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REPORTS

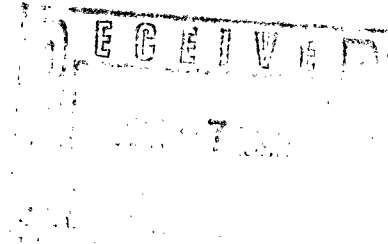
DATE:

4/2/1998



Tipperary
CORPORATION

633 Seventeenth Street
Suite 1550
Denver, Colorado 80202



April 2, 1998

CERTIFIED MAIL

Mr. William C. Olson
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

**RE: Progress Report
Tatum Pit Closure Project
Lea County, NM**

Dear Mr. Olson:

Please find enclosed additional results from our monitor wells in the subject project area. These results are from water samples taken on March 23, 1998. The total BTEX concentrations have declined significantly from the December 1997 sample results. We are currently planning to analyze water samples quarterly from the project monitor wells.

If you have any questions, please call me at (303) 293-9379.

Very truly yours,

Larry G. Sugano
Vice President - Engineering

*Results filed
separately in case files
Will*

cc: Wayne Price, NMOCD Hobbs Office

Enclosure





**Executive Summary
Tipperary Corporation
Tatum Pit Closure Project
March, 1998 Well Sampling**

Procedures

On March 23, 1998, Mr. Vic Vice, Tipperary Production Foreman, sampled the fluid contents of twenty-three monitoring wells in accordance with WEQP-76. The samples were delivered the next day to Environmental Labs of Texas and results provided to Whole Earth Environmental on March 26, 1998. Analysis methods and QA / QC data are provided on the laboratory report.

Whole Earth prepared various spreadsheets and graphs comparing the results to those of two prior sampling events.

Results

The total BTEX concentrations within the monitoring wells are shown to decline by an average of 20% per quarter. There was a 39% increase in the number of wells having all individual BTEX compound concentrations within WQCC standards. Though benzene remains the principal contaminant, the benzene concentrations were reduced by an average of 31% from the December sampling indicating that the "slug" resultant from the closure activities is now passing the monitoring perimeter.

Conclusions

The process of natural attenuation is demonstrated to be working. In June one and possibly two pit sites should be considered for final closure as it is expected that they will have shown four consecutive quarters of BTEX concentrations falling below New Mexico WQCC standards.

The construction of any additional delineation wells is not recommended at this time. One additional sampling round should provide us with enough statistical data to forecast which wells (if any) will require further testing.



**Tipperary Corporation
Sampling Instructions
June 1, 1998 Sampling Round**

1. Sample Monitor Wells # 1-24 as performed on 3/23/98 sampling round.
2. Sample Iva COM source well for BTEX. If results are acceptable, we will then immediately test for PAH's. If PAH results are acceptable, we will request formal closure from the State. *(The State may require additional witnessed sampling for final closure).*
3. Sample Vera for PAH's. Use 1 liter amber jar with no preservatives for PAH and 1 liter clear jar with H₂SO₄ preservative for metals in addition to your normal BTEX sample vial. If PAH's are acceptable, we will request immediate closure. *(PAH & RCRA 8 metals were all within limits on 9/5/97 sampling).*
4. Save G.S. State monitor well # 12 for last. Pump well bore for at least 30 minutes in an attempt to remove all of the free product from the sample. If free product is still present, forward the sample to the lab anyway with instructions to additionally run TPH analysis.

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TIPPERARY
ATTN: MR. VICTORIA VICE
P.O. BOX 857
TATUM, NM 88267
FAX: 281-646-8996

Receiving Date: 03/24/98
Sample Type: WATER
Project: TATUM, NM
Project Location: TATUM, NM

Analysis Date: 3/24/98
Sampling Date: 3/23/98
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYLBENZENE (mg/l)	m,p-XYLENE (mg/l)	o-XYLENE (mg/l)
14045	Satellite #4 MW #23	0.071	0.004	0.012	0.017	0.002
14046	Satellite #4 MW #24	0.001	<0.001	<0.001	0.003	0.001
14047	Bell "A" MW #13	0.011	0.007	0.004	0.011	0.004
14048	Bell "A" MW #14	0.904	0.002	0.004	0.006	0.002
14049	NBF MW #15	1.470	1.230	0.364	1.058	0.466
14050	NBF MW #16	1.029	0.086	0.084	0.173	0.047
14051	Sohio State #1 MW #17	1.101	0.108	0.130	0.376	0.148
14052	Sohio State #1 MW #18	1.396	0.269	0.159	0.823	0.366
14053	Sohio State A MW #19	0.042	0.017	0.010	0.034	0.017
14054	Sohio State A MW #20	0.539	0.016	0.014	0.075	0.014
14055	G.S. State #1 MW #21	0.233	0.019	0.067	0.221	0.014
14056	G.S. State #1 MW #22	0.050	0.017	0.016	0.088	0.028
14057	Iva Com MW #1	0.003	0.003	0.001	0.007	0.008
14058	Iva Com MW #2	0.002	0.001	<0.001	0.005	0.002
14059	Mable Com MW #3	0.006	0.006	0.007	0.029	0.006
14060	Mable Com MW #4	0.019	0.004	0.002	0.019	0.003
14061	Vera MW #5	0.003	0.001	<0.001	0.004	0.002
14062	Bell "A" MW #8	0.236	0.002	0.019	0.016	0.008
14063	NBN MW #7	0.009	0.001	0.001	0.004	0.002
14064	NBN MW #8	0.048	0.036	0.013	0.038	0.011
	NBF					
	% IA	98	92	90	90	92
	% EA	110	104	101	103	103
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: SW 846-8020,5030


Michael R. Fowler

3-25-98
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TIPPERARY
ATTN: MR. VICTOR A. VICE
P.O. BOX 857
TATUM, NM 88267
FAX 281-848-8996

Receiving Date: 03/24/98
Sample Type: WATER
Project: TATUM, NM
Project Location: TATUM, NM

Analysis Date: 03/25/98
Sampling Date: 3/23/98
Sample Condition: Intact/Iced

ELY#	FIELD CODE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYLBENZENE (mg/l)	m,p-XYLENE (mg/l)	o-XYLENE (mg/l)
14065	Satellite #4 MW #9	0.002	<0.001	<0.001	0.002	<0.001
14066	Sohio State #1 MW #10	1.301	0.113	0.209	0.490	0.179
14067	Sohio State 'A' MW #11	0.126	0.011	0.007	0.026	0.014

% IA	113	109	107	107	109
% EA	104	100	96	95	99
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: SW 846-8020,5030


Michael R. Fowler

3-25-98
Date

**Tipperary Corporation
Tatum Pit Closure Project
Closure Status**

Well Name	M.W. #	Sample Date		
		9/5/97	12/3/98	3/23/98
Iva Com ¹	1	P	P	P
	2	P	P	P
Mable COM	3	P	F	P
	4	F	F	F
Vera ²	5	P	P	P
Bell	6	F	F	F
	13	F	P	F
	14	P	F	F
NBN	7	P	F	P
NBF	8	F	F	F
	15	F	F	F
	16	F	F	F
Satellite 4	9	F	F	P
	23	P	F	F
	24	P	F	P
Sohio St. # 1	10	F	F	F
	17	F	F	F
	18	F	F	F
Sohio St. "A"	11	F	F	F
	19	P	F	F
	20	F	F	F
G.S. State	21	F	F	F
	22	F	F	F

Passing	9	4	7
Failing	14	19	16

(1) Sample Source Well on 6/1/98

(2) Take P.A.H. Sample on 6/1/98

**Tipperary Corporation
Tatum Pit Closure Project
Average Concentration Comparison**

Compound	Sample Date		
	9/5/97	12/3/97	3/23/98
Benzene	0.456	0.544	0.378
Toluene	0.178	0.068	0.084
E-Benzene	0.053	0.040	0.048
Xylene	0.304	0.259	0.211
BTEX	1.185	0.923	0.722

Total Sampling Results Comparison



**Tipperary Corporation
Tatum Pit Closure Project
Benzene Concentration Comparison**

Monitor Well #	10/2/97 Sampling	12/3/97 Sampling	3/23/98 Sampling
1	0.001	0.004	0.003
2	0.001	0.002	0.002
3	0.010	1.039	0.006
4	0.015	1.465	0.019
5	0.003	0.003	0.003
6	0.687	0.029	0.236
7	0.001	0.017	0.009
8	0.302	0.017	0.048
9	0.092	0.067	0.002
10	2.559	2.148	1.301
11	0.096	0.057	0.126
12	?	?	?
13	1.309	0.002	0.011
14	0.001	1.147	0.904
15	1.950	2.289	1.470
16	0.835	0.234	1.029
17	0.789	1.409	1.101
18	1.276	2.063	1.396
19	0.003	0.009	0.126
20	0.385	0.284	0.539
21	0.026	0.166	0.233
22	0.136	0.015	0.050
23	0.001	0.040	0.071
24	0.001	0.017	0.001
Total Benzene	10.479	12.523	8.686

**Tipperary Corporation
Tatum Pit Closure Project
Toluene Concentration Comparison**

Monitor Well #	10/2/97 Sampling	12/3/97 Sampling	3/23/98 Sampling
1	0.001	0.003	0.003
2	0.001	0.002	0.001
3	0.008	0.024	0.006
4	0.002	0.007	0.004
5	0.002	0.001	0.001
6	0.013	0.004	0.002
7	0.001	0.002	0.001
8	0.208	0.002	0.036
9	0.010	0.009	0.001
10	1.148	0.062	0.113
11	0.004	0.009	0.011
12	?	?	?
13	0.003	0.001	0.007
14	0.001	0.007	0.002
15	1.823	1.176	1.230
16	0.111	0.003	0.086
17	0.128	0.053	0.108
18	0.614	0.178	0.269
19	0.001	0.002	0.011
20	0.009	0.005	0.016
21	0.008	0.013	0.019
22	0.005	0.005	0.017
23	0.001	0.012	0.004
24	0.001	0.006	0.001
Total Toluene	4.103	1.586	1.949

**Tipperary Corporation
Tatum Pit Closure Project
Ethyl-Benzene Concentration Comparison**

Monitor Well #	10/2/97 Sampling	12/3/97 Sampling	3/23/98 Sampling
1	0.001	0.001	0.001
2	0.001	0.002	0.001
3	0.031	0.024	0.006
4	0.002	0.017	0.002
5	0.002	0.003	0.001
6	0.024	0.002	0.019
7	0.001	0.001	0.001
8	0.039	0.001	0.013
9	0.015	0.006	0.001
10	0.243	0.173	0.209
11	0.002	0.007	0.007
12	?	?	?
13	0.020	0.001	0.004
14	0.001	0.017	0.004
15	0.381	0.338	0.364
16	0.090	0.004	0.084
17	0.141	0.116	0.130
18	0.206	0.118	0.159
19	0.001	0.003	0.007
20	0.010	0.008	0.014
21	0.005	0.059	0.067
22	0.001	0.010	0.016
23	0.001	0.009	0.012
24	0.001	0.005	0.001
Total E-Benzene	1.219	0.925	1.123

**Tipperary Corporation
Tatum Pit Closure Project
Xylene Concentration Comparison**

Monitor Well #	10/2/97 Sampling	12/3/97 Sampling	3/23/98 Sampling
1	0.009	0.017	0.015
2	0.001	0.008	0.007
3	0.151	0.173	0.035
4	0.012	0.012	0.022
5	0.012	0.019	0.006
6	0.066	0.033	0.024
7	0.001	0.003	0.006
8	0.414	0.003	0.049
9	0.084	0.041	0.003
10	1.338	1.243	0.669
11	0.020	0.051	0.040
12	?	?	?
13	0.014	0.006	0.015
14	0.002	0.012	0.008
15	2.278	1.696	1.524
16	0.313	0.015	0.220
17	0.920	0.727	0.524
18	1.201	0.002	1.189
19	0.003	0.859	0.040
20	0.025	0.048	0.089
21	0.124	0.715	0.235
22	0.004	0.170	0.112
23	0.003	0.061	0.019
24	0.003	0.036	0.004
Total Xylene	6.998	5.950	4.855

**Tipperary Corporation
Tatum Pit Closure Project
BTEX Concentration Comparison**

Monitor Well #	10/2/97 Sampling	12/3/97 Sampling	3/23/98 Sampling
1	0.012	0.025	0.022
2	0.005	0.013	0.011
3	0.200	1.387	0.054
4	0.031	1.501	0.047
5	0.019	0.025	0.011
6	0.790	0.068	0.281
7	0.005	0.023	0.017
8	1.377	0.023	0.146
9	0.285	0.123	0.007
10	6.626	3.626	2.292
11	0.122	0.124	0.184
12	?	?	?
13	1.346	0.010	0.037
14	0.005	1.183	0.918
15	6.432	5.499	4.588
16	1.662	0.256	1.419
17	2.908	2.305	1.863
18	4.498	2.361	3.013
19	0.011	0.873	0.184
20	0.454	0.345	0.658
21	0.287	0.953	0.554
22	0.152	0.200	0.195
23	0.009	0.122	0.106
24	0.009	0.064	0.007
Total BTEX	27.245	21.109	16.614