GW - 202

MONITORING REPORTS

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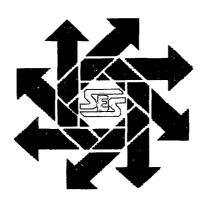
Pro-Kem, Inc. Monitor Well Report Section 15, T16S, R36E Lea County, New Mexico

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March 19, 2001



Prepared for:

Pro-Kem, Inc. P.O. Box 1506 Lovington, New Mexico 88260

By:

Safety & Environmental Solutions, Inc. 703 E. Clinton, Suite 102 Hobbs, New Mexico 88240 (505) 397-0510

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I. Background

The subject property is located in south Lovington, New Mexico adjacent to NM Highway 18 in Section 15, Township 16S, Range 36E. Safety & Environmental Solutions, Inc. (SESI) performed sampling and data collection on the three (3) ground water monitor wells previously installed in November 1997 at the site (See Vicinity Map). The casing size in all wells is 2".

II. Work Performed

On March 19, 2001 an environmental technician with SESI arrived at the site. Ground water samples were taken from each well after a hand bailer was used to develop the wells. Three to five casing volumes of water were removed from each well until pH and temperature of the water were stabilized. The samples were obtained and placed in appropriate containers, preserved and transported under chain of custody to Cardinal Laboratories of Hobbs, New Mexico for analysis for the contaminants Carbon Tetrachloride, and BTEX. (See Analytical Data)

In addition to the sampling, SESI also measured the depth to the top of the water table and the total depth of each well. The depth to the top of ground water was measured using a Solinst water level indicator. The total depth of each well was measured in order to compute the proper casing volumes. A groundwater potentiometric and gradient map was prepared using the measured depth to water and previously surveyed top of casing elevations. A summary of this data follows:

| ID | DATE | TOP OF | DEPTH | POTENTIO | TOTAL | FREE |
|--------|---------|-----------|--------|-----------|--------|-----------|
| 1 | | CASING | TO | METRIC | WELL | PRODUCT |
| | | ELEVATION | WATER | ELEVATION | DEPTH | THICKNESS |
| MW – 1 | 3/19/01 | 3895.67' | 60.15' | 3835.52' | 73.36' | 0.00 |
| MW – 2 | 3/19/01 | 3894.33' | 59.42' | 3834.91' | 70.51' | 0.00 |
| MW - 3 | 3/19/01 | 3894.13' | 60.17' | 3833.96' | 71.44' | 0.00 |

III. Analytical Results

The analysis of the groundwater samples performed by Cardinal Laboratories are summarized as follows:

| CONTAMINANT | WQCC STANDARD | MW #1 | MW #2 | MW #3 |
|---------------|------------------|-----------|-----------|-----------|
| Carbon Tet. | 0.01 ppm | 0.817ppm | 0.023ppm | 0.136ppm |
| Benzene | 0.01 ppm | <0.005ppm | <0.005ppm | <0.005ppm |
| Toluene | 0.75 ppm | <0.005ppm | <0.005ppm | <0.005ppm |
| Ethyl Benzene | 0.75 ppm | <0.005ppm | <0.005ppm | <0.005ppm |
| Total Xylenes | 0.62 ppm | <0.010ppm | <0.010ppm | <0.010ppm |

IV. Figures and Appendices

Figures:

Vicinity Map Potentiometric Map

Appendices:

Cumulative Well Water Quality Data Results Analytical Results Figure 1 Vicinity Map

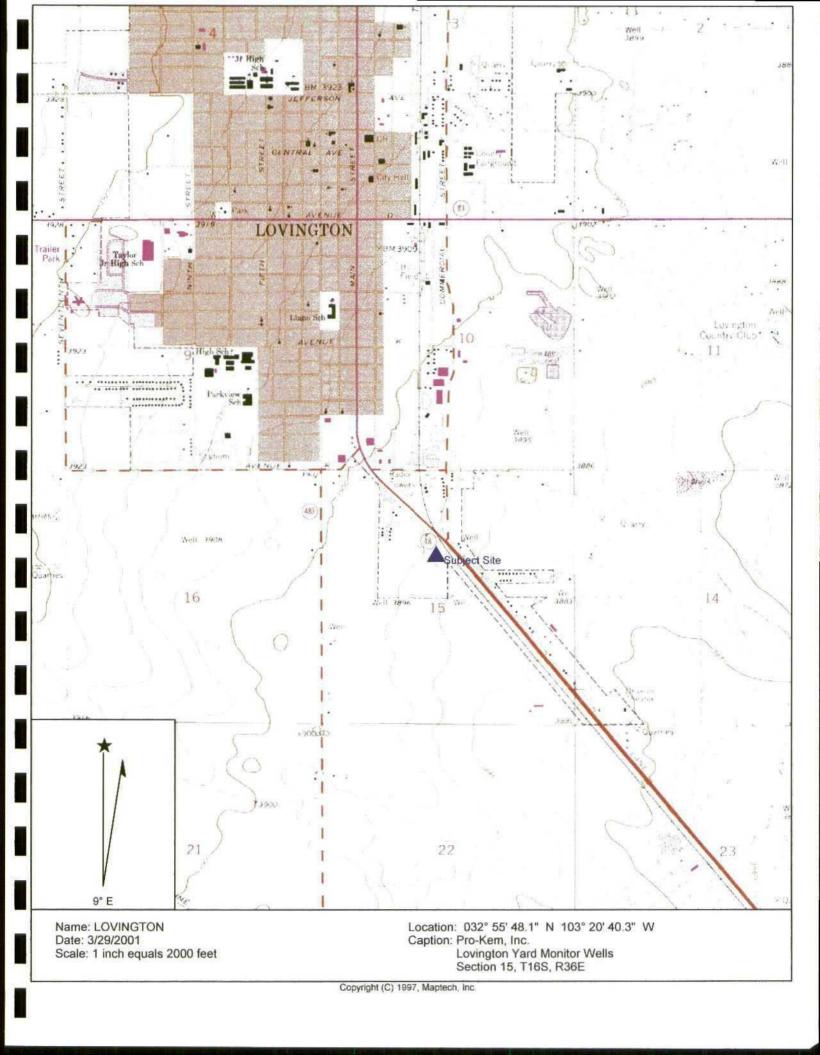
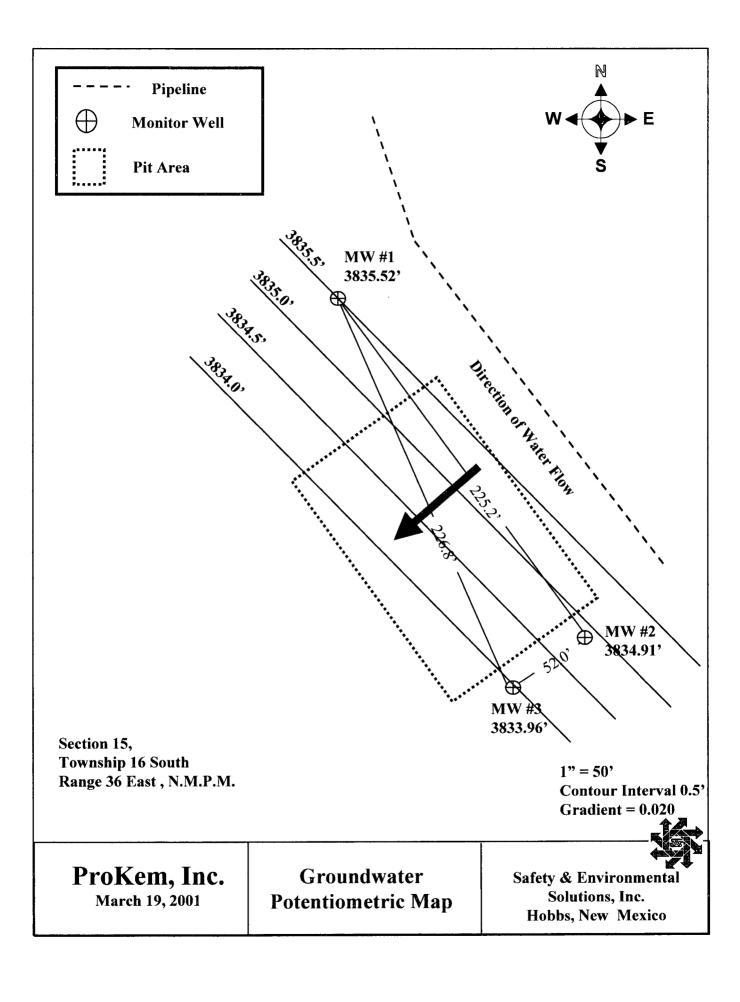


Figure 2
Potentiometric Map



Appendix A Cumulative Well Water Quality Data Results

ProKem, Inc. Cumulative Well Data

Monitor Well #1

| CONTAMINANT | WQCC STANDARD | TEST DATE 1/8/99 | TEST DATE 4/16/99 | TEST DATE 12/8/99 |
|----------------------|------------------|------------------------|-------------------------|-------------------------|
| Chloride | 250.0ppm | 56ppm | N/A | N/A |
| Carbon Tetrachloride | 0.002ppm | .342ppm | .338ppm | .366ppm |
| Benzene | 0.01ppm | <0.002ppm | <0.002ppm | <0.002ppm |
| Toluene | 0.75ppm | <0.002ppm | <0.002ppm | <0.002ppm |
| E. Benzene | 0.75ppm | <0.002ppm | <0.002ppm | <0.002ppm |
| Total Xylenes | 0.62ppm | <0.006ppm | <0.006ppm | <0.006ppm |
| TPH | N/A | <1.0ppm | N/A | N/A |

| CONTAMINANT | WQCC | TEST | TEST | TEST |
|--|----------|-----------|-----------|-----------|
| | STANDARD | DATE | DATE | DATE |
| And the second s | | 2/22/00 | 6/16/00 | 9/6/00 |
| | | | 2.7 | |
| Chloride | 250.0ppm | N/A | N/A | N/A |
| Carbon Tetrachloride | 0.002ppm | .589ppm | 0.144ppm | 0.460ppm |
| Benzene | 0.01ppm | <0.002ppm | <0.002ppm | <0.005ppm |
| Toluene | 0.75ppm | <0.002ppm | <0.002ppm | <0.005ppm |
| E. Benzene | 0.75ppm | <0.002ppm | <0.002ppm | <0.005ppm |
| Total Xylenes | 0.62ppm | <0.006ppm | <0.004ppm | <0.015ppm |
| TPH | N/A | N/A | N/A | N/A |

| CONTAMINANT | | TEST |
|----------------------|----------|-----------------|
| | STANDARD | DATE 3/19/01 |
| Chloride | 250.0ppm | N/A |
| Carbon Tetrachloride | 0.002ppm | 0.817ppm |
| Benzene | 0.01ppm | <0.005ppm |
| Toluene | 0.75ppm | <0.005ppm |
| E. Benzene | 0.75ppm | <0.005ppm |
| Total Xylenes | 0.62ppm | <0.010ppm |
| TPH | N/A | N/A |

Monitor Well #2

| CONTAMINANT | WQCC | TEST | TEST | TEST |
|----------------------|----------|----------------|-----------------|-----------------|
| | STANDARD | DATE 1/8/99 | DATE 4/16/99 | DATE 12/8/99 |
| Chloride | 250.0ppm | 94ppm | N/A | N/A |
| Carbon Tetrachloride | 0.002ppm | 0.17ppm | 0.15ppm | .008ppm |
| Benzene | 0.01ppm | <0.002ppm | <0.002ppm | <0.002ppm |
| Toluene | 0.75ppm | <0.002ppm | <0.002ppm | <0.002ppm |
| Ethyl Benzene | 0.75ppm | <0.002ppm | <0.002ppm | <0.002ppm |
| Total Xylenes | 0.62ppm | <0.006ppm | <0.006ppm | <0.006ppm |
| TPH | N/A | 1.47ppm | N/A | N/A |

| CONTAMINANT | WQCC STANDARD | TEST DATE 2/22/00 | TEST DATE 6/16/00 | TEST DATE 9/6/00 |
|----------------------|------------------|-------------------------|-------------------------|------------------------|
| Chloride | 250.0ppm | N/A | N/A | N/A |
| Carbon Tetrachloride | 0.002ppm | .354ppm | 0.006ppm | <0.005ppm |
| Benzene | 0.01ppm | <0.002ppm | <0.002ppm | <0.005ppm |
| Toluene | 0.75ppm | <0.002ppm | <0.002ppm | <0.005ppm |
| Ethyl Benzene | 0.75ppm | <0.002ppm | <0.002ppm | <0.005ppm |
| Total Xylenes | 0.62ppm | <0.006ppm | <0.004ppm | <0.015ppm |
| TPH | N/A | N/A | N/A | N/A |

| CONTAMINANT | WQCC STANDARD | TEST DATE 3/19/01 |
|----------------------|------------------|-------------------------|
| Chloride | 250.0ppm | N/A |
| Carbon Tetrachloride | 0.002ppm | 0.023ppm |
| Benzene | 0.01ppm | <0.005ppm |
| Toluene | 0.75ppm | <0.005ppm |
| Ethyl Benzene | 0.75ppm | <0.005ppm |
| Total Xylenes | 0.62ppm | <0.010ppm |
| ТРН | N/A | N/A |

Monitor Well #3

| CONTAMINANT | WQCC STANDARD | TEST DATE 1/8/99 | TEST DATE 4/16/99 | TEST DATE 12/8/99 |
|----------------------|------------------|------------------------|-------------------------|-------------------------|
| Chloride | 250.0ppm | 116ppm | N/A | N/A |
| Carbon Tetrachloride | 0.002ppm | .111ppm | .109ppm | .353ppm |
| Benzene | 0.01ppm | <0.002ppm | <0.002ppm | <0.002ppm |
| Toluene | 0.75ppm | <0.002ppm | <0.002ppm | <0.002ppm |
| Ethyl Benzene | 0.75ppm | <0.002ppm | <0.002ppm | <0.002ppm |
| Total Xylenes | 0.62ppm | <0.006ppm | <0.006ppm | <0.006ppm |
| TPH | N/A | <1.0ppm | N/A | N/A |

| CONTAMINANT | WQCC STANDARD | TEST DATE 2/22/00 | TEST DATE 6/16/00 | TEST DATE 9/6/00 |
|----------------------|------------------|-------------------------|-------------------------|------------------------|
| Chloride | 250.0ppm | N/A | N/A | N/A |
| Carbon Tetrachloride | 0.002ppm | .007ppm | 0.438ppm | 0.155ppm |
| Benzene | 0.01ppm | <0.002ppm | <0.002ppm | <0.005ppm |
| Toluene | 0.75ppm | <0.002ppm | <0.002ppm | <0.005ppm |
| Ethyl Benzene | 0.75ppm | <0.002ppm | <0.002ppm | <0.005ppm |
| Total Xylenes | 0.62ppm | <0.006ppm | <0.004ppm | <0.015ppm |
| TPH | N/A | N/A | N/A | N/A |

| CONTAMINANT | WQCC STANDARD | TEST DATE 3/19/01 |
|----------------------|------------------|-------------------------|
| Chloride | 250.0ppm | N/A |
| Carbon Tetrachloride | 0.002ppm | 0.136ppm |
| Benzene | 0.01ppm | <0.005ppm |
| Toluene | 0.75ppm | <0.005ppm |
| Ethyl Benzene | 0.75ppm | <0.005ppm |
| Total Xylenes | 0.62ppm | <0.010ppm |
| TPH | N/A | N/A |

Appendix B Analytical Results





PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR

SAFETY & ENVIRONMENTAL SOLUTIONS, INC.

ATTN: BOB ALLEN 703 E. CLINTON, #103 HOBBS, NM 88240 FAX TO: (505) 393-4388

Receiving Date: 03/19/01 Reporting Date: 03/20/01

Project Number: NOT GIVEN

Project Name: NOT GIVEN PROKEN Project Location: NOT GIVEN Lovington

Lab Number: H5719-1

Sample ID: MW #1

Analysis Date: 03/19/01 Sampling Date: 03/19/01

Sample Type: GROUNDWATER Sample Condition: COOL & INTACT

Sample Received By: AH

Analyzed By: BC

| VOLATILES (mg/L) | Sample Result H5719-1 | Method Blank | QC | %Recov. | True Value QC |
|----------------------|--------------------------|-----------------|-------|---------|------------------|
| Benzene | <0.005 | <0.005 | 0.107 | 107 | 0.100 |
| Carbon Tetrachloride | 0.817 | <0.005 | 0.102 | 102 | 0.100 |
| Toluene | <0.005 | <0.005 | 0.108 | 108 | 0.100 |
| Ethylbenzene | <0.005 | <0.005 | 0.113 | 113 | 0.100 |
| m,p-Xylene | <0.005 | <0.005 | 0.224 | 112 | 0.200 |
| o-Xylene | <0.005 | <0.005 | 0.102 | 102 | 0.100 |

% RECOVERY

| Dibromofluoromethane | 95 |
|----------------------|----|
| Toluene-d8 | 97 |
| Bromofluorobenzene | 99 |

METHODS: EPA SW-846 8260

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



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ANALYTICAL RESULTS FOR

SAFETY & ENVIRONMENTAL SOLUTIONS, INC.

ATTN: BOB ALLEN 703 E. CLINTON, #103 HOBBS, NM 88240 FAX TO: (505) 393-4388

Receiving Date: 03/19/01 Reporting Date: 03/20/01 Project Number: NOT GIVEN

Project Name: NOT GIVEN PROKEIN
Project Location: NOT GIVEN Loving for

Lab Number: H5719-2 Sample ID: MW #2 Analysis Date: 03/19/01 Sampling Date: 03/19/01

Sample Type: GROUNDWATER Sample Condition: COOL & INTACT

Sample Received By: AH

Analyzed By: BC

| VOLATILES (mg/L) | Sample Result H5719-2 | Method Blank | QC | %Recov. | True Value QC |
|----------------------|--------------------------|-----------------|-------|---------|------------------|
| Benzene | <0.005 | <0.005 | 0.107 | 107 | 0.100 |
| Carbon Tetrachloride | 0.023 | <0.005 | 0.102 | 102 | 0.100 |
| Toluene | <0.005 | <0.005 | 0.108 | 108 | 0.100 |
| Ethylbenzene | <0.005 | <0.005 | 0.113 | 113 | 0.100 |
| m,p-Xylene | <0.005 | <0.005 | 0.224 | 112 | 0.200 |
| o-Xylene | <0.005 | <0.005 | 0.102 | 102 | 0.100 |

% RECOVERY

| | 70 RECOVER | |
|----------------------|------------|--|
| Dibromofluoromethane | 102 | |
| Toluene-d8 | 101 | |
| Bromofluorobenzene | 97 | |

METHODS: EPA SW-846 8260

Burgess J. A. Cooke, Ph. D.

3/20/00

Date

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ANALYTICAL RESULTS FOR

SAFETY & ENVIRONMENTAL SOLUTIONS, INC.

ATTN: BOB ALLEN 703 E. CLINTON, #103 HOBBS, NM 88240 FAX TO: (505) 393-4388

Receiving Date: 03/19/01 Reporting Date: 03/20/01

Project Number: NOT GIVEN

Project Name: NOT GIVEN PROKEIN
Project Location: NOT GIVEN Lovington

Lab Number: H5719-3 Sample ID: MW #3

Analysis Date: 03/19/01 Sampling Date: 03/19/01

Sample Type: GROUNDWATER Sample Condition: COOL & INTACT

Sample Received By: AH

Analyzed By: BC

| VOLATILES (mg/L) | Sample Result H5719-3 | Method Blank | QC | %Recov. | True Value QC |
|----------------------|--------------------------|-----------------|-------|---------|------------------|
| Benzene | <0.005 | <0.005 | 0.107 | 107 | 0.100 |
| Carbon Tetrachloride | 0.136 | <0.005 | 0.102 | 102 | 0.100 |
| Toluene | <0.005 | <0.005 | 0.108 | 108 | 0.100 |
| Ethylbenzene | < 0.005 | < 0.005 | 0.113 | 113 | 0.100 |
| m,p-Xylene | <0.005 | <0.005 | 0.224 | 112 | 0.200 |
| o-Xylene | <0.005 | <0.005 | 0.102 | 102 | 0.100 |

% RECOVERY

| Dibromofluoromethane | 97 | |
|----------------------|-----|--|
| Toluene-d8 | 103 | |
| Bromofluorobenzene | 103 | |

METHODS: EPA SW-846 8260

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476 (915) 673-7001 Fax (915) 673-7020

| Company Name: St | SEST | | | | | į | | | ļ | | | | | | | Y | ANALYSIS | YSIS | REC | REQUEST | Ľ | | | | |
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| Project Manager: | | | | . | | | | 3118 | OL THU | 0 | PO #: | | | | | | | | | | | | | | |
| Address: 703 E. | Address: 703 E. CLINTON, #103 | | | . | | | Ŏ | Company: | any: | SAME | ME | | | | | | | -, | | | | ····· | | | |
| city: HOBBS | State: NM Zlp: | | 88240 | 0 | | · | ĕ | Attn: | | | | | | | | | ·· | | | | | | | | |
| Phone #: (505) 3 | 397-0510 | | | İ | | | Ă | Address: | 55: | | | | | | | | | | | | | | | | |
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| FOR LAB USE ONLY | | | | | MA | MATRIX | | | PRES. | - | SAMPLING | 9 | | | | | | | | | | | | | |
| LAB I.D. | Sample I.D. | (G)RAB OR (C)OMP. | # CONTAINERS | GROUNDWATER | MASTEWATER SOIL | סור | SLUDGE: | VCID: | ICE I COOL | : ЯЭНТО | DATE | TIME | 17/1 | med 12 | | | | | | | | , | | | |
| H&219-1 | 17/11/1 | | | | | ├── | - | - | > | ~ | 124 | | 7 | / | | | | | | | | | | | |
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† Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020. Sample Condition
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Sampler . UPS . Bus . Other: Delivered By: (Circle One)

CHECKED BY: (Initials)

Redelved By: (Lab Staff)

Date:

Relinguished By:

Time:

