3R – 322

2011 AGWMR

05 / 11 / 2012

Williams
Environmental Services
188 CR 4900
Bloomfield, NM 87413

May 11, 2012

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

RE: 2011 GROUND WATER SUMMARY REPORT

Dear Mr. Von Gonten:

Enclosed for your review is the Williams 2011 Ground Water Summary Report. The report presents monitoring data for seven 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. Free product which has again appeared at the Dogie Compressor Station has been analyzed and found to be some type of refined product. A report on this finding will be presented under separate cover. Periodic emptying of the collection devices along with active bailing of LNAPL continues at all free product sites 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 (505) 402-1958 or Danny Reutlinger at (918) 573-2000.

Respectfully,

Mark Harvey
Project Manager

Enclosure

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

Annual
Groundwater Report
2011

San Juan Basin, New Mexico
Unlined Surface Impoundments

3R-322

Site Summary Report

Site Name: Ice Canyon Drip **Reporting Period: 2011**

Location: Unit B, Sec 15, Twn 26N, Rng 6W
Canyon: Largo
Operator: Williams

Status Narrative

This site has eight monitoring wells and one 4-inch well installed as part of a soil-vapor extraction pilot study conducted by PNM. To date, fifty-three quarters of monitoring have been completed. Accumulations of LNAPL in the 4-inch well have not been observed over the last several quarters and in fact BTEX concentrations are relatively low.

Source area well MW-2 was again not sampled due to a restriction in the well. Attempts to remove / repair the restriction have not been successful. Previously, measured BTEX concentrations from MW-2 showed a decline from earlier monitoring events. Measured concentrations of BTEX in the other wells continue to meet WQCC closure standards. Of the wells monitored, only SVE-4in was found to have contamination exceeding WQCC standards. Sentinel well MW-8 continues to show no measurable BTEX as it has for several years.

Potentiometric surface maps (Figure 2) depict a general south-southwest flow direction. The average hydraulic gradient is 0.003. The hydrograph for the monitoring period illustrates seasonal fluctuations in water-table elevations, with highs generally in the Spring, but overall, a declining water table. Monitored natural attenuation appears effective at this site with clean closure likely within the next few monitoring periods.

Analytical Data Summary

Site Name:
Ice Canyon Drip

Reporting Period:
1/1/2010 To 1/30/2012

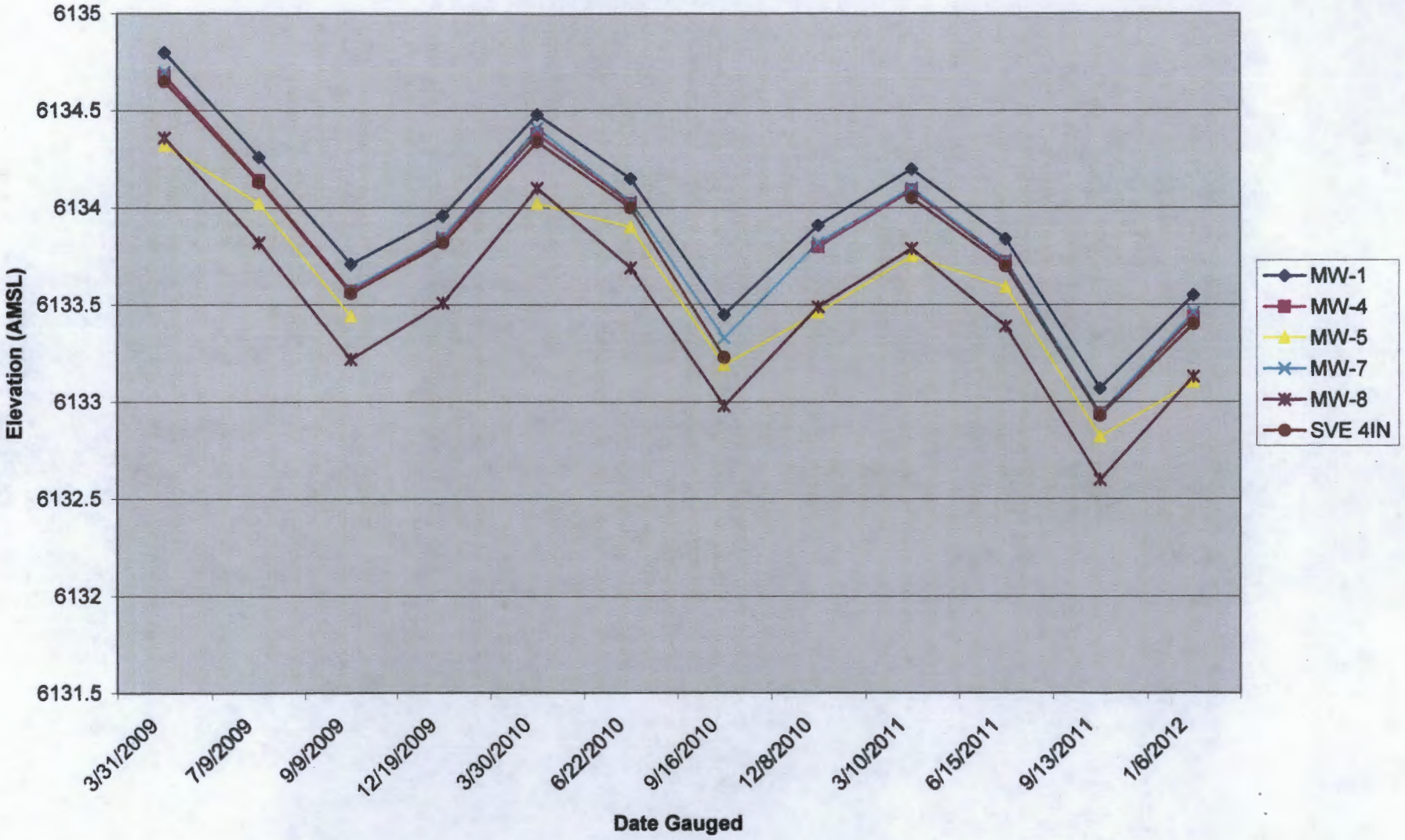
Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-1						
	3/30/2010	141630MAR10	<1.0	<1.0	<1.0	<3.0
	6/22/2010	105722JUN10	<1.0	<1.0	<1.0	<3.0
	9/16/2010	120816SEP10	<1.0	<1.0	<1.0	<3.0
	12/8/2010	120208DEC10	<1.0	<1.0	<1.0	<3.0
	3/10/2011	145210MAR11	<1.0	<1.0	<1.0	<3.0
	6/15/2011	115915JUN11	<1.0	<1.0	<1.0	<3.0
	9/13/2011	124313SEP11	<1.0	<1.0	<1.0	<3.0
	1/6/2012	104806JAN12	<1.0	<1.0	<1.0	<3.0
MW-3						
	3/30/2010	143830MAR10	<1.0	<1.0	<1.0	<3.0
	9/16/2010	123116SEP10	<1.0	<1.0	<1.0	<3.0
	6/15/2011	122515JUN11	<1.0	<1.0	<1.0	<3.0
	1/6/2012	112006JAN12	<1.0	<1.0	<1.0	<3.0
MW-4						
	3/30/2010	145730MAR10	<1.0	<1.0	<1.0	<3.0
	6/22/2010	111922JUN10	<1.0	<1.0	<1.0	<3.0
	9/16/2010	124116SEP10	<1.0	<1.0	<1.0	<3.0
	12/8/2010	122108DEC10	<1.0	<1.0	<1.0	<3.0
	3/10/2011	151810MAR11	<1.0	<1.0	<1.0	<3.0
	6/15/2011	123215JUN11	<1.0	<1.0	<1.0	<3.0
	9/13/2011	141113SEP11	<1.0	<1.0	<1.0	<3.0
	1/6/2012	113306JAN12	<1.0	<1.0	<1.0	<3.0
MW-5						
	3/30/2010	150930MAR10	1.4	<1.0	<1.0	<3.0
	6/22/2010	114422JUN10	<1.0	<1.0	<1.0	<3.0
	9/16/2010	130216SEP10	1.8	<1.0	<1.0	<3.0
	12/8/2010	123708DEC10	<1.0	<1.0	<1.0	<3.0
	3/10/2011	152710MAR11	<1.0	<1.0	<1.0	<3.0
	6/15/2011	124615JUN11	2.7	<1.0	4.7	21.9
	9/13/2011	141713SEP11	1.7	<1.0	<1.0	<3.0
	1/6/2012	114206JAN12	<1.0	<1.0	<1.0	<3.0

Site Name:
Ice Canyon Drip

Reporting Period:
1/1/2010 To 1/30/2012

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-7						
	3/30/2010	144730MAR10	<1.0	<1.0	<1.0	<3.0
	6/22/2010	110922JUN10	<1.0	<1.0	<1.0	<3.0
	9/16/2010	131216SEP10	<1.0	<1.0	<1.0	<3.0
	12/8/2010	122808DEC10	<1.0	<1.0	<1.0	<3.0
	3/10/2011	150210MAR11	<1.0	<1.0	<1.0	<3.0
	6/15/2011	123915JUN11	<1.0	<1.0	<1.0	<3.0
	9/13/2011	140413SEP11	<1.0	<1.0	<1.0	<3.0
	1/6/2012	112706JAN12	<1.0	<1.0	<1.0	<3.0
MW-8						
	3/30/2010	140430MAR10	<1.0	<1.0	<1.0	<3.0
	6/22/2010	104822JUN10	<1.0	<1.0	<1.0	<3.0
	9/16/2010	120016SEP10	<1.0	<1.0	<1.0	<3.0
	12/8/2010	115308DEC10	<1.0	<1.0	<1.0	<3.0
	3/10/2011	144610MAR11	<1.0	<1.0	<1.0	<3.0
	6/15/2011	115015JUN11	<1.0	<1.0	<1.0	<3.0
	9/13/2011	123413SEP11	<1.0	<1.0	<1.0	<3.0
	1/6/2012	104006JAN12	<1.0	<1.0	<1.0	<3.0
SVE 4IN						
	3/30/2010	142830MAR10	5.9	1.5	113	400
	6/22/2010	113222JUN10	6.9	<5.0	105	413
	9/16/2010	125016SEP10	<1.0	<1.0	9.0	<3.0
	12/8/2010	124708DEC10	1.3	<1.0	18.8	29.2
	3/10/2011	150810MAR11	5.3	<5.0	120	499
	6/15/2011	120815JUN11	4.7	1.6	84.7	247
	9/13/2011	125113SEP11	6.7	1.7	86.3	193
	1/6/2012	110906JAN12	5.6	<5.0	63.1	42.1

2011 ICE Hydrograph



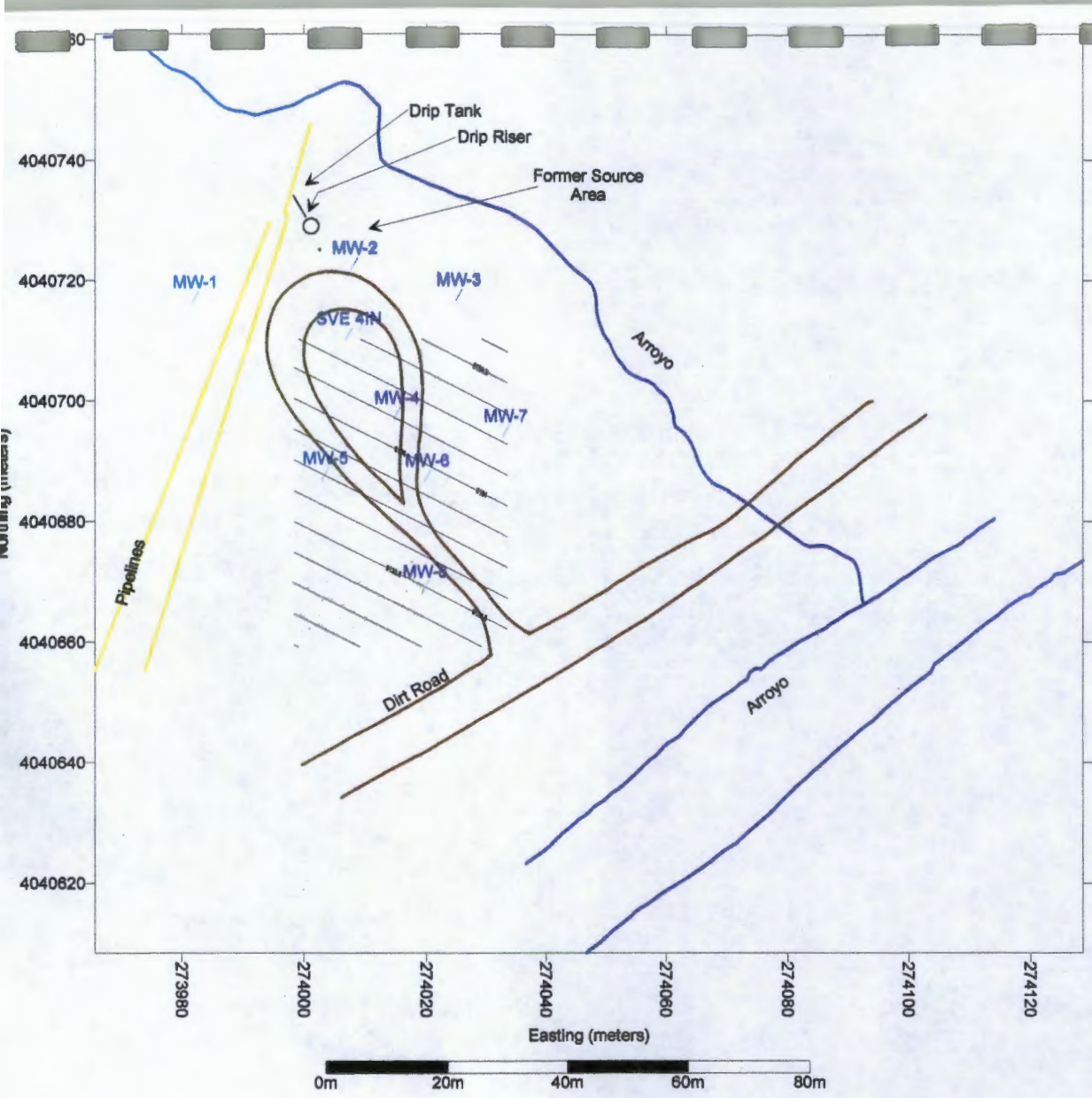


Figure 2
Potentiometric Surface Map
Ice Canyon Line Drip
March 2011

LEGEND

MW-2 — Monitoring Well

5565.20 — Ground Water Elevation (ft. AMSL)

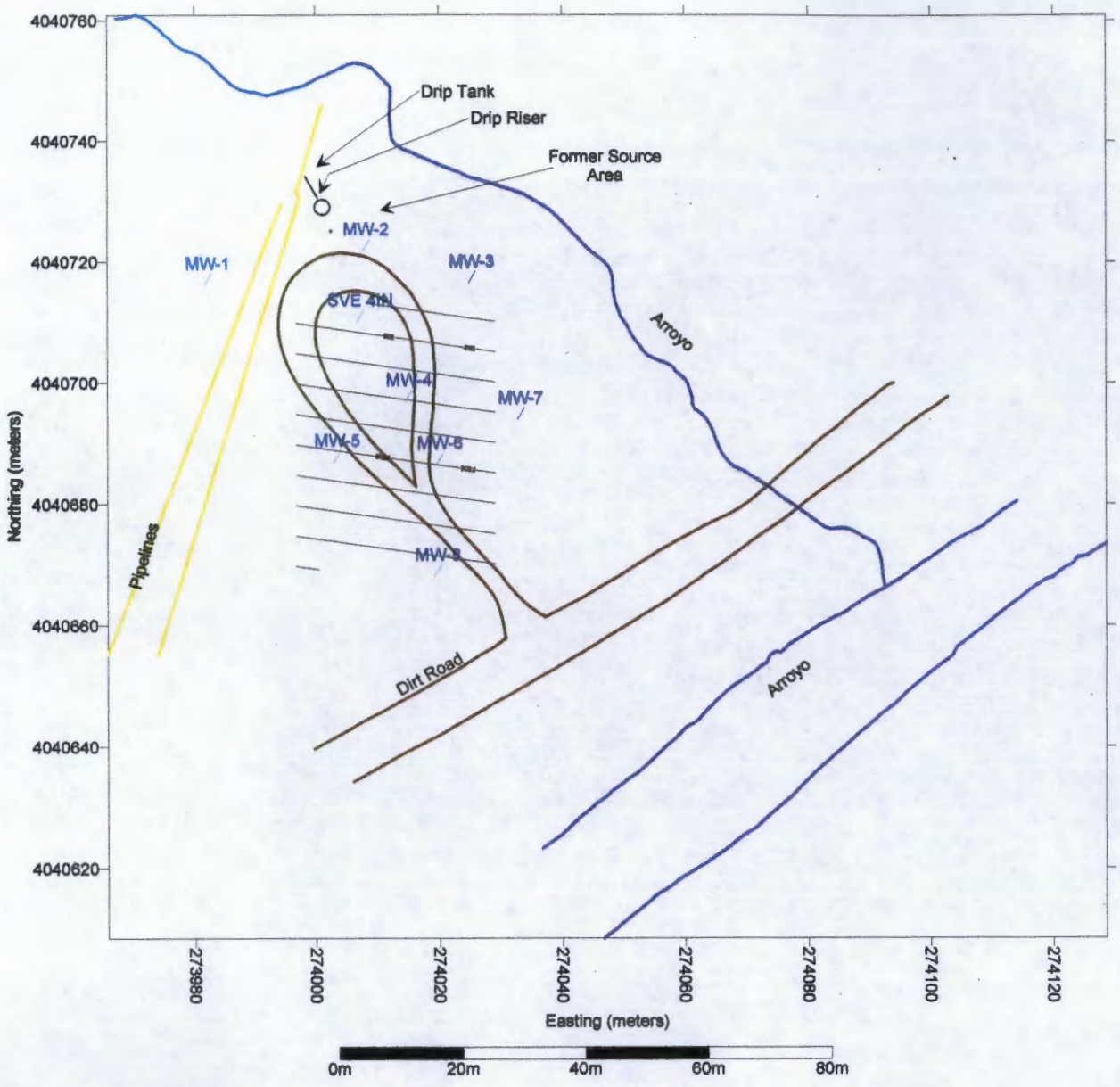


Figure 2
Potentiometric Surface Map
Ice Canyon Line Drip
September 2011

LEGEND

MW-2 — Monitoring Well

5585.20 — Ground Water Elevation (ft. AMSL)