection system shall be approved by the liner contractor.

The 40-mil PVC leach pad liner shall meet or exceed the National Sanitation Foundation minimum material properties (NSF Standard 54). Prior to installation of the PVC liner, the lining contractor shall inspect and verify the subgrade to be a continuous smooth surface free of rock protrusions, nested gravels or other abrupt irregularities and that proper compaction has been achieved. Field seaming shall require a minimum overlap of six (6) inches for adjoining PVC sheets and shall be sealed with a bodied solvent with a minimum glued width of four (4)-inches. All field seams shall be tested by the Air Lance Method. Destructive shear and peel test (ASTM D4545 6.1.2. and 6.1.1.) shall be performed by an independent testing laboratory on field seaming every 500 lineal feet of seaming. The authorized installation contractor or the field service representative shall provide written certification that states, installation of the liner system was performed in accordance with the manufacturer's recommendations and industry standards. Liner installation shall be supervised by a lining contractor or field service representative which has more than five (5)-million square feet of successfully installed flexible membrane lining.

c. Solution Storage Ponds with Leak Detection/Collection

The PVC pipe which shall be used to transport the leach solution from the leach pad to the pregnant pond shall be located in a flexile membrane lined trench capable of containing and draining leach solution to the pregnant pond in the event of pipe failure. The PVC pipe shall be protected from the sunlight. The PVC pipe which shall be used to transport the neutralizing solution from the leach pad to the neutralization pond shall require the

same protection as required for leach solution piping. All pipes transporting leach solution from lined containment areas shall require the same protection as stated above.

The solution ponds, pregnant, barren and neutralization shall each consist of double liners of a flexible membrane material which is sunlight resistant. The solution ponds shall have a total capacity of 1.3 million gallons with maintaining one (1) foot of freeboard. The solution ponds shall have a liner system consisting of four (4) layers; first, a primary flexible membrane liner with a minimum thickness of 30-mil; underneath the primary liner shall be a geotextile drainage net for the leak detection system. The underliner shall be a flexible membrane liner with a minimum thickness of 30-mil. Underneath the flexible membrane underliner shall be a two (2)-foot thick clay subgrade which shall serve as further protection against solution leakage.

The bottom of both ponds shall be sloped to a gravel-filled leak detection/collection sump which shall be placed in between the primary flexible membrane liner and the flexible membrane underliner. A 12-inch HDPE pipe shall be plumbed to the leak detection/collection sump and shall extend to above the crest elevation of each pond to provide access for the detection and sampling of any fluid in the sump. Geomembrane liner installation and field seaming tests as described for the heap pad liner installation shall be required for pond liner installations.

d. Product Recovery and Spill Containment.

Precious metals contained in the leach solution shall be recovered in the extraction plant. Leach solution in the pregnant solution pond shall be pumped to the extraction plant and then into the barren solution storage pond. The extraction plant area shall be sloped to drain to the baren solution storage pond. The concrete floor of the extraction plant shall be designed to drain to a cement sump piped to conduct flow to the barren solution pond. The cement floor structure and sump drainage shall be capable of draining all solutions being processed within the extraction plant.

e. Neutralized Tailings Disposal

The waste product (leached tailings) generated by the heap leach processing shall be rinsed and neutralized in place on the heap leach pad. Tailings shall not be removed from the heap leach pad until neutralized to contain less than 0.45 mg/Kg cyanide as per the weak-acid dissociable (ASTM Method C) analytical test method.

Transferring of neutralized tailings from the heap leach pad to the spent ore disposal area shall be exercised with care and supervised by PBR, Inc. management. The neutralized tailings shall not be removed from the clay-lined spent ore disposal area and shall be stacked to prevent slumping and shall not allow discharge of any material or fluids to the land surface or subsurface.

The spent ore disposal area shall be lined with a compacted clay liner with a minimum thickness of two (2)-feet and shall be compacted to a minimum of 95 pecent of maximum density as determined by ASTM D698 Method. The frequency of the field density test shall not be less than one test for each 500 cubic yards of placed liner material. Written records shall be maintained for the liner construction activities. The written records and reports shall be in accordance with the respective Quality Control (QC) Procedures Plan as submitted and documented in the Notice of Disposal File. The original records of all construction testing shall be kept on-site and available for Departmental review.

f. Storm Water Protection

The entire facility site shall be protected from storm water runoff associated from a 100-year/24-hour storm water event (3.75 inches) by a series of surface water diversion devices constructed to prevent any runoff from entering the processing site or spent ore disposal area. All lined areas shall be capable of containing a 100-year/24-hour storm water event which will land on the lined areas. The pregnant and barren solution ponds shall have a normal operating capacity of maintaining a one (1)-foot freeboad. Only during precipitation events can the one (1)-foot freeboad be exceeded and at such time the storm water back-up pond shall be used to store excess solution. The storm water back-up pond shall require an impervious liner of a flexible membrane material with a minimum thickness of 30-mil with a two (2)-foot clay subgrade. Liner and subgrade construction shall be the same as required for the construction of the heap leach pad. The storm water back-up pond shall not be used during normal operations; it shall only be used during or after precipitation events which cause solution levels in the solution ponds to exceed the one (1)-foot freeboad operating level. Solution collected in the storm water back-up pond shall be introduced back into the leaching circuit. In the event solution in the storm water back-up pond cannot be reintroduced back into the leaching circuit within ten (10) days, it shall be neutralized to contain less than 0.20 free cyanide and transferred to the neutralization pond. A written log shall be kept daily available for Departmental review of

solution entering and leaving the storm water back-up pond.

g. Chemical Storage

Sodium cyanide used in the leaching process shall be stored in "air-tight" drums in the cyanide storage area which shall have a concrete slab with six (6)-inch curbing and shall have a drainage system with an outlet to the barren solution pond and a canopy to protect the drums from sunlight and weather. A fresh water rinse pad shall be installed for washdown of the chemical containers and shall consist of a concrete slab with a six (6)-inch curbing which has a drainage system with an outlet to the barren solution pond. Empty chemical containers which have been triple rinsed shall be stored on-site until either returned to vendor or an approved landfill or recycling center. A sufficient stock of hypochlorite shall be maintained on-site for the purpose of neutralizing any cyanide in the unlikely event a spill occurs outside the areas of lined containment.

h. Domestic Sewage Disposal

Only nonresidential structures shall be built on-site to serve as an analytical laboratory, offices and storage. Domestic sewage disposal shall be by means of Cochise County approved septic tank systems. All analytical samples shall be returned to the leaching circuit so that no discard of analytical samples are to the land surface or subsurface.

2. Unauthorized Materials

a. Materials authorized to be disposed of in all septic tanks shall be typical household sewage and shall not include motor oil, gasoline, paints, varnishes, solvents, pesticides, fertilizers or other materials not generally associated with toilet flushing, food preparation, laundry facilities and personal hygiene.

b. No commercial operations utilizing hazardous materials or creating hazardous wastes shall dispose of such materials into these systems.

3. Operational Practices

Adequate supervision and operation shall be performed to ensure that all users of the facility are aware of and understand the containment/disposal requirements of PART II.A.

4. Discharge Source Limits

a. There shall be no discharge of pollutants that violate the State of Arizona Groundwater Quality Standards (A.R.S. R9-21-401, et seq.).

b. Analyical sampling aliquots shall be returned to the heap leach solution circuit and shall not be disposed of on the land surface or subsurface.

5. Leak Detection Limits

Any fluid collected at the leak detection/collection sampling points shall not exceed a pH of 8.5 or show the presence of free cyanide.

6. Modification

This permit is issued contingent upon the above conditions. The permittee shall give 90-days advance, written notice to the Department of any modification to the above facility.

7. Other Laws and Rules

The issuance of this permit does not waive any federal, state, county or local government rules, regulations or permits for which this facility may have to comply.

B. <u>Monitoring Requirements, Record Keeping (R9-20-215)</u>

1. Monitoring Type Conditions

a. Leach Solution Monitoring

The leaching solution used in the hydrometallurgical heap leach process shall be closely monitored at least once <u>daily</u> in the form of an operation record. Representative samples will be taken daily from: Drainage from the heap leach pad into the pregnant pond, leach solution entering and leaving the barren pond where chemicals (cyanide, lime) are added and solution draining from the tailings neutralization pad. All solutions sampled shall be analyzed by standard field methods for pH and free cyanide (EPA Method 335.1). A log of these results, as well as daily solution levels in both pregnant and barren ponds and the amount of fresh water added to the leaching system daily, shall be kept at the facility available for inspection by Arizona Department of Environmental Quality personnel and shall be submitted to the Department along with the monitoring report as outlined in PART II.B.2. In addition, similar monitoring requirements shall be conducted for neutralization solution from the tailings pad and neutralization pond.

b. Leak Detection and Collection Monitoring

The leak collection sampling points specified in PART II.A.1.b. and c. shall be monitored weekly for the presence of fluid. Any fluid collected shall be analyzed by standard field methods for pH and free cyanide. Refer to contingency requirements (PART II.C.) for action to be taken if cyanide is detected.

c. Neutralized Tailing Disposal Monitoring

Prior to transferring neutralized spent ore from the heap leach pad to the spent ore disposal pad, the spent ore shall be sampled and assayed to assure that the material contains less than 0.45 mg/Kg of weak-acid dissociable (ASTM Method C) cyanide. Sampling shall be conducted at three (3) randomly-selected sites across the pad segment surface which has received the neutralization procedure. Samples shall be recovered by means of a bucket hand auger or a backhoe. All equipment used in recovery samples shall be steam cleaned before sampling and between digging each sample hole. After sampling the entire depth of the tailings, the samples will be mixed and quartered. One quarter sample from each hole will be subsequently composited with the samples from the other two (2) holes. The composite sample will then be analyzed for soluble weak-acid dissociable (WAD) cyanide in accord with ASTM Method C. The remaining three quarters of each sample will be retained pending receipt of sample results.

In the event the composite sample contains less than 0.45 mg/Kg WAD cyanide, the remaining samples can be disposed and the spent ore can be removed from the leach pad and placed on the spent ore disposal pad. If the level in the composite sample is greater than 0.45 mg/Kg WAD cyanide, all three (3) individual samples shall be assayed for WAD cyanide. Neutralization efforts shall be continued on the portion of the pad represented by the elevated level(s). Additional composite samples and neutralization efforts shall continue until the level in the pad segment to be unloaded contains less than 0.45 mg/kg WAD cyanide.

Written records of all neutralized spent ore sampling locations and analytical results shall be kept by the permittee and shall be tabularized and submitted to the Department on a quarterly basis.

d. Groundwater Monitoring

Groundwater quality conditions shall be monitored by one (1) down-gradient on-site pumped monitor well and two (2) (up-gradient and down-gradient) on-site passive

groundwater monitoring wells. The permittee shall complete at least three (3) rounds of ambient groundwater monitoring prior to the initiation of facility operations. Enforceable groundwater limits and levels shall be based on ambient groundwater quality as sampled prior to initiation of facility operations. State Alert Levels and Maximum Groundwater Limits (MGL) shall be used as enforceable standards for samples analyzed from the monitor wells. Verification of an exceeded MGL shall result in a permit violation. MGL's are equal to MCL's and State Action Levels, except in cases where ambient water quality exceeds MCL's and Action Levels. When ambient water quality exceeds the MCL's and Action Levels, the highest ambient water quality observed for the constituent during ambient water quality monitoring shall become the MCL.

Alert Levels for each groundwater monitoring constituent shall be based on the arithmetic mean for the constituent from the first three (3) rounds of ambient groundwater sampling. In calculating the mean, values reported to be below detection limit shall be regarded as zero. Alert Levels shall be set at the mean plus two (2) standard deviations. If Alert Levels calculated in this manner are below detection limit (analysis detection level), the Alert Level shall be set at the detection limit. If Alert Levels calculated in this manner exceed the MGL's or State Action Levels, the Alert Level shall be set at the MCl or State Action Level.

e. Groundwater Monitoring Limits and Schedule

Well ID	DWR Registration	DWR Location
#1 Pumping Well	xxxxxxxx-C	x,xxx,xxx,xxx,xxx
#2 Down Gradient Passive	xxxxxxxx-C	x,xxx,xxx,xxx,xxx
#3 Up Gradient Passive	xxxxxxxx-C	x,xxx,xxx,xxx,xxx

Constituent	Frequency	Alert Level	MCL
Cyanide (total)	Quarterly	Detection Level	0.20 mg/l
Mercury	Quarterly	Detection Level	0.002 mg/l
Arsenic	Quarterly	Detection Level	0.05 mg/l
Lead	Quarterly	Detection Level	0.05 mg/l
Silver	Quarterly	Detection Level	0.05 mg/l
Nitrate (as N)	Quarterly	Reserved	10.0 mg/l

Constituent	Frequency	Alert Level	State Action Level
pH	Monthly	Reserved	6.5-8.5
Calcium	Monthly	Reserved	200 mg/l
Chloride	Monthly	Reserved	250 mg/l
Magnesium	Monthly	Reserved	150 mg/l
Sodium	Monthly	Reserved	250 mg/l
Sulfate	Monthly	Reserved	250 mg/l
Zinc	Monthly	Reserved	5.0 mg/l

The following parameters shall be recorded immediately before each groundwater monitoring sample round:

Well ID#, Date, Time, Name of Technician
Volume of water extracted
Temperature of groundwater
pH
Specific Conductance

f. Groundwater Monitoring Protocol

Static water level shall be measured in each of the three (3) monitor wells prior to pumping and purging for a sample round. Immediately before a sampling round each well shall be purged. Purging shall consist of removing at least three (3) casing volumes of water (as measured using the static water level) or until indicator parameters are stable (Conductivity, pH and Temperature), whichever represents the greater volume. If the well recharges slowly or is pumped dry, the well shall be allowed to recover to 80% of the static water level before sampling.

The ADEQ Quality Assurance Operation Plan procedures must be followed while sampling and transporting the samples to the designated lab. Travel blanks, equipment blanks and duplicates must be obtained as stated in the Department's QA/QC document. Chain of custody protocol must be followed. Analysis for all groundwater sampling shall be performed only by laboratories certified by the State of Arizona, using USEPA approved methods. To ensure proper preservation of the samples, the receiving laboratory shall be contacted prior to sampling to ensure that all required preservatives have been added to the sample containers and to ensure that all samples shall be delivered within the maximum allowable holding times. For results to be considered accurate and valid, all analytical work shall meet all quality control standards specified by the Arizona Department of Health Services, Office of Laboratory Licensure Certification (phone number in PART III of permit). Groundwater sample results shall be submitted on the forms supplied by the Department or on a form approved by the Department prior to submittal.

2. Reporting Requirements

The permittee/operator shall prepare a quarterly interpretative assessment report for the entire facility and shall include all records of all construction testing and all monitoring as required by this permit. The quarterly report submitted to the Department shall include:

a. Construction Testing Results

(1) Compaction/Density Testing Results

(2) Flexible Membrane Field Seaming Testing Results

(3) Construction Status of Facility Operations

b. Leach Solution Monitoring

(1) Daily testing for pH and free cyanide in solutions from the pregnant pond, barren pond and neutralization pond.

(2) Daily solution levels in the pregnant pond, barren pond, neutralization pond and storm water back-up pond.

c. Leak Detection Monitoring

(1) Weekly testing for the presence of fluid and if fluid is present, testing for pH and free cyanide in the four (4) leak detection manholes located in the heap leach pad.

(2) Weekly testing for the presence of fluid and if fluid is present, testing for pH and free cyanide in the leak detection sump located in the pregnant and barren solution ponds.

d. Tailings Neutralization Monitoring

(1) Neutralized tailings sample locations and analytical results.

(2) The amount of neutralized tailings removed from the leach pad and placed on the spent ore disposal area.

e. Groundwater Monitoring

(1) Quarterly analytical results for constituents with MGL's.

(2) Monthly analytical results for constituents with State Action Level's.

f. Remedial Actions

Type and volume of any spill not contained within the leaching circuit and actions taken.

Quarterly reports shall be submitted to the Department in accordance with the following schedule:

Interpretative Assessment Report for:	Due Date
Oct, Nov, Dec	Feb 1
Jan, Feb, Mar	May 1
Apr, May, Jun	Aug 1
Jul, Aug, Sep	Nov 1

If, for any reason, the permittee is unable to comply with the schedule for report submittal, the permittee shall provide the Director in writing with the following information within five (5) days of becoming aware of such a condition or five (5) days prior to due date:

(1) A description of the cause for non-compliance with the due date; and,

(2) The period, including exact dates of the period of non-compliance and steps that are being taken to correct the condition.

The interpretative assessment report including all monitoring forms and analytical results shall be submitted in duplicate to the following location:

Arizona Department of Environmental Quality
Office of Water Quality
Water Pollution Control Compliance Unit
2005 N. Central Avenue
Phoenix, Arizona 85004

C. Contingency Requirements (R9-20-206.D.2.)

1. Should any fluid be collected in any of the leak detection sampling points which exceed the permit limits (Part II.A.4.) or should any groundwater sample exceed the permit limits (Part II.B.1.e.), the permittee shall contact the Department's Water Pollution Control Compliance Unit (Part III.) within 72 hours of being aware of a permit violation to determine the appropriate action(s) to mitigate the effects of the permit violation.

2. In the event of a leach solution spill onto the land surface, it shall be neutralized immediately with a five (5) percent hypochlorite solution with a pH of greater than 10.0. A sufficient amount of hypochlorite shall be stored on-site to accommodate such or any other type of unforeseen situation. Any leach solution or chemical spill shall be reported to the Department's Water Pollution Compliance Unit and the Cochise County Health Department within 72 hours of the spill and any spill or clean-up activities (remedial actions) shall be documented in the quarterly submittal of the interpretative assessment report.

D. Post-Closure Plan (R9-20-206.D.3. and R9-20-216.C.2.)

1. Before permanent abandonment of the facility site, the permittee shall adhere to the following procedures for closure when utilizing cyanide.

   a. Operate the leach solution circuit for a minimum of 96 hours without the addition of cyanide, only adding fresh water and caustic soda to maintain water levels and a pH of 10 to 11. Test the leach solution for any residual free cyanide. If free cyanide is detected in concentrations of greater than 0.2 mg/l, continue with next steps ("b." and "c." hypochlorite neutralization). If free cyanide is not detected in concentrations of greater than 0.2 mg/l, go to step "e.".

   b. Run a 1% hypochlorite solution through the pregnant pond and barren pond for a minimum of 24 hours.

   c. Run a 1% hypochlorite solution through the entire heap leaching system for a minimum of 48 hours.

   d. Test the rinseate for free cyanide as described in PART II.B.1.a. If free cyanide is detected in concentrations of greater than 0.2 mg/l, repeat steps "a." "b." and "c." above and test for cyanide again.

   e. Allow solutions to evaporate from the ponds. Any remaining residues or sludges shall be analyzed by EPA approved test methods (Test Methods for Evaluating Solid Waste, SW-846, 2nd Edition) for the following constituents, and the results reported to the Department:

Constituent	Limits
Cyanide (Total and Free)	10 mg/l
Arsenic	5 mg/l
Barium	100 mg/l
Cadmium	1 mg/l
Chromium	5 mg/l
Lead	5 mg/l
Selenium	1 mg/l
Silver	5 mg/l

If any constituent exceeds its associated limit, the residual sludge shall be removed and disposed of at a landfill approved for handling hazardous waste.

2. The permittee shall file a report with the Department's Water Permits Unit following closure describing the results of each step of the closure plan within 60 days after closure.

E. Compliance Schedule (R9-20-219)

Reserved.

PART III. REFERENCES: PERTINENT INFORMATION

A. References

The terms and conditions set forth in this permit have been developed based upon the information contained in the following:

1. Groundwater Field Inspection Form(s) dated _____

2. Notice of Disposal dated 7-22-88

3. Groundwater Impact Review (re above No. 2) dated _____

4. Plan Review File Number N/A

5. Permit Application dated 8-3-88

6. Groundwater Impact Review (re above No. 5) dated _____

7. Amendments to above Nos. 2, 4 and 5 dated _____

8. Public Notice dated _____

9. Public Hearing comments, correspondence and any additional supplemental information contained in the facility permit file.

10. Other ADEQ Water Pollution Control Compliance Unit
Phone No. (602) 257-6818
ADHS Office of Laboratory Licensure Certification
Phone No. (602) 255-1188

B. Facility Information

1. Facility Contact Person Gary A. Lindroos

2. Address 950 Skyline Drive
P. O. Box 370
Tombstone, Arizona 85638

3. Emergency Telephone Number: Business (602) 457-2282
Home ( )

The Department shall be notified within 30 days of a change in the facility contact person.

4. Landowner of Facility Site Tombstone Development Co.

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Rose Mofford, Governor
Ronald Miller, Acting Director

August 19, 1988

Mr. Gary Lindroos
PBR Minerals, Inc.
950 Skyline Drive
P.O. Box 370
Tombstone, Arizona 85638

Dear Mr. Lindroos:

RE: Grand Central Leaching Facility, PBR Minerals, Inc.
ADEQ Notice of Disposal File No. 88-102

A Groundwater Quality Protection Permit application has been received by the Department for the above referenced facility and given a preliminary review. In accordance with ACRR Title 9, Chapter 20, Section 205.F. this letter serves as notification that before a permit can be drafted additional areas of concern the Department has about the application need to be addressed by the applicant. The Departments concerns are listed below for easy reference.

1. Leach solutions may affect the properties of a clay liner, thus altering the hydraulic conductivity of the compacted clay. Results of laboratory hydraulic conductivity measurements using a simulated leach solution should be submitted to the Department for review. The results should include a comparison of the sample compaction used in the laboratory with that to be utilized for the liner construction on-site. In addition, field QA/QC protocol should be described to insure that the liner meets the design specifications.

2. The possible presence of underground mine workings in the area which could provide a preferential flow path to the aquifer, removing the safety net of the 500-foot thick vadose zone. The Department is requesting the installation of two passive monitor wells, one upgradient and the other downgradient of the facility. The absence of an upgradient monitor well at the previously operated facility makes the interpretation of high mercury, calcium and sulfate levels difficult. The use of a downgradient pumping groundwater monitor well is not acceptable due to the likelihood of dilution with uncontaminated water. Although a pumped monitor well may eventually detect contaminants in groundwater, a passive monitor well should detect the presence of pollutants earlier. The Department would allow a water supply well located further downgradient from the downgradient monitor well.

3. Prior to, or coincident with the installation of the passive monitor wells and the water supply well, a water table elevation map should be sumbitted to the Department to verify proper placement of the monitor well network.

4. The Department requires leak detection and containmentd devices be placed on all pipelines used to transport cyanide solutions to or from the lined heap and pond facilities.

5. The cyanide neutralization process utilized to neutralize the leached ore needs to have a more thorough description in the permit application. In addition, a description of the sampling and analysis protocol used to verify that the leached ore is neutralized to the level of 0.45 mg/kg cyanide using the soluble weak acid dissociable (ASTM Method C) method.

6. The contingency plan discusses the use of spray irrigation onto the surrounding desert in the case of contaminated groundwater is encountered. If cyanide or mercury is a contaminent, the spray irrigation should be in a controlled access area with application rates not exceeding the evaporation rate. If this method is to be used soil sampling and analysis shall be required to verify that contaminants are below state soil clean-up action levels.

7. The Department requires that a post-closure monitoring be carried out for five years with a semi-annual sampling frequerncy rather than the proposed two year quarterly monitoring. A five-year post-closure monitoring period will give a higher degree of confidence that groundwater contamination has not occured.

As soon as these concerns are addressed by the applicant and approved by the Department the application review can be completed and a permit drafted. If you have any questions or concerns about this correspondence feel free to contact me at (602) 257-2270

Sincerely,

Rob B. Larson

Rob B. Larson, EES
Water Permits Unit

RBL:mls

cc: Bruce K. Thatcher, State Permits Hydrology Unit
Jim V. Rouse, Geochemical Engineering, Inc.
Jay I. Moyes, Meyers, Hendricks, Victor, Osborn & Maledon

8/18/88
GLindroos

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Rose Mofford, Governor
Ronald Miller, Acting Director

August 3, 1988

Mr. Gary Lindroos
PBR Minerals, Inc.
950 Skyline Drive
P.O. Box 370
Tombstone, Arizona 85638

Dear Mr. Lindroos:

Re: Grand Central Leaching Facility, PBR Minerals, Inc.
ADEQ Notice of Disposal File No. 88-102

A Notice of Disposal (NOD) has been received and given a preliminary review for the above referenced facility. In accordance with ACRR Title 9, Chapter 20, Section 205 of the Water Pollution Control Permit System, this letter serves as notification that the NOD is incomplete, and further information will be required to complete the preliminary review.

Mr. Jay Moyes mentioned in the NOD submittal that additional support materials would be submittal to the Department in the near future. The Department requires detailed site plans and descriptions of all containment facilities on-site so that a preliminary review can be completed.

A meeting has been scheduled between DEQ and PBR Minerals on August 3, 1988 at 1:30 p.m. in the Departments External Affairs Conference Room, to discuss the inadequacies of the NOD submittal.

If you have any questions or concerns, feel free to call me at 257-2270.

Sincerely,

Rob Larson

Rob Larson
Water Permits Unit

RL:mls

cc: Jay Moyes
Jim Rouse

10.0 REFERENCES CITED

Best, John, July 9, 1987, Arizona Dept. of Environmental Quality Interoffice Memorandum to James A. Maston, "Source of High Mercury Level in Cochise Silver Well No. Z"

Blake, William P., 1882, The geology and veins of Tombstone, Arizona: American Inst. Mining Eng. Trans., v. 10, p. 343-345.

Brinsmade, R. B., 1906, Wet sinking in Arizona: Mines and Minerals, v. 27, no. 3, p. 97-99.

Brinsmade, R. B., 1907, Tombstone, Arizona, restored: Mines and Minerals, v. 27, no. 8, p. 371-374.

Butler, B. S., Wilson, E. D., and Rasor, C.A., 1938, Geology and ore deposits of the Tombstone district, Arizona: University Arizona, Arizona Bur. Mines Bull. 143, supplement, maps.

Church, John A., 1903, The Tombstone, Arizona, mining district: American Inst. Mining Eng. Trans., v. 33, p. 3-37.

Church, John A., 1905, The Tombstone Consolidated Mines, a report on Tombstone and its mines to Mr. F. M. Murphy, President, The Development Company of America, New York, January 4, 1905.

Gilluly, James, Cooper, J.R., and Williams, J. S., 1954, Late Paleozoic stratigraphy of central Cochise County, Arizona: U.S. Geol. Survey Prof. Paper 266.

Gilluly, James, 1956, General geology of central Cochise Country, Arizona: U.S. Geol. Survey Prof. Paper 281.

Hollyday, Este F., 1963, A geohydrologic analysis of mine dewatering and water development, Tombstone, Cochise County, Arizona: M.S. Thesis, University of Arizona, Department of Geology.

Houle, M.J. and D. E. Long, 1980, Interpreting results from serial batch extraction tests of wastes and soils in Disposal of Hazardous Wastes, Proceedings of the Sixth Annual Research Symposium, EPA-600/9-80-010, p. 60-81.

Legrand, Charles, 1914, Un-watering at Tombstone, a letter to Walter Douglas, General Manager, Phelps, Dodge & Co. Inc.: Newmont Mining Corp., File I_1-7, Tombstone, 1962.

Ransome, Frederick L., 1920, Deposits of manganese ore in Arizona: Bisbee and Tombstone Districts: U.S. Geol. Survey Bull. 710, p. 96-119.

Staunton, William F., 1908, Report of the General Manager in Annual report of the President, General Manager, and Treasurer, Tombstone Consolidated Mines Company, Ltd., Sept. 30, 1908.

Staunton, William F., 1910, The pumping problem at the Tombstone mines: Eng. Mining Journal, v. 89, no. 3, p. 174-175.

Walker, Elton W., 1909, Pumping plant at the Tombstone Consolidated: Eng. Mining Journ., v. 88, no. 4, p. 160-162.

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Rose Mofford, Governor
Ronald Miller, Acting Director

Mr. Gary Lindroos
PBR Minerals, Inc.
950 Skyline Drive
P.O. Box 370
Tombstone, Arizona 85638

September 15, 1988

Dear Mr. Lindroos:

Re: Grand Central Leaching Facility, PBR Minerals, Inc.
ADEQ Notice of Disposal File No. 88-102

A Notice of Disposal has been received and given a preliminary review for the above referenced facility. In accordance with A.A.C. Title 9, Chapter 20, Section 205 of the Water Pollution Control Permit System, this letter serves as notification:

__X__ 1. Of our intent to issue a Groundwater Quality Protection Permit. You should however, be reminded that operations may not commence until a groundwater permit is issued.

_____ 2. The issuance of the permit is contingent on technical approval of plans and specifications by the ADEQ, Technical Review Unit, or the appropriate County Health Department.

_____ 3. That the facility does not comply with the criteria listed in R9-20-208.A, and as such, a full permit application will be required. The regulations (R9-20-205.D) require you to first submit a proposal for a permit application. It is suggested you contact this office to arrange a pre-proposal meeting. Enclosed is a copy of the "Groundwater Quality Permit Guidance Document".

_____ 4. That the NOD is incomplete, and further information will be required to complete the preliminary review. (See attachment)

If you have any questions or comments feel free to call me at 257-2270.

Sincerely,

Rob B. Larson

Rob B. Larson
Water Permits Unit

RBL:mls

cc: Hydrology Permits Section, Attn: Bruce K. Thatcher
Geochemical Engineering, Inc., Attn: Jim V. Rouse
Meyers, Hendricks, Victor, Osborn & Maledon, Attn: Jay I. Moyes

The Department of Environmental Quality is An Equal Opportunity Affirmative Action Employer