

Ref 10 30 96  
40-8989

**ENVIROCARE** OF UTAH, INC.  
THE SAFE ALTERNATIVE

October 24, 1996

Chief, Uranium Recovery Branch  
Division of Waste Management  
Office of Nuclear Materials Safety  
U.S. Nuclear Regulatory Commission  
MS T-7J9  
11545 Rockville Pike  
Rockville, MD 20852

Attn: Mr. Harold Lefevre

Re: 11e.(2) Groundwater Monitoring Well Exceedences, Compliance Monitoring Plan  
License Number SMC-1559, Amend. 8

Dear Mr. Lefevre:

Pursuant to Section 11.1 (g) of Material License Number SMC-1559, Amendment 8, Ref. 40-8989, Envirocare is providing a site specific Compliance Monitoring Plan specific to 2nd quarter background water quality exceedences in a number of their 11e.(2) monitoring wells. Implementation of this plan does not in anyway imply any contamination of the groundwater or compromise in the liner system has taken place. This plan does however address an approach to qualitatively determine the reason(s) for said exceedences, and eliminate their occurrence in the future.

On October 4, 1996, you were notified in a letter from Envirocare's Vernon Andrews of confirmed exceedences in a variety of 11e.(2) groundwater monitoring wells. In review, the following table documents these confirmed exceedences:

Well	Parameter	Initial Result (mg/l)	1st or 2nd Confirmation (mg/l)	Table S-1 (mg/l)
GW-19A	Arsenic	0.044	0.047	0.036
GW-24	Arsenic	0.033	0.034	0.032
	Selenium	0.032	0.033	0.008
GW-25	Arsenic	0.117	0.117	0.110
GW-26	Arsenic	0.234	0.215	0.200
	Mercury	0.0006	0.0014	0.0002
GW-27	Arsenic	0.110	0.071	0.059

NL10%

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Well	Parameter	Initial Result (mg/l)	1st or 2nd Confirmation (mg/l)	Table S-1 (mg/l)
GW-28	Uranium	0.013	0.016 (0.0087)*	0.011
GW-29	Arsenic	0.028	0.029	0.023
GW-57	Arsenic	0.046	0.047	0.026
GW-60	Arsenic	0.035	0.034	0.028
GW-63	Arsenic	0.036	0.039	0.034

\* Second resample for informational purposes

Please note that wells GW-19A and GW-63, located in the southwest corner of 11e.(2), and regionally upgradient of the cell, demonstrated an exceedence in Arsenic. These wells are approximately ½ mile upgradient from disposed waste, which is located in the northeast corner of the cell. In addition, wells GW-38 and GW-20, located in the vicinity and downgradient of the placed waste, have not demonstrated any exceedences. Please refer to attached Figure 1.

Groundwater transport modeling previously conducted at the site indicates that it is statistically impossible for groundwater contamination of these wells to have occurred as a result of on-site waste placement.

Beginning with the 2nd quarter sampling event, to which this correspondence pertains, Envirocare contracted the services of a new certified laboratory. All previous sample analyses for these wells, including analyses to establish Table S-1 background levels, was carried out by a different laboratory.

It is these bases which lead Envirocare, as well as its consultant, to believe that current sample analysis results are indicating background levels. As a result of this, Envirocare plans to incorporate the following procedures to identify conclusively that levels identified in subsequent 11e.(2) groundwater sampling events are background levels only.

- 1) Sampling will continue on the same quarterly frequency as previous sampling events.
- 2) Sample splits will be taken from the above wells and submitted to both the current laboratory in use (Mountain States Analytical), as well as the previous laboratory (American West Analytical). At a minimum, an analysis of each of the above analytes will be performed by both labs and the results compared. Mountain States will perform the complete suite of analyses for none-radioactive constituents. Remaining wells will not have splits taken but simply be analyzed by Mountain States. This procedure will be repeated for a minimum of

the next two sampling events ( November 1996 and March 1997), as well as any required resampling events. The results will then be compared and any trending established.

3) It will be determined whether additional splits in subsequent sampling events are required to further determine trending.

4) Well GW-28, which demonstrated an exceedence in Uranium, will be sampled and analyzed quarterly for four (4) quarters. If the four (4) consecutive quarters do not demonstrate an exceedence, Envirocare will consider the well is no longer in non-compliance. Envirocare feels strongly that this exceedence was a result of anomalies in sampling or analysis.

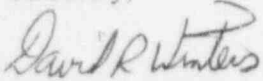
5) The NRC will be notified with the results of Envirocare's findings, and Envirocare may then petition for a modification of Table S-1 to more accurately identify background levels.

Implementation of this plan will confirm that there has been no contamination of the groundwater, and 11e (2) well analytes are at background levels.

As a result of the two (2) resampling events, the 2nd quarter report is scheduled for completion by November 8, 1996, at which time copies will be submitted to you.

Should you have any questions, please feel free to contact me.

Sincerely,

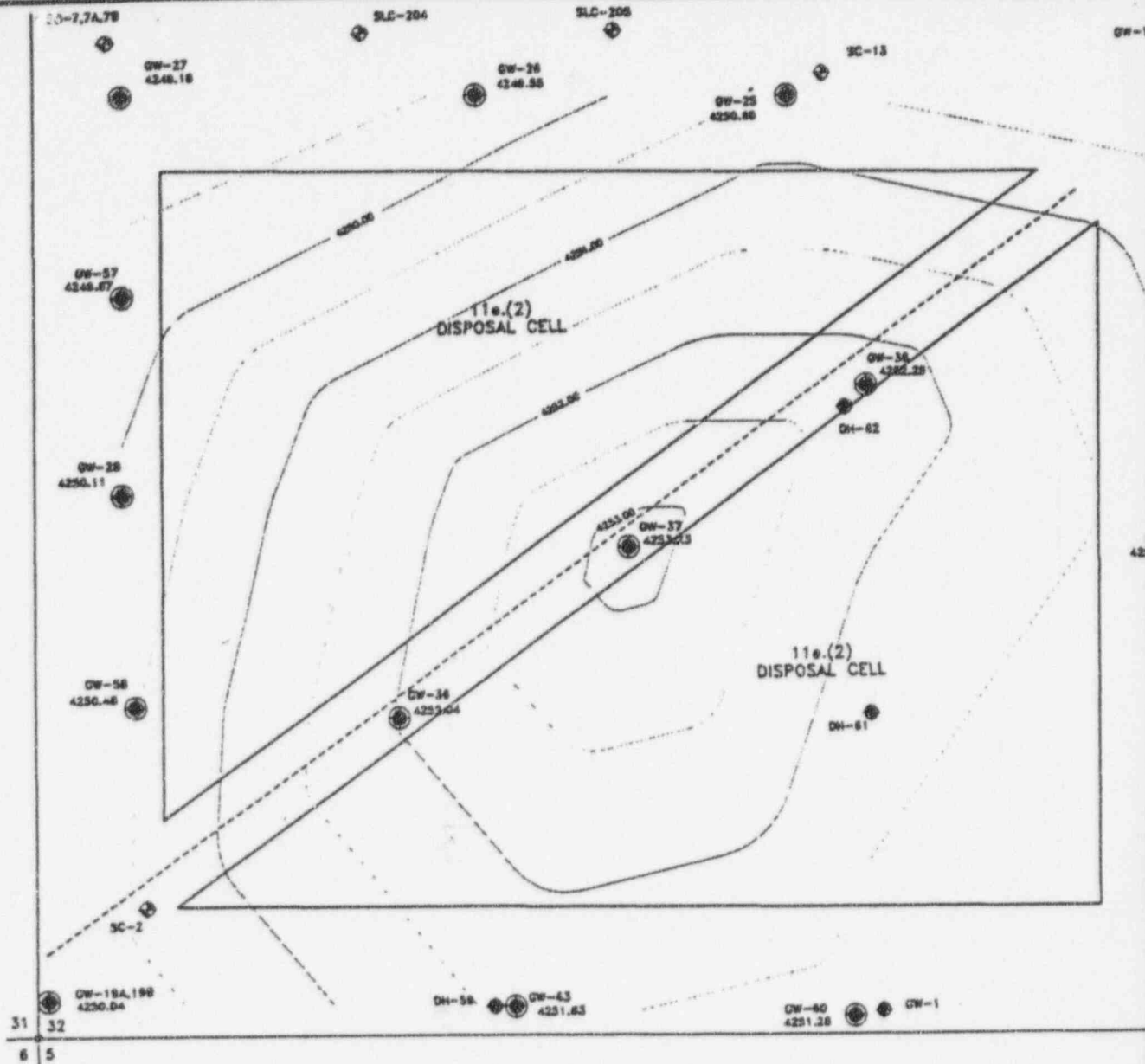


David R. Winters, P.E.  
Director of Groundwater Affairs

attachment

cc: Administrator, Region IV  
Earthfax, Larry Dushane  
file





### LEGEND

- 4245 — Freshwater Equivalent Head (FEBRUARY 5-8, 1996)  
 Freshwater Equivalent Head Elevation Included Adjacent to Well I.D.
- ⊕ GW-16 Through GW-66: Monitor Wells-Bingham Environmental (1991-1994)
  - ⊕ DH-30 Through DH-65: Exploratory Holes / Piezometers-Bingham Environmental (1991-1993)
  - ⊕ I and other GW's: Delta Geotechnical Consultants (1988, 1990)
  - ⊕ SLC- Jacobs Engineering Group, Inc. (1984)
  - ⊕ SC- Dames & Moore (1981-1982)
  - ⊕ Monitor Wells Included in Network
  - ⊕ Suction Lyimeters In Network

### SOIL SAMPLING CODE

- ⊕ Continuous Soil Sampling Hole
- ⊕ Discontinuous Soil Sampling Hole

### COMPLIANCE MONITOR

#### EXISTING LARW CELL:

#### COMPLIANCE MONITOR WELLS

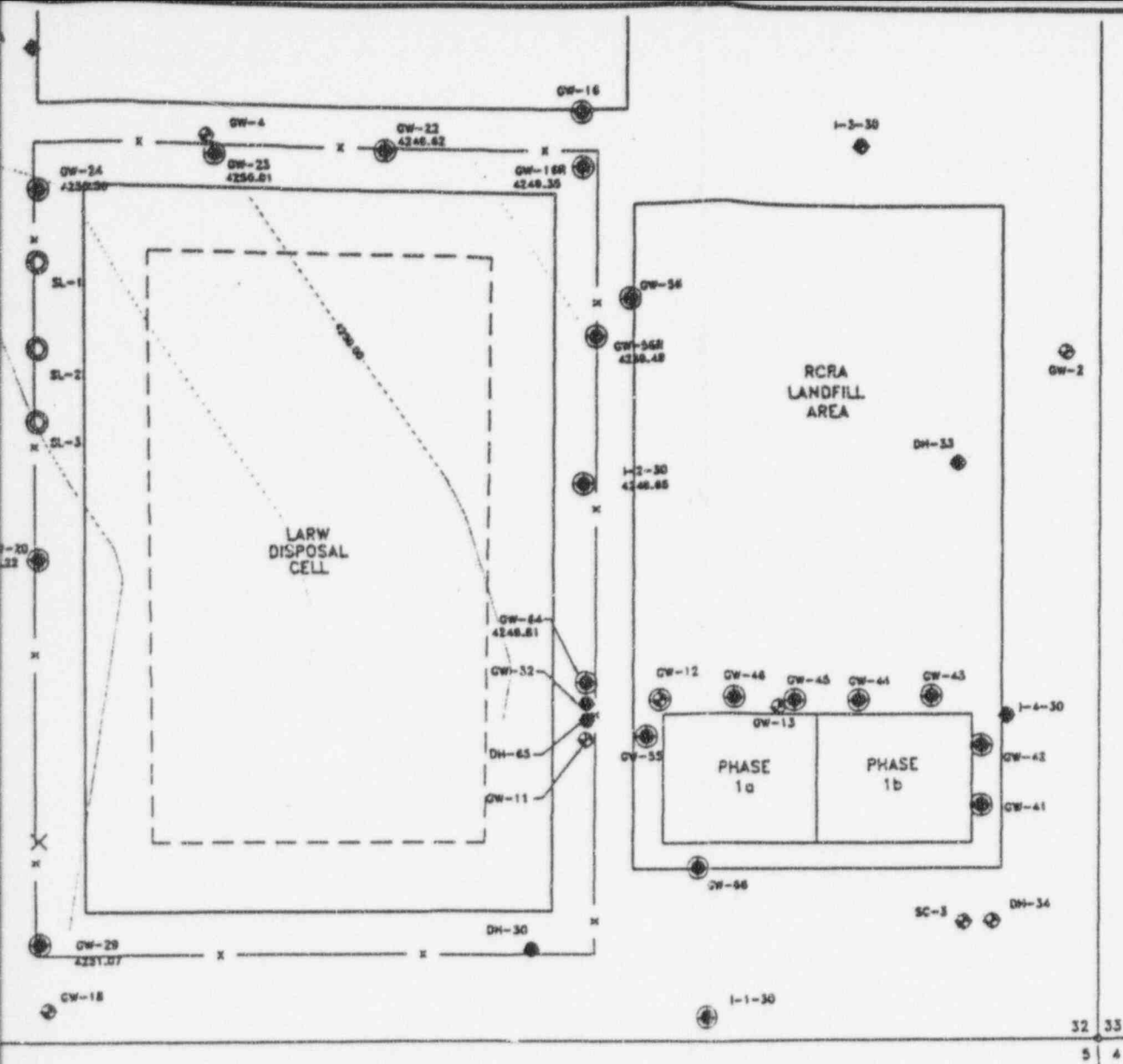
- |        |       |      |
|--------|-------|------|
| I-2-30 | GW-23 | GW-5 |
| GW-16R | GW-24 | GW-6 |
| GW-20  | GW-25 | GW-4 |
| GW-22  | GW-29 |      |

#### SUCTION LYIMETERS

- SL-1
- SL-2
- SL-3

### NOTES

1. GW-17A TO MONITOR DISPOSAL CELL. THIS BE A COMPLIANCE MONITOR
2. DH- DESIGNATES EXPLORATORY HOLES NOT COMPLETED AS DH-33 AND DH-34



## ANSTEC APERTURE CARD

Also Available on  
Aperture Card

### WELLS/LYSIMETERS

#### 11a. (2) DISPOSAL CELLS

##### COMPLIANCE MONITOR WELLS

GW-19A	GW-27	GW-38
GW-20	GW-28	GW-57
GW-24	GW-29	GW-58
GW-25	GW-36	GW-60
GW-26	GW-37	GW-63

PERFORMANCE OF VITRO  
IS NOT PROPOSED TO  
MONITOR WELL.

LABORATORY DRILL HOLES WHICH WERE  
MONITOR WELLS. DH-31, DH-32,  
WERE COMPLETED AS PIEZOMETERS.

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0 200 400 600  
Scale in Feet

ENVIROCARE OF UTAH

FRESHWATER EQUIVALENT HEAD  
POTENTIOMETRIC MAP  
SHALLOW UNCONFINED AQUIFER  
(FEBRUARY 1996)

**B BINGHAM**  
ENVIRONMENTAL  
SALT LAKE CITY - (801) 532-2230

FIGURE 1