

BRIAN SANDOVAL
Governor

STATE OF NEVADA

AMY ROUKIE, MBA
Administrator, DPBH

RICHARD WHITLEY, MS
Director, DHHS



JOHN DIMURO, D.O., MBA
Chief Medical Officer

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC AND BEHAVIORAL HEALTH
Bureau of Preparedness, Assurance, Inspections and Statistics
Radiation Control Program
675 Fairview Drive, Suite 218
Carson City, Nevada 89701
Telephone: (775) 687-7550 · Fax: (775) 687-7552

August 31, 2017

MEMORANDUM

To: Beatty File

From: John Follette, Radiation Control Specialist *JF 8-31-17*

Subject: Beatty Inspection Summary August 10, 2017

An inspection of the Beatty Low-Level Waste landfill (closed) was conducted on August 10, 2017 by Brandie Peretz, Haley Brown, and John Follette. The radiological survey was performed by driving the BNC Model RD-120 GN (SN 120009) backpack around the site boundary access road and in a grid across the cap to detect radiological anomalies. None were detected. Dose rate readings on the cap remain about twice background*, as read on the access road.

Status of Previous Inspection Items:

The markers for the trenches are not in place on the cap. They are still stacked off to the south side inside of the fenced area.

Our lock to the site needs to be replaced or serviced. The key continues to stick inside the lock and is difficult to remove.

Site Observations:

Radiological Postings Adequate: Yes

Site Boundary Fence Undamaged and Gate(s) Locked: Yes.

- The new gate is 16" above the ground at the center of the gate. On August 31, 2017, RCP will discuss this with USEN to see if it represents a problem with people or wildlife accessing the site. See enclosed picture of the new gate.

Site Boundary, Access Road, and Buffer Areas Maintained: Yes

Rain Since Last Inspection:

May- 0.0", June- 0.0", July- 0.0", and August- 0.66 inches as of August 10, 2017.

Erosion, Fissures, Water Pooling, or Subsidence Concerns:

- No erosion, fissures, water pooling, or subsidence concerns were identified on the cap.
- Along the site boundary fence, there is erosion due to runoff from the cap. Erosion along the site boundary fence indicates that water is running off the cap efficiently. Pictures of the erosion are included in this report. RCP will request a quote from USEN to repair the erosion areas.

Radiation Survey Results:

Instrument: BNC Model RD-120 GN (SN 120009) Calibration date: Daily by self-calibration

Background Location: Near the access road by the US Geological Survey (USGS) sampling station, Emergency Meeting Area sign:

Background measurement: 18 – 23 μ rem/hr

Value used for twice background: 46 μ rem/hr

Site Boundary Highest Measurement: Within twice background*

Cap Highest Measurement: Within twice background*

*If sustained radiation measurements are above twice background, record the measurement and identify the location for discussion with supervisor. Otherwise, indicate all measurements were within twice background.

For any reading above 0.5 mrem/hr contact a supervisor or the State of Nevada Radiation Control Program Manager. (Site Stabilization and Closure Plan Closure Plan for Low-Level Radioactive Waste Management Facility US Ecology, Inc. Beatty, Nevada, submittal date December 1988.)

Contacts:	Karen Beckley:	775-687-7540, kbeckley@health.nv.gov
	Adrian Howe:	775-687-7531, ahowe@health.nv.gov
	Glen Gimenez:	775-687-7542, glgimenez@health.nv.gov
	John Follette:	702-486-3017, jfollette@health.nv.gov
	Brandie Peretz:	702-486-5286, bperetz@health.nv.gov
	Haley Brown:	702-486-3015, habrown@health.nv.gov

8/10/17 Beatty Field Notes Haley Brown

West Gate Reading

Erosion Photos

18.4 - 24.0 urem/hr #1

19.1 - 23.8.8 urem/hr #2

16.8 - 21.6 urem/hr #3

18.3 - 21.9 urem/hr #4

Background taken @ emergency meeting sign

17.9 - 23.0 urem/hr

South Gate Reading

Erosion Photos

Note * Runoff on South side of fence (See photos)

16.7 - 24.2 urem/hr #1

Note * markers are still on South gate side

Note * South entrance gate is problematic. 16" gap under

Note * Erosion on South wall (numerous areas of runoff in previously repaired area)

Southeast Gate Reading - (multiple areas of runoff)

19.4 - 26.8 urem/hr #2

19.4 - 24.9 urem/hr #3

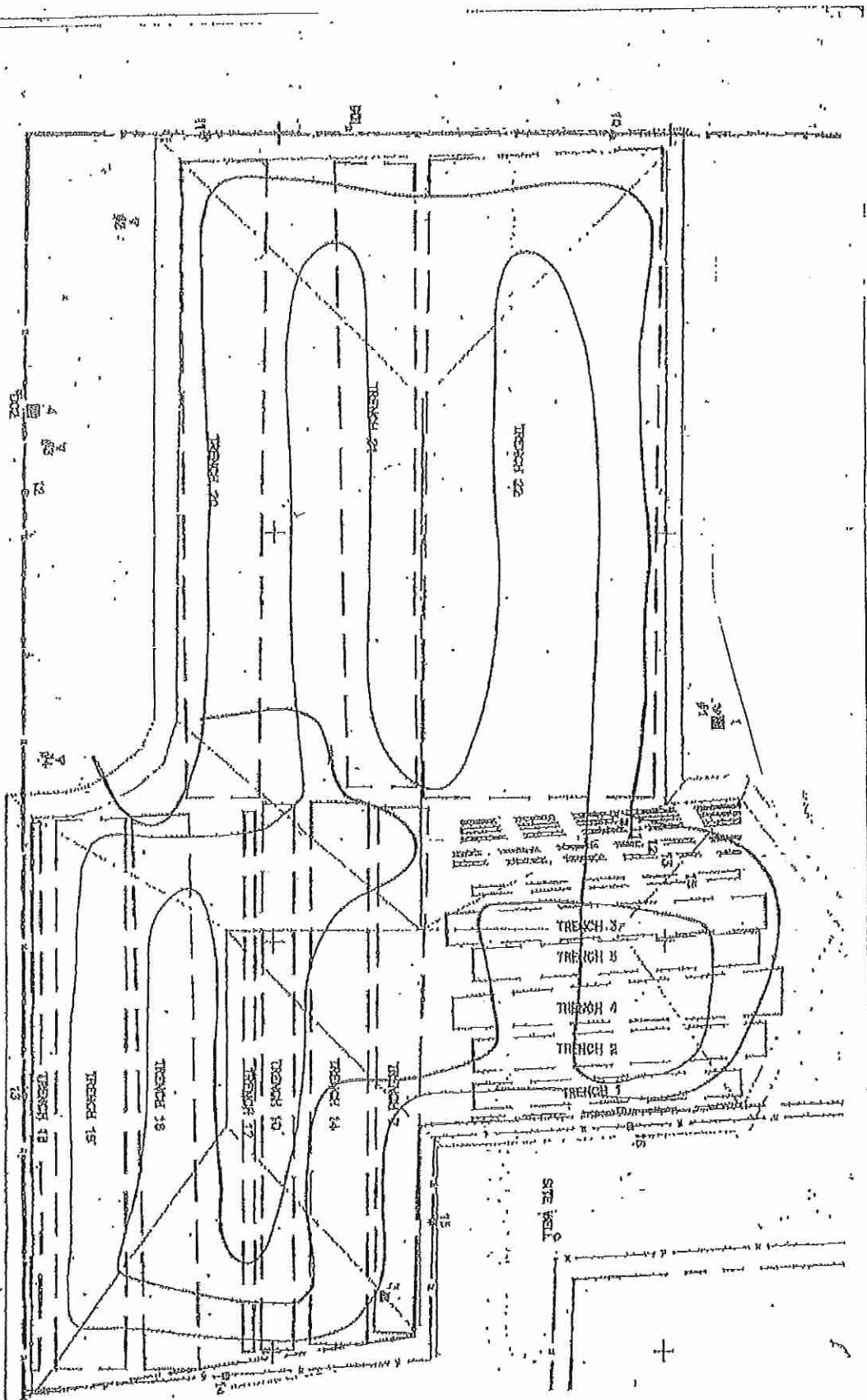
Cap - no significant erosion

17.6 - 25.6 urem/hr

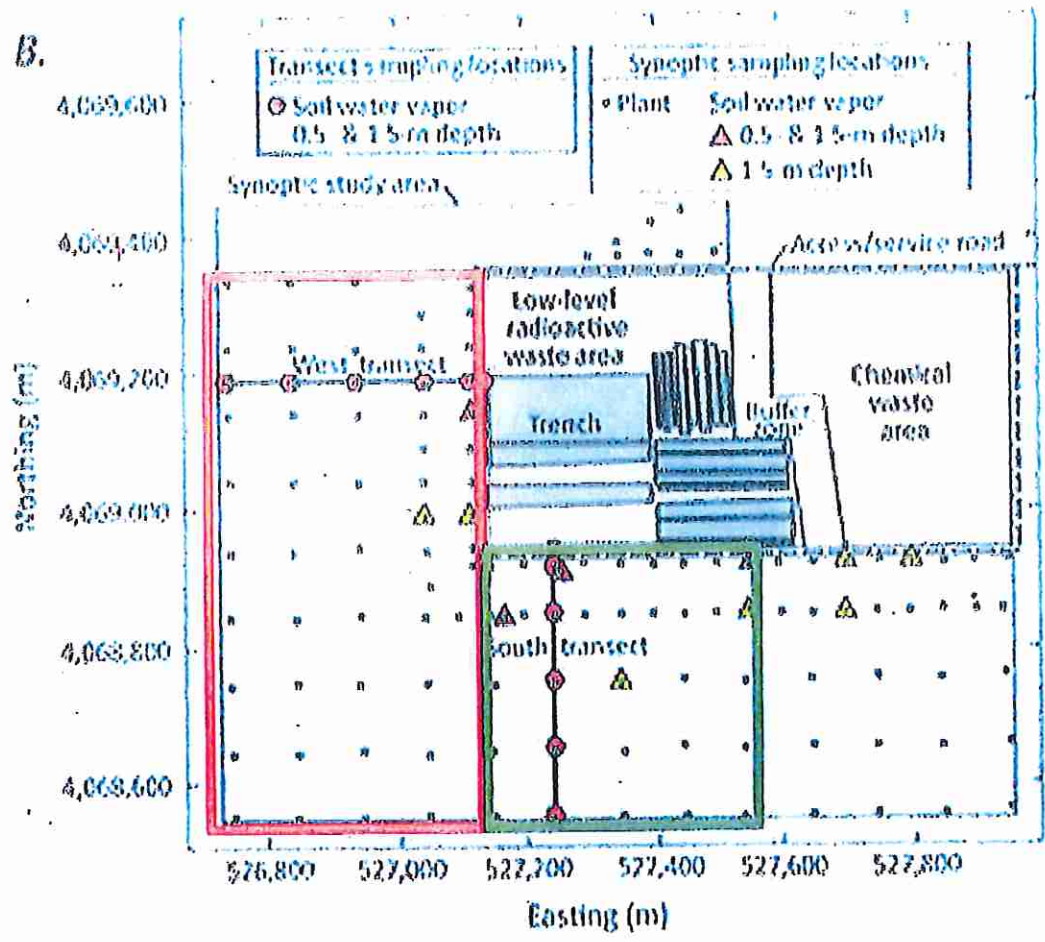
LEGEND

--- LIMITS OF DESIGNATED TRENCH

KEY



B.





Station Summary

Beatty 11SSE US Ecology Nevada

Monthly Summary for

May, 2017

Day of Month	Day of Year	Total Solar Rad. ly.	Wind		Air Temperature			Humidity			Dew Point	Wet Bulb	Total Precip. inches	
			Ave . mph	V. Dir. Deg	Max . mph	Mean	Max	Min	Mea n	Ma x				Mi n
						Deg. Fahrenheit			Percent			Deg. Fahrenheit		
<u>1</u>	121	690	17.6	333	35.6	75	85	63	14	24	8	21	49	0.00
<u>2</u>	122	675	16.0	322	31.7	78	90	62	16	24	12	28	52	0.00
<u>3</u>	123	689	10.5	303	26.1	79	94	64	16	27	8	28	52	0.00
<u>4</u>	124	696	4.8	225	19.5	80	97	58	15	27	7	24	51	0.00
<u>5</u>	125	588	11.7	209	39.2	80	95	62	14	24	8	26	52	0.00
<u>6</u>	126	483	18.3	156	40.8	71	81	56	23	43	11	31	50	0.00
<u>7</u>	127	492	9.9	125	24.9	57	68	48	32	47	20	27	43	0.00
<u>8</u>	128	594	13.1	324	31.9	65	75	48	35	47	26	36	49	0.00
<u>9</u>	129	510	18.5	319	35.5	71	84	60	32	46	17	38	52	0.00
<u>10</u>	130	681	8.1	174	21.7	69	85	50	36	63	16	39	52	0.00
<u>11</u>	131	687	12.1	143	24.9	75	89	64	31	51	15	41	55	0.00
<u>12</u>	132	707	16.6	156	33.6	75	91	61	21	37	6	30	51	0.00
<u>13</u>	133	727	10.6	306	35.2	65	81	55	13	22	6	13	43	0.00
<u>14</u>	134	675	12.3	167	31.4	66	80	51	14	23	5	13	43	0.00
<u>15</u>	135	673	12.4	137	27.0	61	72	52	25	41	14	24	44	0.00
<u>16</u>	136	619	7.5	216	23.7	63	77	45	28	51	14	29	46	0.00
<u>17</u>	137	702	22.1	356	55.3	63	73	49	23	48	7	22	44	0.00
<u>18</u>	138	689	15.4	342	41.8	63	75	50	20	29	11	20	44	0.00
<u>19</u>	139	728	11.9	302	29.5	68	84	50	16	29	8	19	45	0.00
<u>20</u>	140	724	4.7	214	25.0	74	90	53	16	30	9	23	49	0.00
<u>21</u>	141	698	6.3	273	26.8	79	95	58	14	25	8	24	51	0.00
<u>22</u>	142	686	5.3	229	22.7	82	97	64	15	25	9	28	53	0.00
<u>23</u>	143	730	5.7	211	26.7	84	100	65	13	22	7	25	53	0.00
<u>24</u>	144	658	9.4	257	56.3	85	100	63	13	24	7	26	54	0.00
<u>25</u>	145	662	13.8	140	29.9	82	96	72	14	23	6	26	53	0.00

<u>26</u>	146	727	9.9	170	26.4	76	88	61	19	32	10	29	51	0.00
<u>27</u>	147	732	6.5	271	22.0	77	92	62	15	28	8	25	51	0.00
<u>28</u>	148	738	6.0	284	20.5	80	95	59	11	20	6	19	50	0.00
<u>29</u>	149	730	5.6	271	22.7	82	99	61	9	18	5	16	51	0.00
<u>30</u>	150	653	9.7	185	33.5	83	97	66	10	14	6	20	51	0.00
<u>31</u>	151	412	13.7	161	27.8	79	89	64	17	27	12	30	53	0.00

MONTHLY STATISTICS

	Total	Wind		Air Temperature			Humidity			Dew	Wet	Total	
	Solar Rad.	Ave	V. Dir.	Max	Mean	Max	Min	Mea n	Ma x	Mi n	Point	Bulb	Precip
	ly.	mph	Deg	mph	Deg. Fahrenheit			Percent			Deg. Fahrenheit		inches
Total	20454												0.00
Ave.	660	11.2	227	30.6	73.8	87.5	57.8	19	32	10	26	50	
Max.	738	22.1		56.3	85	100	72	36	63	26	41	55	0.00
Min.	412	4.7		19.5	57	68	45	9	14	5	13	43	0.00

Data are subject to further review and editing. Please refer any questions to the Western Regional Climate Center.

$^{\circ} 1 \text{ ly} = 1 \text{ cal/cm}^2 = 4.1855 \text{ J/cm}^2 = 3.6855 \text{ BTU/ft}^2 = .01163 \text{ KW-hr/m}^2$



Station Summary

Beatty 11SSE US Ecology Nevada

Monthly Summary for

June, 2017

Day of Month	Day of Year	Total Solar Rad. ly.	Wind Ave. mph	Wind V. Dir. Deg	Wind Max mph	Air Temperature Mea n Deg. Fahrenheit	Air Temperature Max	Air Temperature Min	Humidity Mea n Percent	Humidity Ma x Percent	Humidity Mi n Percent	Dew Point Deg. Fahrenheit	Wet Bulb	Total Precip. inches
1	152	727	5.6	226	25.1	78	93	58	17	32	7	27	51	0.00
2	153	731	5.4	220	22.3	82	98	61	13	21	7	25	52	0.00
3	154	703	7.5	200	30.8	86	101	63	12	22	7	26	54	0.00
4	155	735	10.5	171	29.1	88	100	65	13	26	6	28	55	0.00
5	156	736	6.2	168	20.1	87	100	70	14	25	6	30	56	0.00
6	157	744	8.6	215	30.7	86	100	64	10	20	4	22	53	0.00
7	158	736	13.6	165	31.0	86	100	63	10	20	5	22	53	0.00
8	159	589	14.8	154	28.3	83	97	71	12	20	6	24	53	0.00
9	160	727	12.8	149	26.1	81	96	70	19	34	11	33	54	0.00
10	161	721	14.7	133	31.4	77	91	67	29	46	13	40	55	0.00
11	162	732	20.2	157	42.5	70	85	59	24	40	9	28	49	0.00
12	163	738	8.8	223	25.5	66	78	51	20	34	9	21	45	0.00
13	164	740	6.5	282	25.0	73	87	56	19	36	7	25	49	0.00
14	165	743	5.8	250	22.9	80	97	60	12	21	6	21	51	0.00
15	166	747	6.9	259	22.9	84	102	63	10	18	4	21	52	0.00
16	167	733	6.3	264	24.8	90	106	71	9	15	5	22	55	0.00
17	168	716	8.8	285	28.3	94	108	74	13	25	8	34	59	0.00
18	169	721	11.9	308	33.2	97	111	84	16	24	10	42	63	0.00
19	170	712	6.7	198	26.6	98	114	79	13	22	6	36	61	0.00
20	171				36.2		112	81		17	4			
21	172	739	6.7	239	27.6	94	109	71	10	16	4	28	58	0.00
22	173	720	7.6	217	25.2	97	111	80	11	17	6	33	60	0.00
23	174	725	11.4	303	28.5	98	111	84	9	14	6	29	59	0.00
24	175	700	13.2	298	28.0	99	113	88	8	12	5	26	59	0.00
25	176	724	10.2	181	31.4	99	111	86	8	14	5	28	59	0.00

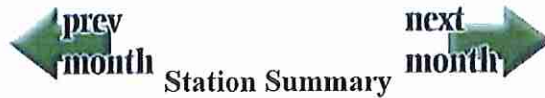
<u>26</u>	177	740	10.1	157	24.2	93	107	76	8	14	4	21	56	0.00
<u>27</u>	178	751	9.8	254	26.2	91	105	69	7	15	4	17	54	0.00
<u>28</u>	179	742	7.8	186	25.4	90	103	69	9	17	5	22	55	0.00
<u>29</u>	180	737	5.2	231	21.6	90	105	69	9	17	4	21	55	0.00
<u>30</u>	181	739	4.8	187	22.1	93	107	74	7	11	4	18	55	0.00

MONTHLY STATISTICS

	Total	Wind		Air Temperature			Humidity			Dew	Wet	Total	
	Solar Rad.	Ave .	V. Dir.	Max .	Mean	Max	Min	Mean	Max	Min	Point	Bulb	Precip .
	ly.	mph	Deg	mph	Deg. Fahrenheit			Percent			Deg. Fahrenheit		inches
Total	21046												0.00
Ave.	726	9.3	207	27.4	87.2	102.0	69.7	13	22	6	27	55	
Max.	751	20.2		42.5	99	114	88	29	46	13	42	63	0.00
Min.	589	4.8		20.1	66	78	51	7	11	4	17	45	0.00

Data are subject to further review and editing. Please refer any questions to the Western Regional Climate Center.

$$^{\circ} 1 \text{ ly} = 1 \text{ cal/cm}^2 = 4.1855 \text{ J/cm}^2 = 3.6855 \text{ BTU/ft}^2 = .01163 \text{ KW-hr/m}^2$$



Station Summary

Beatty 11SSE US Ecology Nevada

Monthly Summary for

July, 2017

Day of Month	Day of Year	Total Solar Rad. ly.	Wind Ave. mph	Wind V. Dir. Deg	Wind Max mph	Air Temperature Mean Deg. Fahrenheit	Air Temperature Max	Air Temperature Min	Humidity Mean Percent	Humidity Max	Humidity Min	Dew Point Deg. Fahrenheit	Wet Bulb	Total Precip. inches
<u>1</u>	182	729	12.0	176	34.7	92	107	69	8	14	5	22	55	0.00
<u>2</u>	183	714	10.9	147	27.8	91	104	72	12	20	8	30	57	0.00
<u>3</u>	184	739	6.6	188	21.1	88	104	71	8	16	3	18	54	0.00
<u>4</u>	185	732	6.9	229	17.8	88	106	66	7	11	4	17	53	0.00
<u>5</u>	186	711	7.2	212	19.4	93	109	72	10	15	5	27	57	0.00
<u>6</u>	187	699	5.9	266	22.2	96	110	79	12	18	8	34	60	0.00
<u>7</u>	188	637	9.6	250	38.6	100	112	82	11	20	7	35	61	0.00
<u>8</u>	189	670	9.9	159	33.9	101	113	84	12	19	7	37	62	0.00
<u>9</u>	190	479	11.1	164	31.2	95	106	87	22	30	13	50	65	0.00
<u>10</u>	191	558	8.8	228	44.3	91	106	81	28	50	14	52	65	0.00
<u>11</u>	192	501	7.1	192	36.0	88	103	76	32	57	14	51	64	0.00
<u>12</u>	193	680	8.0	138	24.5	91	105	75	20	33	11	44	62	0.00
<u>13</u>	194	706	7.2	204	30.7	94	106	77	16	28	9	38	61	0.00
<u>14</u>	195	702	6.6	240	22.7	93	108	74	15	29	9	37	60	0.00
<u>15</u>	196	709	6.6	249	24.5	96	111	75	13	23	6	35	60	0.00
<u>16</u>	197	695	8.0	174	22.5	98	111	79	12	24	7	36	61	0.00
<u>17</u>	198	673	10.6	152	29.8	97	109	87	18	35	10	45	64	0.00
<u>18</u>	199	709	12.5	143	27.8	96	109	85	13	21	6	36	60	0.00
<u>19</u>	200	624	17.7	132	37.5	92	98	84	20	37	12	44	62	0.00
<u>20</u>	201	649	11.0	149	26.7	91	103	79	18	43	5	35	60	0.00
<u>21</u>	202	692	6.5	204	32.5	91	105	70	10	14	7	27	56	0.00
<u>22</u>	203	687	5.2	241	21.3	92	108	73	13	19	7	33	58	0.00
<u>23</u>	204	680	7.2	208	26.2	96	111	76	16	26	9	41	62	0.00

<u>24</u>	205	539	16.6	137	41.8	90	104	79	31	50	14	54	66	0.00
<u>25</u>	206	473	11.2	136	30.1	86	95	78	40	53	23	58	67	0.00
<u>26</u>	207	581	8.2	176	23.6	89	101	76	34	47	20	56	66	0.00
<u>27</u>	208	651	6.2	222	20.7	92	104	77	24	46	10	47	63	0.00
<u>28</u>	209	684	6.8	224	26.5	94	106	78	16	32	8	39	61	0.00
<u>29</u>	210	650	8.7	166	26.0	93	106	75	14	22	9	36	59	0.00
<u>30</u>	211	680	7.6	248	21.7	94	107	75	16	29	7	38	61	0.00
<u>31</u>	212	617	6.7	311	45.4	94	111	77	15	23	8	38	60	0.00

MONTHLY STATISTICS

	Total	Wind		Air Temperature			Humidity			Dew	Wet	Total	
	Solar Rad.	Ave .	V. Dir.	Max .	Mea n	Max	Min	Mea n	Ma x	Mi n	Point	Bulb	Precip .
	ly.	mph	Deg	mph	Deg. Fahrenheit			Percent			Deg. Fahrenheit		inches
Total	20251												0.00
Ave.	653	8.9	176	28.7	92.9	106.4	77.0	17	29	9	38	61	
Max.	739	17.7		45.4	101	113	87	40	57	23	58	67	0.00
Min.	473	5.2		17.8	86	95	66	7	11	3	17	53	0.00

Data are subject to further review and editing. Please refer any questions to the Western Regional Climate Center.



Station Summary

Beatty 11SSE US Ecology Nevada

Monthly Summary for
August, 2017

Day of Month	Day of Year	Total Solar Rad. ly.	Wind		Air Temperature			Humidity			Dew Point Deg. Fahrenheit	Wet Bulb Deg. Fahrenheit	Total Precip. inches	
			Ave. mph	V. Dir. Deg	Max mph	Mean	Max	Min	Mea n	Ma x				Mi n
<u>1</u>	213	583	8.5	166	33.4	94	109	76	17	35	11	42	62	0.00
<u>2</u>	214	567	9.0	146	49.7	90	108	69	36	93	16	57	67	0.60
<u>3</u>	215	617	7.6	200	24.0	86	100	75	44	76	23	60	68	0.02
<u>4</u>	216	478	9.1	174	42.1	83	99	74	46	68	24	59	66	0.00
<u>5</u>	217	628	6.7	179	34.8	88	99	76	35	53	22	55	66	0.00
<u>6</u>	218	603	7.4	215	33.2	87	100	74	36	64	20	54	65	0.04
<u>7</u>	219	662	7.1	189	29.2	89	101	77	25	51	10	46	62	0.00
<u>8</u>	220	666	5.0	182	20.6	88	102	69	19	38	11	39	59	0.00
<u>9</u>	221	674	6.8	229	25.8	89	103	70	16	30	8	35	58	0.00
<u>10</u>	222				10.6		78	69		22	14			

MONTHLY STATISTICS

	Total Solar Rad. ly.	Ave. mph	V. Dir. Deg	Max mph	Mean	Max	Min	Mea n	Ma x	Mi n	Dew Point Deg. Fahrenheit	Wet Bulb Deg. Fahrenheit	Total Precip. inches
Total	5478												0.66
Ave.	609	7.5	187	30.3	88.1	99.8	72.9	30	53	16	50	64	
Max.	674	9.1		49.7	94	109	77	46	93	24	60	68	0.60
Min.	478	5.0		10.6	83	78	69	16	22	8	35	58	0.00

Data are subject to further review and editing. Please refer any questions to the Western Regional Climate Center.

$^{\circ} 1 \text{ ly} = 1 \text{ cal/cm}^2 = 4.1855 \text{ J/cm}^2 = 3.6855 \text{ BTU/ft}^2 = .01163 \text{ KW-hr/m}^2$

Bob Marchand <bob.marchand@usecology.com>

Thursday, August 3, 2017 7:31 AM

John Follette

Vaughn Thurgood

Rainfall

John:

We received 0.60 inches of rain overnight. I inspected the LLRW cap this morning and did not see any significant erosion, ponding or subsidence.

Please give me a call if you have any questions.

Thanks,

Bob Marchand

Director of Operations

p: 775.553.2203 x4104 | c: 702.280.2596

P.O. Box 578
Beatty, NV 89003



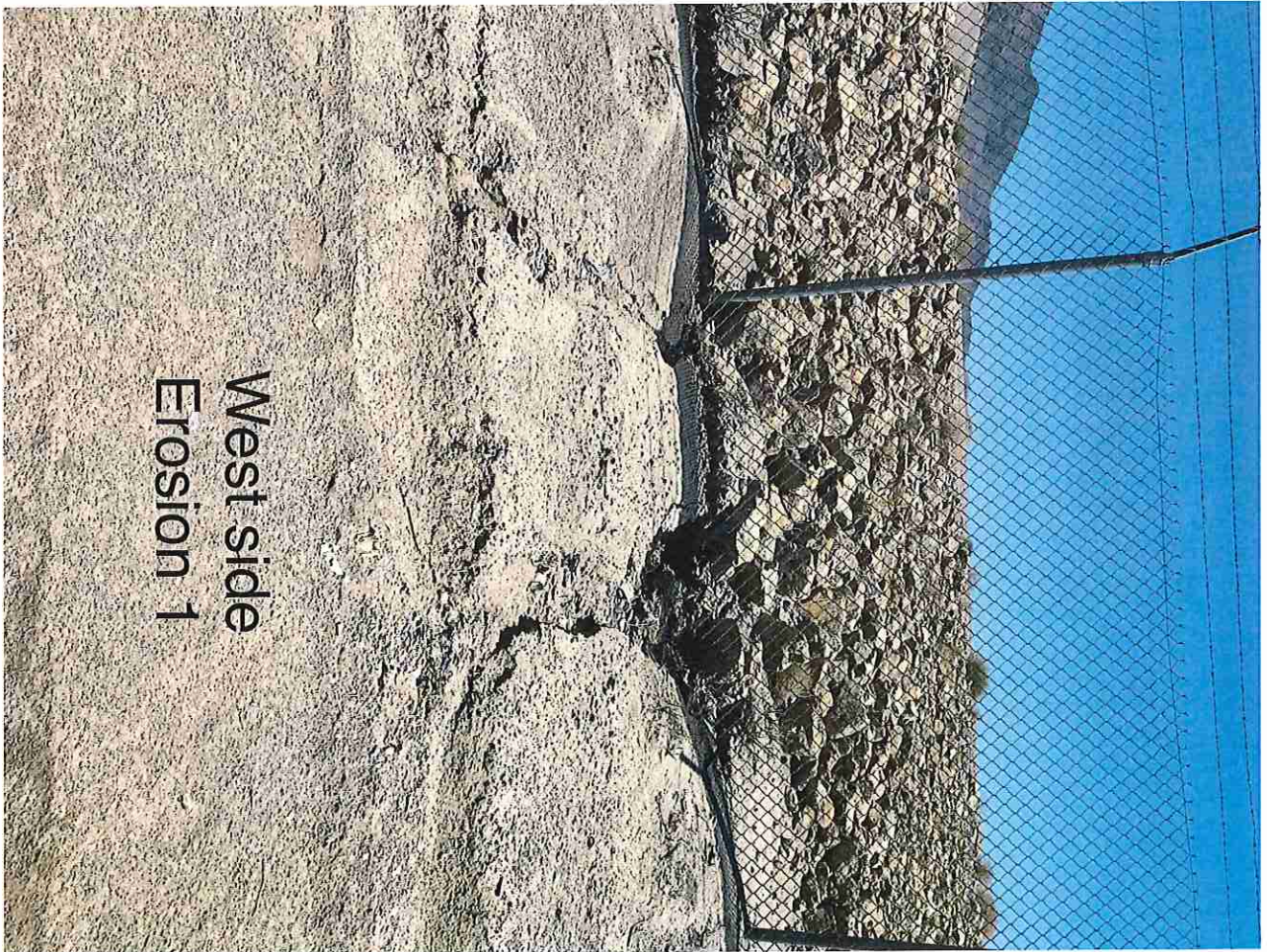
Unparalleled service. Solutions you can trust
USEcology.com



West side
Erosion 1



West side
Erosion 1









West side fence
Erosion 1



West side
Erosion 2



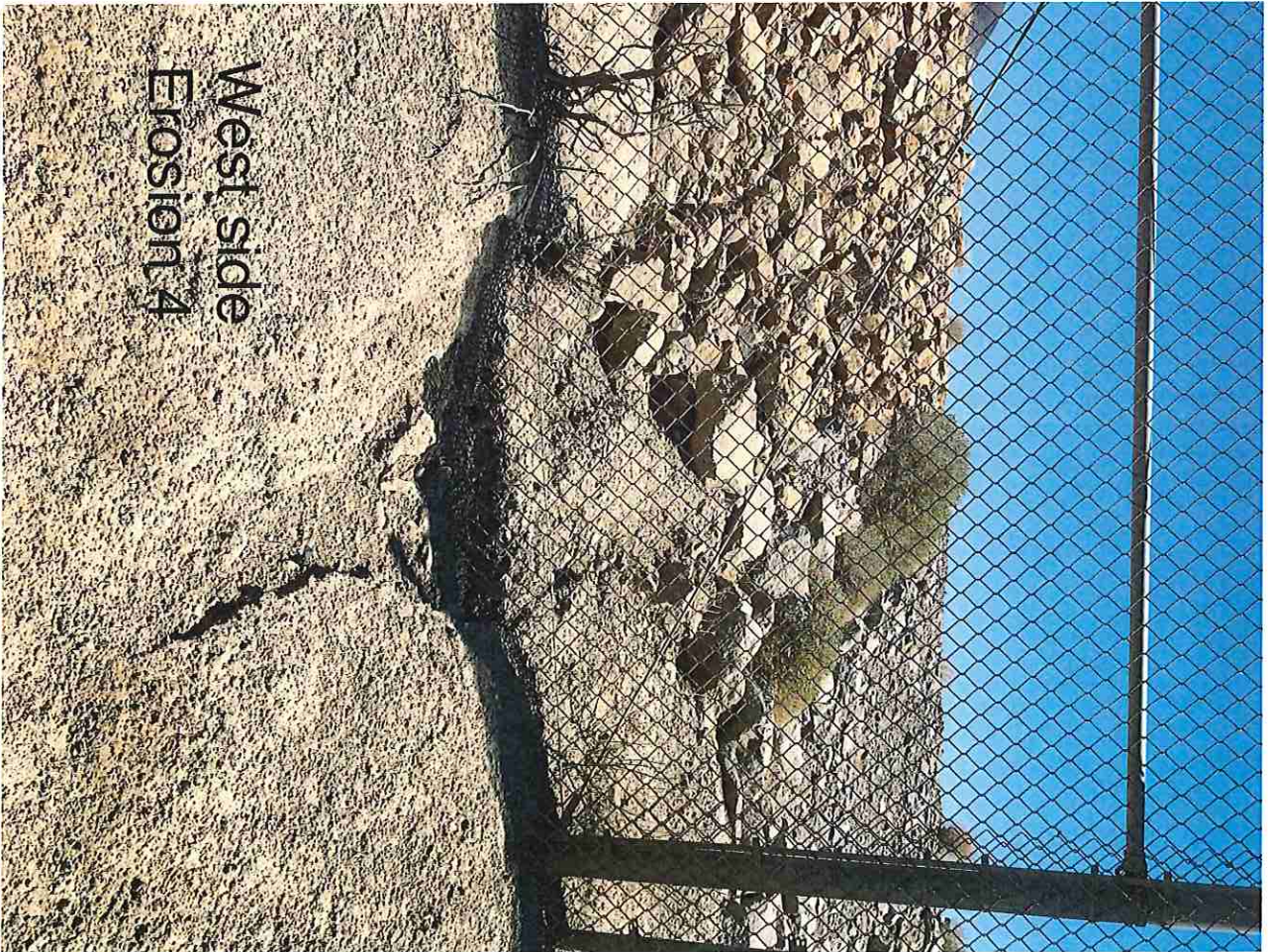
West side
Erosion 2



West side erosion 2



West side
Erosion3



West side
EROSION4



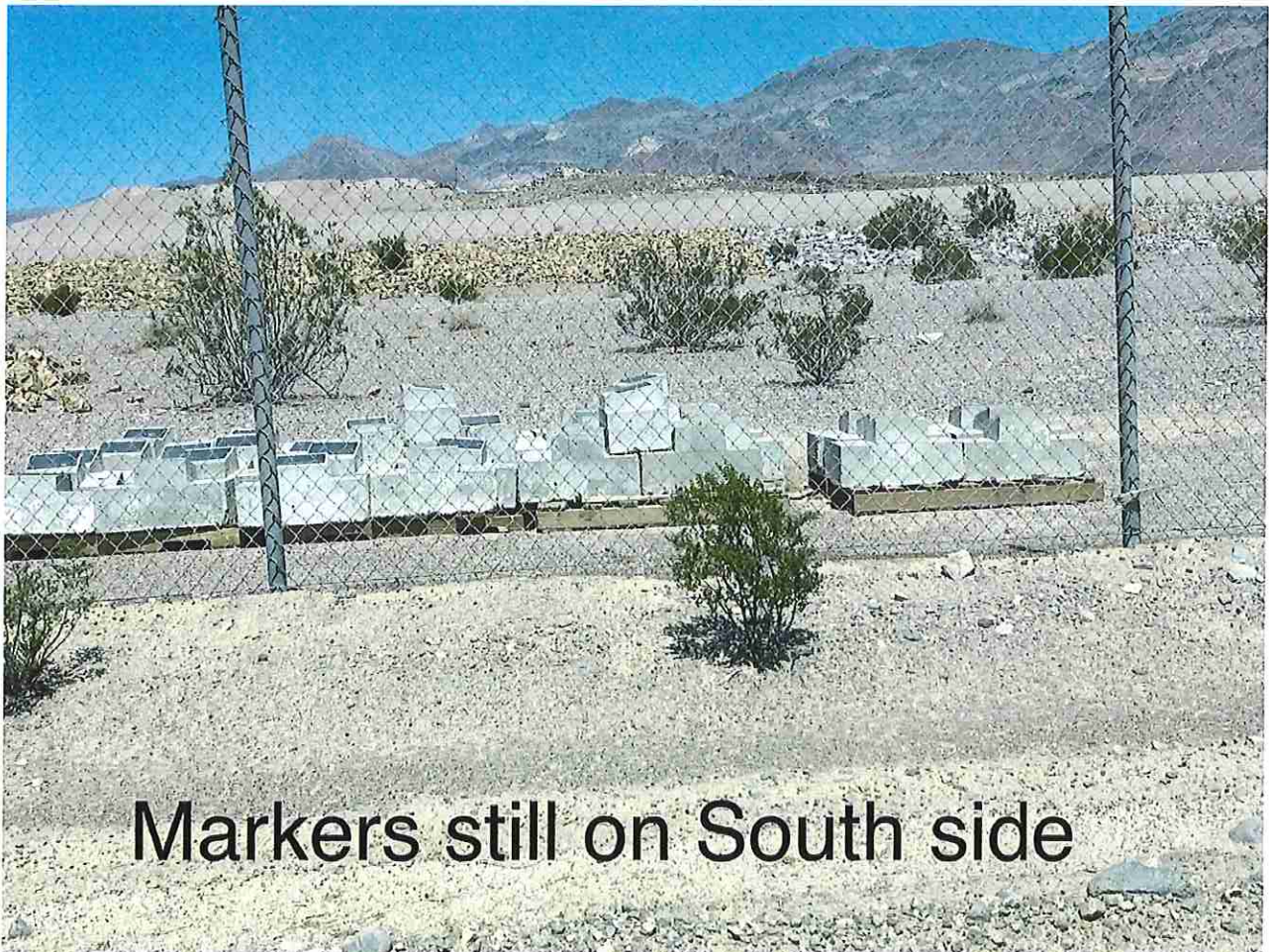
Entrance Gate



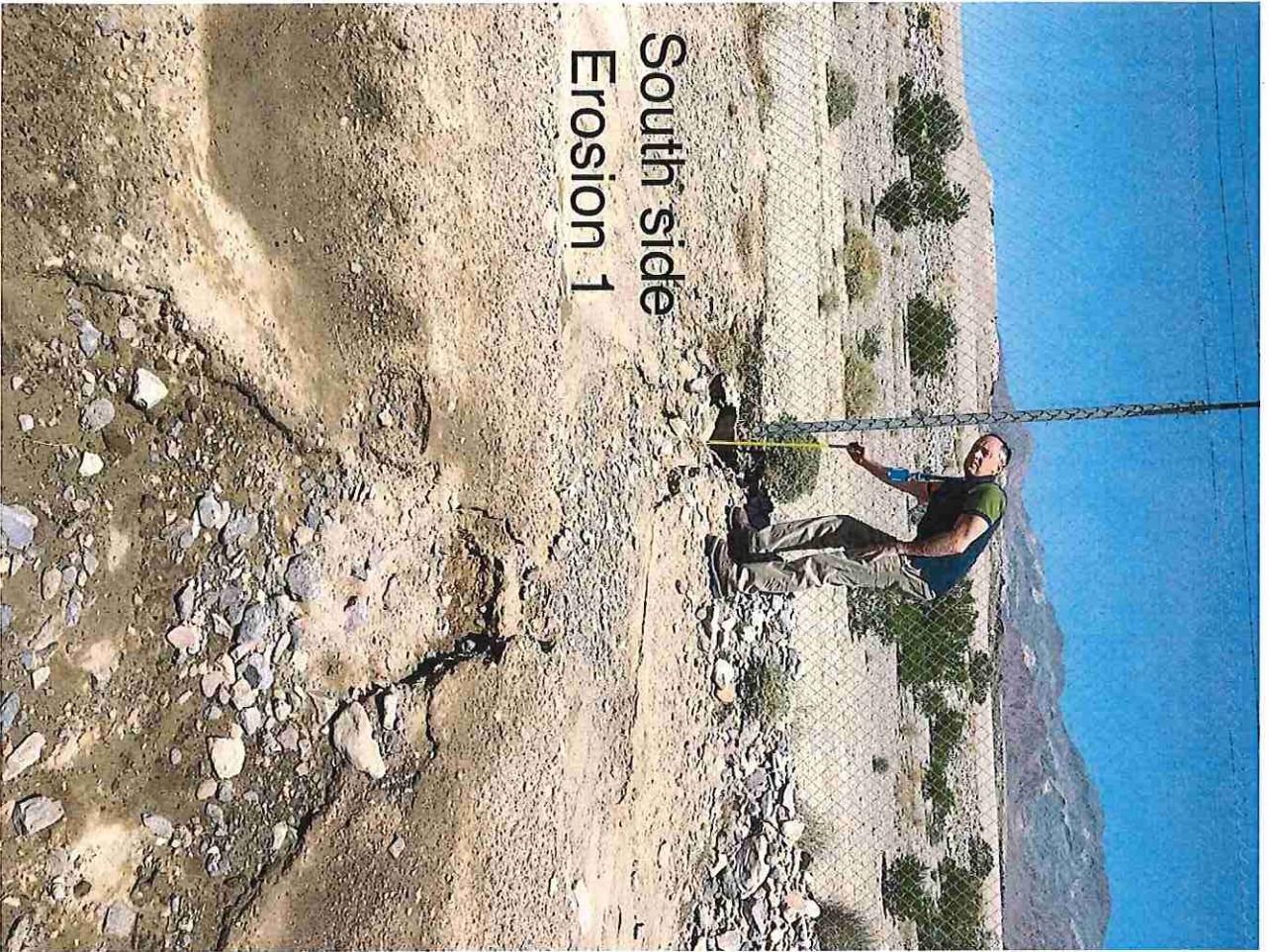
Entrance Gate
16" Gap below

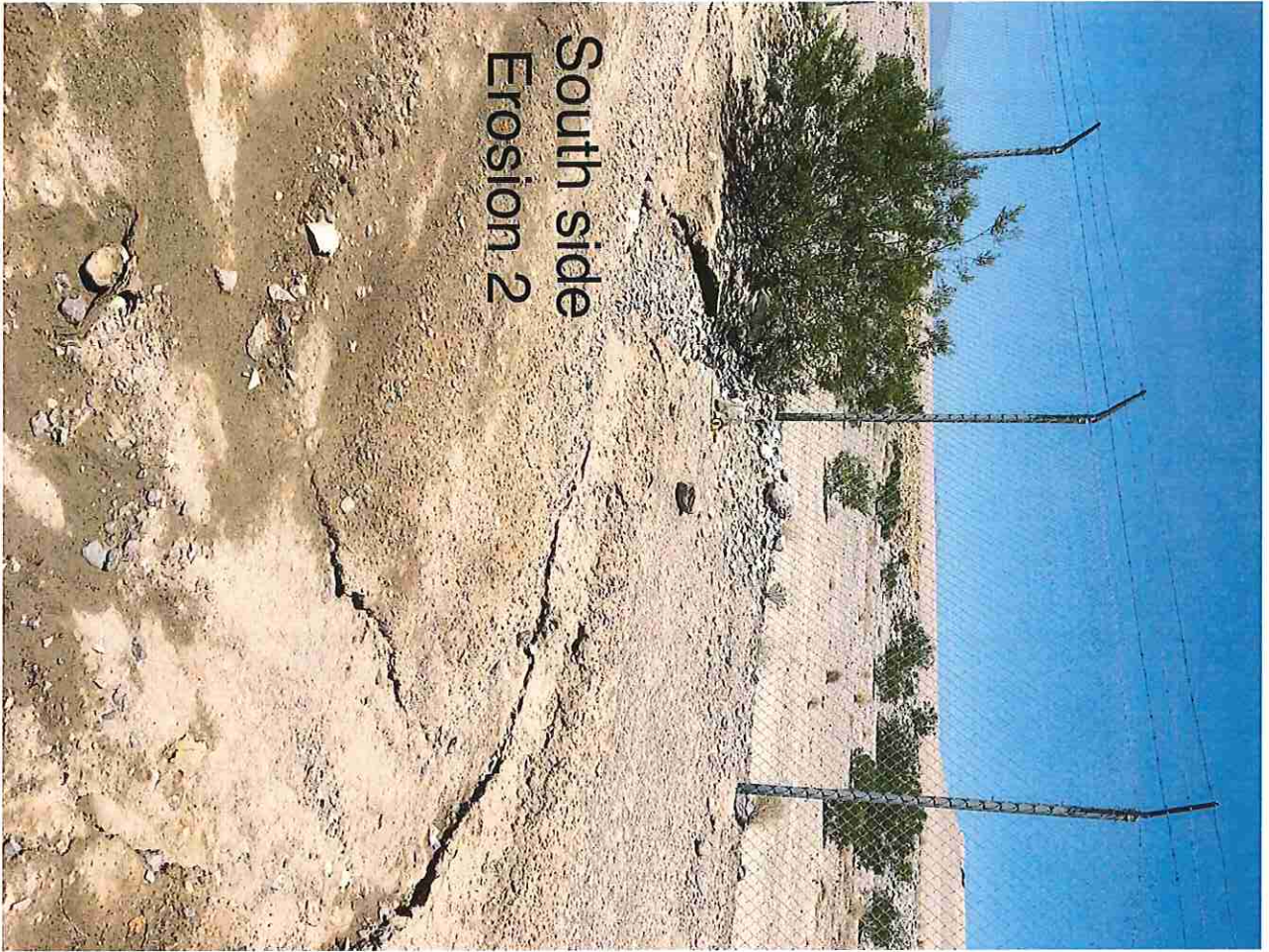


Erosion on South Wall



Markers still on South side





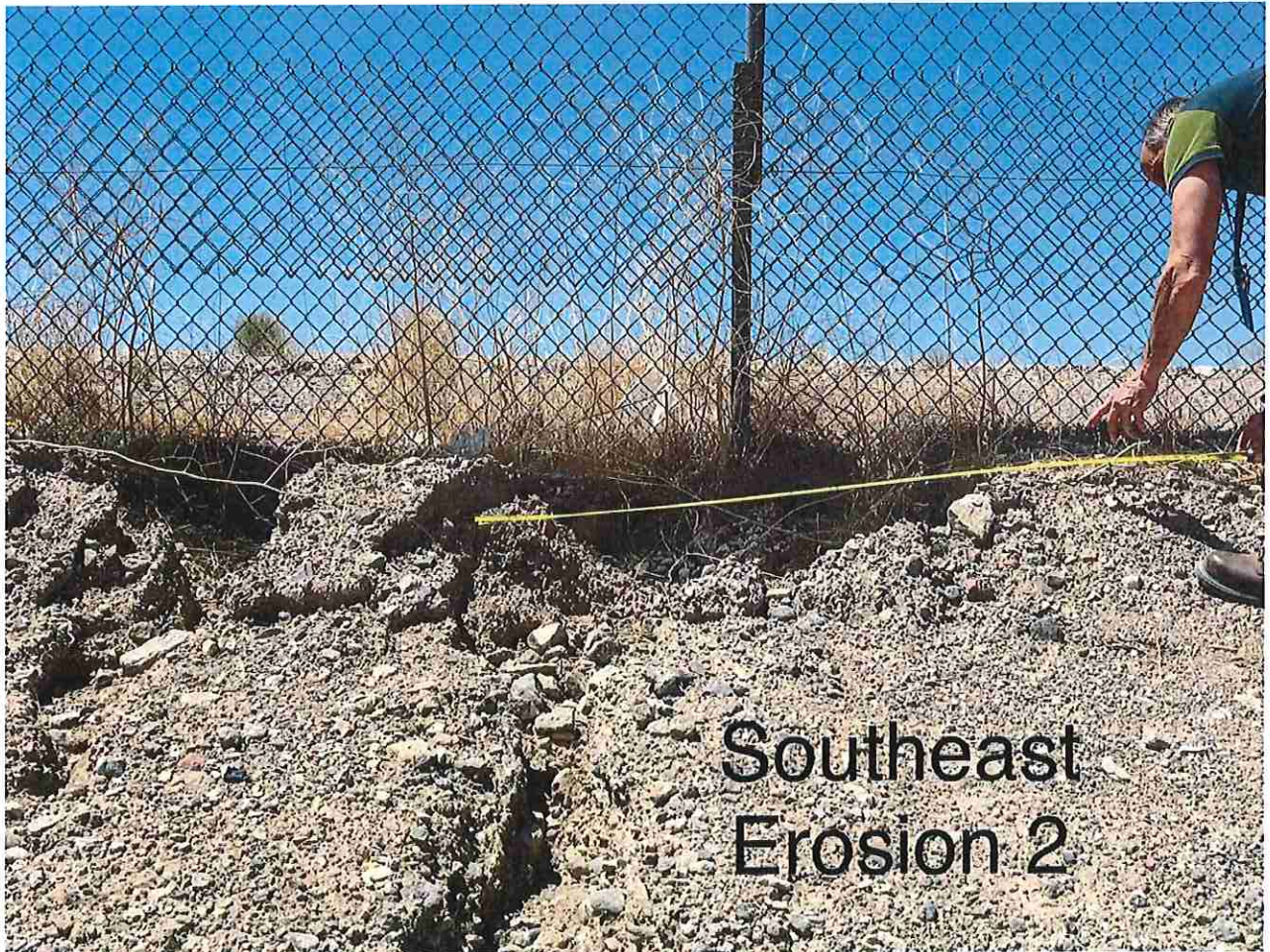
South side
Erosion 2



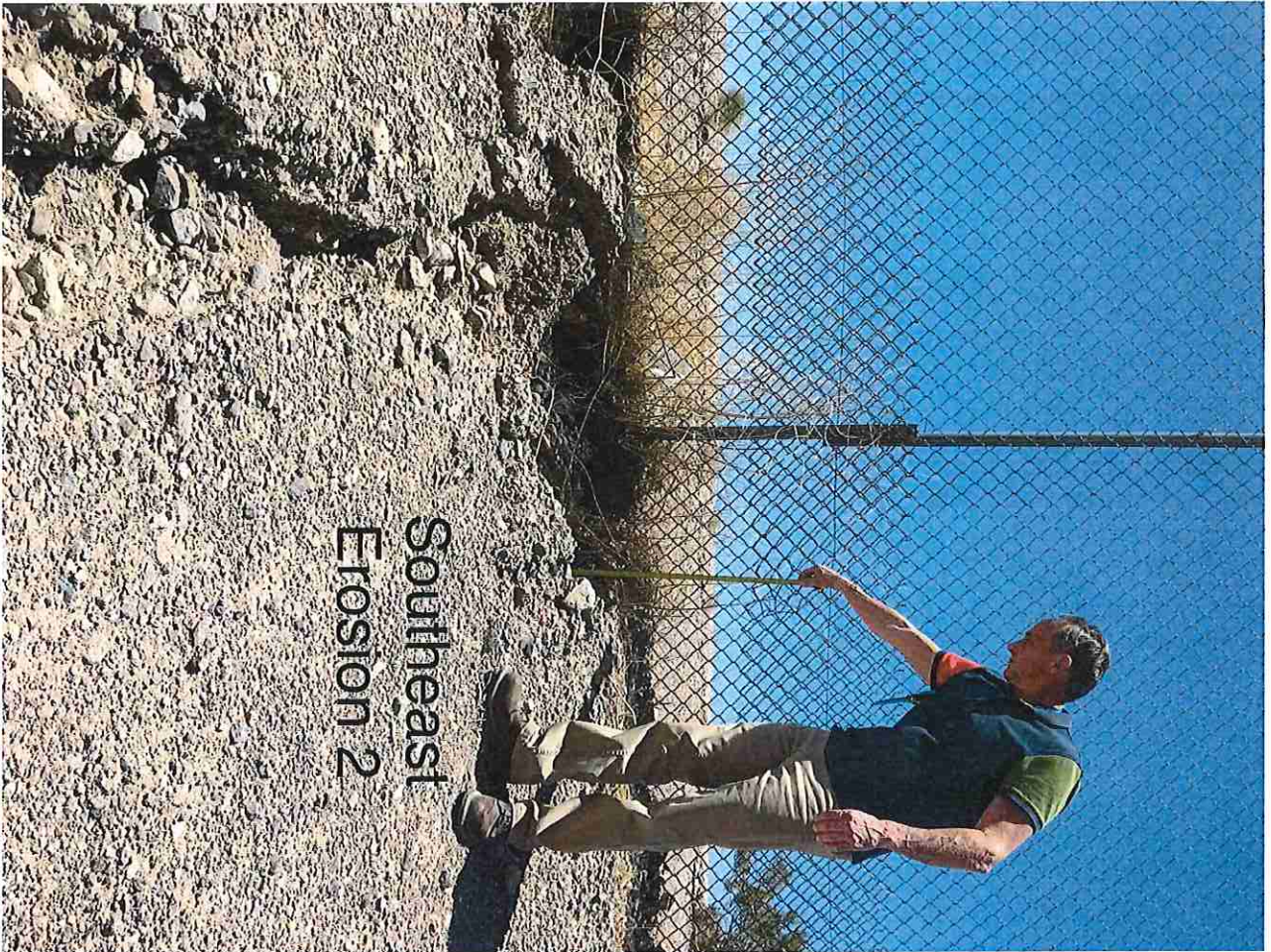
South side
Erosion 2



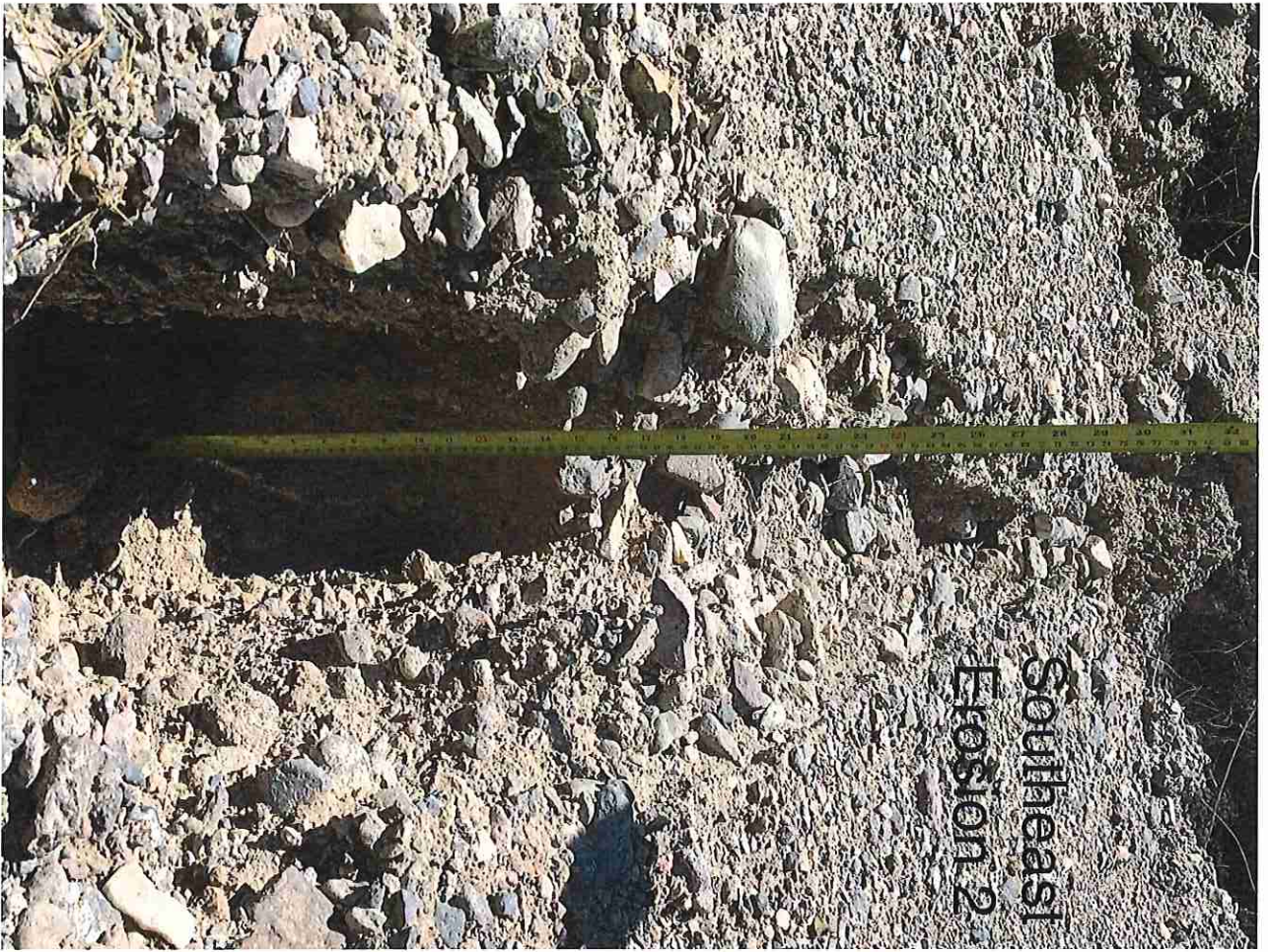
Southeast
Erosion 1



Southeast
Erosion 2

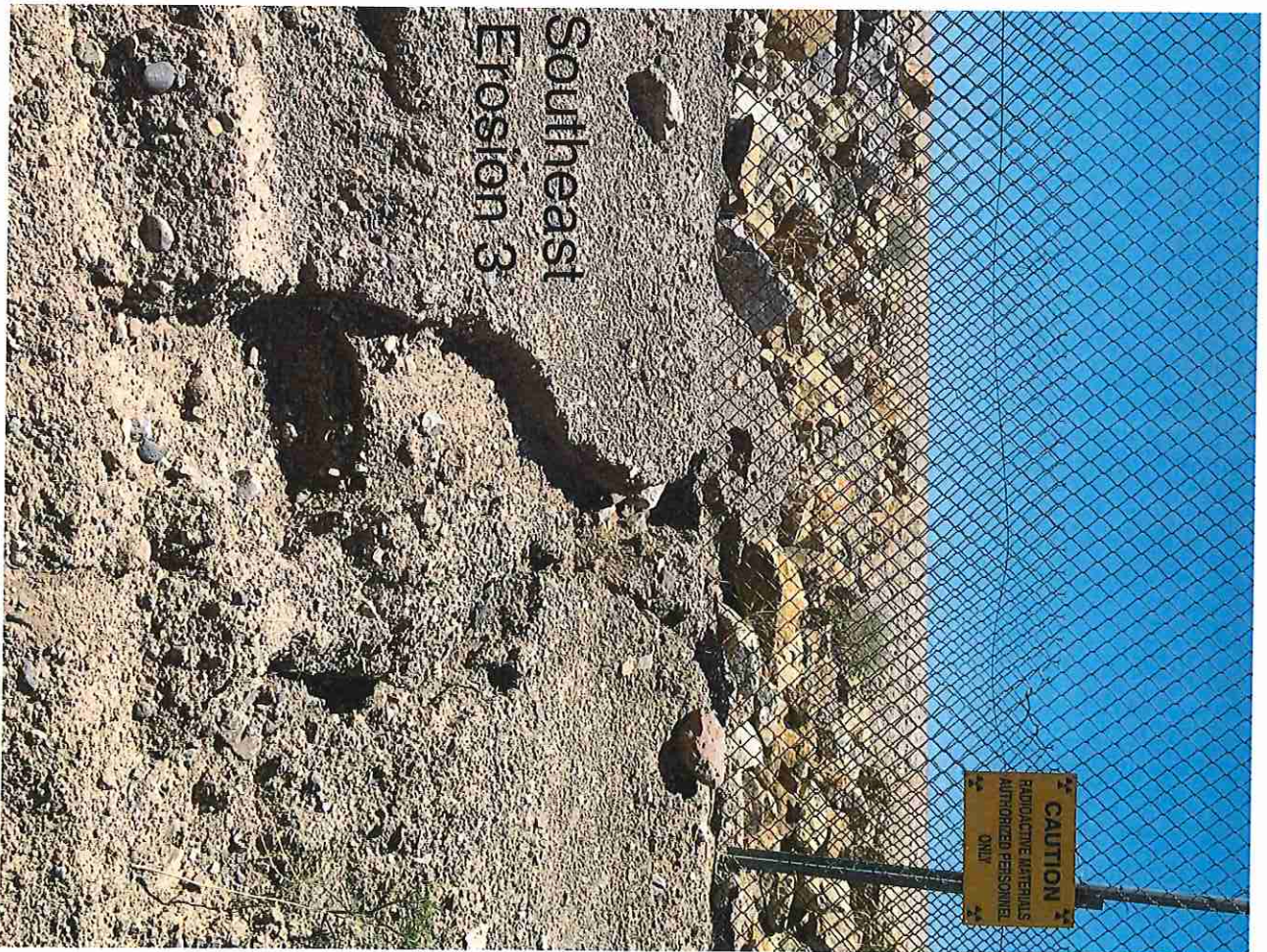








Southeast
Erosion 3



Southeast
Erosion 3

CAUTION
RADIOACTIVE MATERIALS
AUTHORIZED PERSONNEL
ONLY