3R – 312

2010 AGWMR

04 / 29 / 2011

Williams
Environmental Services
188 CR 4900
Bloomfield, NM 87413

April 29, 2011

Mr. Glen Von Gonten
Hydrologist
Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

RE: 2010 GROUND WATER SUMMARY REPORT

Dear Mr. Von Gonten:

Enclosed for your review is the Williams 2010 Ground Water Summary Report. The report presents monitoring data for eight sites having petroleum hydrocarbon impacted ground water resulting from past use of unlined surface impoundments. Information for each site includes a brief narrative, analytical summary, hydrograph, and ground water contour maps.

As has been mentioned previously, four of the eight sites have known or suspected up-gradient contaminant sources which continue to influence conditions affecting the rate of natural attenuation. These conditions likely indicate producer or third party responsibility and affect the ultimate closure schedule.

Two sites (Florence 47X and Davis #1) have regular accumulations of LNAPL in one monitoring well at each location. Since 2002, passive collection devices have been deployed in all wells containing measurable accumulations of LNAPL. Periodic emptying of the collection devices along with active bailing of LNAPL continues at the aforementioned sites and at any other site if and when LNAPL is observed.

As noted in the site summaries, laboratory reports have not been included in the annual summary report. Lab results reports are retained in project files until such time as a site closure report is developed, but are available anytime upon request.

Thank you for your time to review this submittal. If you have any questions regarding the content of the report, or about specific conditions at any site, you may call me at (801) 232-8985 or Aaron Dailey at (505) 634-4708.

Respectfully,

Mark B. Harvey
Project Manager

Enclosure - CD

c: Bill Liess, BLM Farmington District Office
Dan Reutlinger, Williams-TUL

Annual Groundwater Summary Report 2010

San Juan Basin, New Mexico
Unlined Surface Impoundments

3R-312

DOGIE COMPRESSOR
EAST PIT

Site Summary Report

Site Name: Dogie East Pit **Reporting Period: 2010**

Location: Unit D, Sec 4, Twn 25N, Rng 6W
Canyon: Largo
Operator: Williams

Status Narrative

This site has nine monitoring wells installed in the original project area located at the northeast corner of the compressor station. To date, forty-nine quarters of ground water monitoring have been completed. Source area well MW-2 has now demonstrated four more consecutive quarters of BTEX concentrations below NMWQCC standards. In addition, the 4-inch SVE pilot well, which is also located within the source area, has not exceeded the BTEX standards during the last thirty-three quarters, with no measurable BTEX for the last several years.

Down gradient monitoring well MW-3 continues to contain elevated levels of total BTEX but levels are trending downward compared to previous monitoring periods. Well MW-7, located downgradient of well MW-5, again shows benzene concentrations diminishing over the high levels measured in previous years. In 2010, measured benzene levels in MW-7 continue a declining trend.

MW-6 which previously was found with LNAPL, shows a moderating downward trend of total BTEX levels. Sentinel well MW-9 shows no detectable levels of BTEX. A summary of the analytical results is attached with all laboratory analytical reports retained for later submittal upon request for closure.

Ground water generally flowed north-northwest at an average hydraulic gradient of 0.002. Figure 2 shows the potentiometric surface for two of the quarterly sampling events. The attached hydrograph shows the seasonal variation in water-table elevations with the high levels in Spring. Monitored natural attenuation appears effective at this site, but unknown historical impacts from facility operations may influence the site closure schedule.

Analytical Data Summary

Site Name:
Dogie East Pit

Reporting Period:
1/8/2008 To 12/31/2010

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-1						
	12/5/2008	112805DEC08	<1.0	<1.0	<1.0	<3.0
	12/9/2010	124009DEC10	<1.0	<1.0	<1.0	<3.0
MW-2						
	3/27/2008	124127MAR08	<1.0	<1.0	<1.0	<3.0
	6/5/2008	150705JUN08	<1.0	<1.0	<1.0	<3.0
	10/1/2008	165801OCT08	<1.0	<1.0	<1.0	<3.0
	12/5/2008	113605DEC08	<1.0	<1.0	<1.0	<3.0
	7/9/2009	145209JUL09	<1.0	<1.0	<1.0	<3.0
	9/9/2009	142309SEP09	<1.0	<1.0	<1.0	<3.0
	12/19/2009	153919DEC09	<1.0	<1.0	<1.0	<3.0
	3/30/2010	175330MAR10	<1.0	<1.0	<1.0	<3.0
	6/22/2010	140922JUN10	<1.0	<1.0	<1.0	<3.0
	9/16/2010	134716SEP10	<1.0	<1.0	<1.0	<3.0
	12/9/2010	123609DEC10	<1.0	<1.0	<1.0	<3.0
MW-3						
	3/27/2008	131027MAR08	14.2	197	278	990
	6/5/2008	151505JUN08	32.6	34.4	131	429
	10/1/2008	171901OCT08	71.7	20.9	53.9	228
	12/5/2008	120105DEC08	34.3	214	167	682
	3/31/2009	163731MAR09	<5.0	56.3	134	481
	7/9/2009	151409JUL09	13.9	11.7	27.7	125
	9/9/2009	144309SEP09	23.8	155	378	1290
	12/19/2009	154819DEC09	35.0	35.9	317	790
	3/30/2010	180330MAR10	8.2	1.5	141	401
	6/22/2010	141922JUN10	6.1	4.1	30.9	100
	9/16/2010	140316SEP10	12.2	7.0	15.3	40.0
	12/9/2010	125609DEC10	1.0	2.3	13.1	28.9
MW-5						
	6/5/2008	152505JUN08	<5.0	<5.0	171	441
	3/30/2010	182130MAR10	<1.0	5.1	21.1	84.5
	6/22/2010	143022JUN10	1.0	9.4	99.4	270

Site Name:
Dogie East Pit

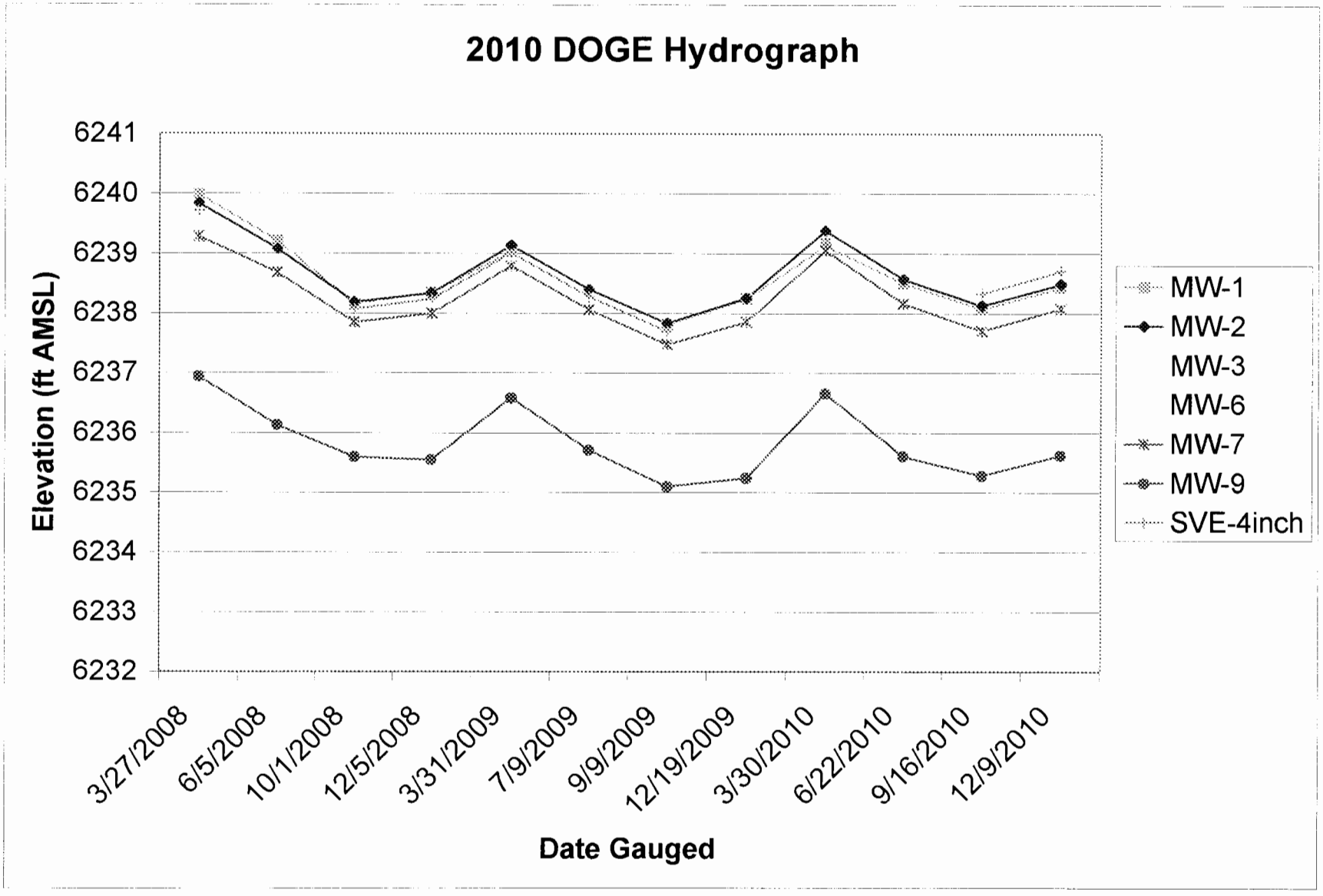
Reporting Period:
1/8/2008 To 12/31/2010

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-6						
	3/27/2008	141127MAR08	940	410	308	1760
	6/5/2008	160705JUN08	3300	1970	746	5030
	10/1/2008	180001OCT08	3520	833	712	5760
	12/5/2008	131905DEC08	901	26.4	136	478
	3/31/2009	171731MAR09	1800	95.2	356	1280
	7/9/2009	155409JUL09	<1.0	<1.0	<1.0	<3.0
	12/19/2009	162419DEC09	958	13.3	239	880
	3/30/2010	190130MAR10	1160	46.1	487	2530
	6/22/2010	151022JUN10	3430	102	460	3410
	9/16/2010	143816SEP10	2940	144	370	2760
	12/9/2010	133809DEC10	2580	<20.0	457	2270
MW-7						
	3/27/2008	133327MAR08	160	<1.0	<1.0	<3.0
	6/5/2008	153605JUN08	211	<5.0	<5.0	<15.0
	10/1/2008	173201OCT08	31.0	<1.0	<1.0	<3.0
	12/5/2008	121205DEC08	14.8	<1.0	<1.0	<3.0
	3/31/2009	165131MAR09	144	<1.0	<1.0	<3.0
	7/9/2009	152809JUL09	104	<1.0	<1.0	<3.0
	9/9/2009	145509SEP09	29.6	4.3	2.0	4.5
	12/19/2009	155819DEC09	20.8	<1.0	<1.0	<3.0
	3/30/2010	183730MAR10	137	<1.0	<1.0	<3.0
	6/22/2010	144122JUN10	131	<1.0	<1.0	<3.0
	9/16/2010	141116SEP10	47.7	<1.0	<1.0	<3.0
	12/9/2010	130509DEC10	20.9	<1.0	<1.0	<3.0
MW-9						
	3/27/2008	135127MAR08	<1.0	<1.0	<1.0	<3.0
	6/5/2008	154905JUN08	<1.0	<1.0	<1.0	<3.0
	10/1/2008	174401OCT08	<1.0	<1.0	<1.0	<3.0
	12/5/2008	122805DEC08	<1.0	<1.0	<1.0	<3.0
	3/31/2009	170231MAR09	<1.0	<1.0	<1.0	<3.0
	7/9/2009	154409JUL09	<1.0	<1.0	<1.0	<3.0
	9/9/2009	150709SEP09	<1.0	<1.0	<1.0	<3.0
	12/19/2009	161119DEC09	<1.0	<1.0	<1.0	<3.0
	3/30/2010	184830MAR10	<1.0	<1.0	<1.0	<3.0
	6/22/2010	145522JUN10	<1.0	<1.0	<1.0	<3.0
	9/16/2010	142716SEP10	<1.0	<1.0	<1.0	<3.0
	12/9/2010	132309DEC10	<1.0	<1.0	<1.0	<3.0

Site Name:
Dogie East Pit

Reporting Period:
1/8/2008 To 12/31/2010

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
SVE-4inch						
	3/27/2008	125627MAR08	<1.0	<1.0	<1.0	<3.0
	10/1/2008	170901OCT08	<1.0	<1.0	<1.0	<3.0
	12/5/2008	114905DEC08	<1.0	<1.0	<1.0	<3.0
	7/9/2009	150409JUL09	<1.0	<1.0	<1.0	<3.0
	9/9/2009	143309SEP09	<1.0	<1.0	<1.0	<3.0
	9/16/2010	135616SEP10	<1.0	<1.0	<1.0	<3.0
	12/9/2010	124909DEC10	<1.0	<1.0	<1.0	<3.0


2010 DOGE Hydrograph
Elevation (ft AMSL)
6241
6240
6239
6238
6237
6236
6235
6234
6233
6232
3/27/2008
6/5/2008
10/1/2008
12/5/2008
3/31/2009
7/9/2009
9/9/2009
12/19/2009
3/30/2010
6/22/2010
9/16/2010
12/9/2010
Date Gauged
MW-1
MW-2
MW-3
MW-6
MW-7
MW-9
SVE-4inch

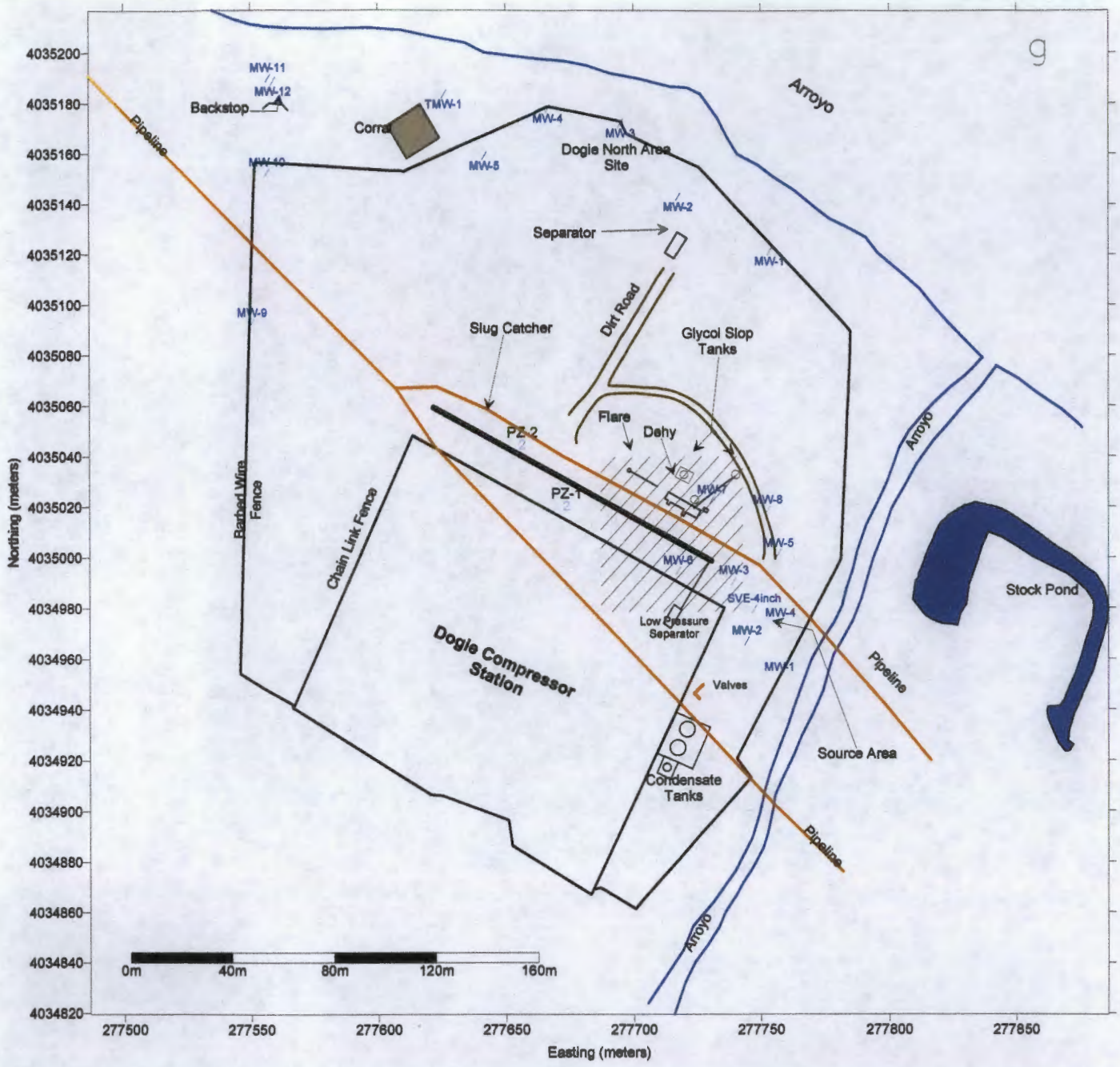


Figure 2
Potentiometric Surface Map
Dogie Compressor Station (East Site)
March 2010

LEGEND

MW-2 — Monitoring Well

5585.20 — Ground Water Elevation (ft. AMSL)

Figure 2
Potentiometric Surface Map
Dogie Compressor Station (East Site)
(September 2010)

LEGEND

MW-2 — Monitoring Well

5585.20 — Ground Water Elevation (ft. AMSL)