1R - 777

Annual GW Mon. Report

Year: 2011

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April 3, 2012

Mr. Edward Hansen
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Legacy Reserves Operating, L.P., Monsanto '30' State #5
Groundwater Monitoring Report
NMOCD Reference 1RP-0777
Section 30, T16S, R37E
Latitude: 32.88629° N and Longitude: 103.28859 W
Lea County, New Mexico

Dear Mr. Hansen:

Talon/LPE (Talon) was retained by Legacy Reserves Operating, L.P. (Legacy) to provide environmental consulting and groundwater remediation services regarding the Monsanto '30' State #5 produced water release in Lea County, New Mexico.

The purpose of this report is to document groundwater monitoring activities that occurred at the site during the year 2011.

Background Information

The site is located northwest in Lea County, New Mexico at GPS coordinates N Latitude: 32.88629° N and Longitude: 103.28859 W in Section 30, Township 16 South, Range 37 East. The following is a synopsis of the site history.

- In February of 2004 Safety and Environmental Solutions (SESI) conducted a site investigation regarding an unlined reserve pit at the subject site.
- In February of 2004, four (4) boreholes (BH-1, BH-2, BH-3, and BH-4)) were advanced below the pit to a depth ranging from 20-feet bgs to 70-feet bgs and soil samples were collected at five (5) feet intervals. Analytical results exhibited chloride concentrations that ranged from 64 mg/Kg to 11,200 mg/Kg.
- In April of 2004, a 40 mil polyethylene liner was installed and the excavation was then backfilled with uncontaminated soil to prevent leaching from rainwater infiltration.

- From May of 2004 to June of 2006 eight (8), two (2) inch monitor wells were installed at various locations around the site to delineate the extent of the groundwater chloride plume.
- Groundwater monitoring commenced subsequent to the initial monitor well installations in July of 2004 and continued to March of 2011.
- An Annual Groundwater Monitoring Report was submitted in March of 2011 documenting groundwater monitoring events that occurred in March, June, September of 2010 and March of 2011.
- Additional groundwater monitoring events were performed in June, September and December of 2011 and March of 2012.
- In July of 2011, applications were submitted to the NMOSE and NMSLO for permits to install two additional monitor wells. The applications are for Right-of-Entry (ROE), and for non-consumptive use of water. The purpose of the wells is to acquire data from a pump test so that a remediation system can be designed and to delineate the chloride plume. To date, the permits to install the well have not been issued.

A Topographic Map is provided as Figure 1b, Appendix A and a site vicinity aerial photograph depicting the general site location and City of Lovington water wells are provided on Figure 1b in Appendix A.

Physical Characteristics of the First Water-Bearing Zone

The primary groundwater resource under the Southern High Plains, including the site, is referred to as the Ogallala Aquifer or High Plains Aquifer. The Southern portion of the Ogallala aquifer underlies an area of about 29,000 square miles (mi^2) in western Texas and eastern New Mexico, encompassing all or part of 31 counties in Texas and 6 counties in New Mexico.

The Ogallala Aquifer has experienced acute depletion from extensive irrigation and urban demand, which have exceeded the average annual recharge rate. Recharge of the Ogallala Aquifer on the Southern High Plains occurs predominately from rainfall runoff that accumulates in ephemeral streams and playa lakes as well as direct recharge in areas that contain permeable soils such as sand hills. Recharge rates vary depending on mechanism, but averages from 0 to 1.6 inches per year.

The Ogallala Aquifer is generally unconfined and the poteniometric surface generally mirrors the land surface elevation with the regional flow direction from the northwest to the southeast. The mean regional gradient is 15 feet per mile and the typical groundwater velocity averages seven inches per day. The regional hydraulic conductivity averages 17 gallons per day per square-foot and specific yield averages 16%. The depth to groundwater at the site has historically ranged from 64 to 72 feet below ground surface (bgs) and the groundwater flow direction is to the south-southwest at an average of 23 feet per mile.

The composition of Ogallala groundwater is defined as mixed-cation-HCO_3, therefore, Ogallala groundwater is considered hard. Problems with scale have occurred with residential and commercial water systems that use Ogallala groundwater and often treatment strategies are

employed to reduce the effects of scale. The typical total dissolved solids of Ogallala groundwater in the Hobbs-Lovington area is generally less than 500 mg/L (ppm) in areas not impacted by oil-field brines with an average pH of 7.3.

Groundwater Gradient and Flow Direction

A total of four (4) groundwater monitoring events occurred during the year 2011 on March 11, June 17, and September 28, and December 21. Measurements to the depth of fluid were collected during each of the four (4) groundwater monitoring events. The results of the fluid level measurements are summarized in Table 1 in Appendix B.

The collected data was used to construct potentiometric surface maps in order to interpret the groundwater gradient and flow direction. The maps, designated Figures 2a through 2d, are presented in Appendix A.

The potentiometric surface maps indicate that the groundwater flow direction is to south southeast at an approximate gradient of 0.0044 feet/foot or 23.06 feet per mile. Groundwater levels at the subject site have exhibited a steady decline of an average of 1.69 feet for the year 2011. The decline in groundwater levels appears to be associated with a regional trend of declining groundwater levels for the Ogallala Aquifer.

Groundwater Analytical Results

During the first quarter, March 2011, groundwater monitoring event, groundwater samples were collected from monitor wells MW-1 through MW-8. Groundwater samples collected during the event exhibited the follwing analytical results:

- Total chloride (Cl) concentrations ranged from 19.0 mg/L to 432 mg/L. Total Cl concentrations exceeded the NMWQCC groundwater standard of 250 mg/L in groundwater samples collected from monitor wells MW-6, MW-7, and MW-8.
- Total dissolved solids (TDS) concentrations ranged from 412 mg/L to 1,030 mg/L. The TDS concentration exceeded the NMWQCC groundwater standard of 1,000 mg/L in the groundwater samples collected from monitor wells MW-6, and MW-7.

During the second quarter, June 2011 sampling event, groundwater samples were collected from monitor wells MW-1 through MW-8. The groundwater samples that were collected exhibited the following analytical results:

- Total Cl concentrations ranged from 24.5 to 352 mg/L. Total Cl concentrations exceeded the NMWQCC groundwater standard of 250 mg/L in groundwater samples collected from monitor well MW-7, and MW-8.
- TDS concentrations ranged from 387 mg/L to 804 mg/L. The TDS concentration did not exceed the NMWQCC groundwater standard of 1,000 mg/L in any groundwater sample collected.

During the third quarter, September 2011 sampling event, groundwater samples were collected from monitor wells MW-1 through MW-8. The groundwater samples that were collected exhibited the following analytical results:

- Total Cl concentrations ranged from 16.6 mg/L to 405 mg/L. The total Cl concentration exceeded the NMWQCC groundwater standard of 250 mg/L in the groundwater sample collected from monitor well MW-8.
- TDS concentrations ranged from 350 mg/L to 1,356 mg/L. The TDS concentrations exceeded the NMWQCC groundwater standard of 1,000 mg/L in the groundwater samples collected from monitor wells MW-2 and MW-8.

During the fourth quarter, December 2011 sampling event, groundwater samples were collected from monitor wells MW-1 through MW-8. The groundwater samples that were collected exhibited the following analytical results:

- Total Cl concentrations ranged from 16.8 mg/L to 376 mg/L. The total Cl concentration exceeded the NMWQCC groundwater standard of 250 mg/L in the groundwater sample collected from monitor well MW-8.
- TDS concentrations ranged from 125 mg/L to 1,102 mg/L. The TDS concentration exceeded the NMWQCC groundwater standard of 1,000 mg/L in the groundwater sample collected from monitor well MW-8.

During 2011, monitor wells MW-7 and MW-8 have consistently exhibited total Cl and TDS concentrations exceeding the NMWQCC groundwater standards. However; the chloride plume is currently stable and the groundwater chloride plume is delineated down-gradient. In addition, the chloride concentrations exhibited in monitor wells MW-7 and MW-8 has been steadily declining over year 2011. This data indicates that the chloride plume is stable and does not appear to be migrating down-gradient.

The results of the laboratory analyses are summarized in Table 2 – Summary of Groundwater Analytical Results in Appendix B.

Summary of Findings

- The groundwater flow direction is to southeast at an approximate gradient of 0.0034 feet/foot or 18 feet per mile.
- Groundwater levels at the subject site have exhibited a steady decline averaging 1.49 feet for the year 2010 that appears to be associated with a regional trend of declining groundwater levels for the Ogallala Aquifer.
- Monitor wells MW-1, MW-6, MW-7, and MW-8 have exhibited Cl and TDS concentrations exceeding the NMWQCC groundwater standards. The chloride plume is currently not delineated down gradient.
- Based on declining chloride concentrations in monitor wells MW-7 and MW-8, it appears that

brine water influx at the source may be mitigated and that the chloride plume may be undergoing dilution as a result of dispersion.

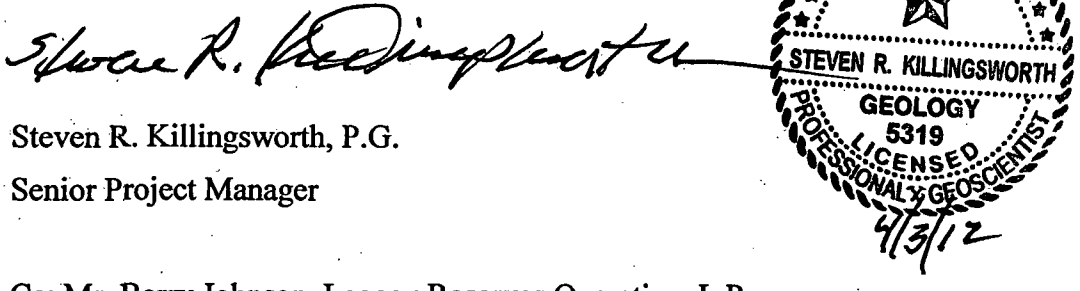
Recommendations

Based upon the results of the four (4) quarterly groundwater monitoring events performed in 2010 and 2011, Talon proposes the following actions:

- Continue to perform quarterly groundwater monitoring events in accordance with NMOCD directives.
- Install one (1) four (4) inch recovery well near the center of the chloride plume and perform a pump test to acquire data for a remediation system design.
- Install one (1) two (2) inch monitor well (MW-9) down-gradient from monitor well MW-7 in order to delineate the chloride plume in concentrations in MW-7 should increase in excess of NMWQCC standards..
- Survey the top of casing elevations for monitor wells MW-5, MW-6, MW-7 and MW-8 and the newly installed monitor wells MW-9 and MW-10.
- Prepare a remediation plan designed to pump and dispose of impacted groundwater and to inhibit migration of the chloride plume based on the results of the pump test.

If you have any questions or require further information, please contact Mr. Kyle Waggoner or me at (432) 522-2133.

Sincerely,



Steven R. Killingsworth, P.G.
Senior Project Manager

Cc: Mr. Berry Johnson, Legacy Reserves Operating, L.P.
Mr. Geoffrey R. Leking, NMOCD

Appendices:

Appendix A Figures

Appendix B Tables

Appendix C Laboratory Analytical Data Reports and Chain of Custody Documentation

Appendix A

Figures

Figure 1b – Site Vicinity Topographic Map

Figure 1 – Site Map

Figure 2a – Groundwater Gradient Map – 3/10/2011

Figure 2b - Groundwater Gradient Map - 3/27/2010

Figure 2c - Groundwater Gradient Map - 6/9/2010

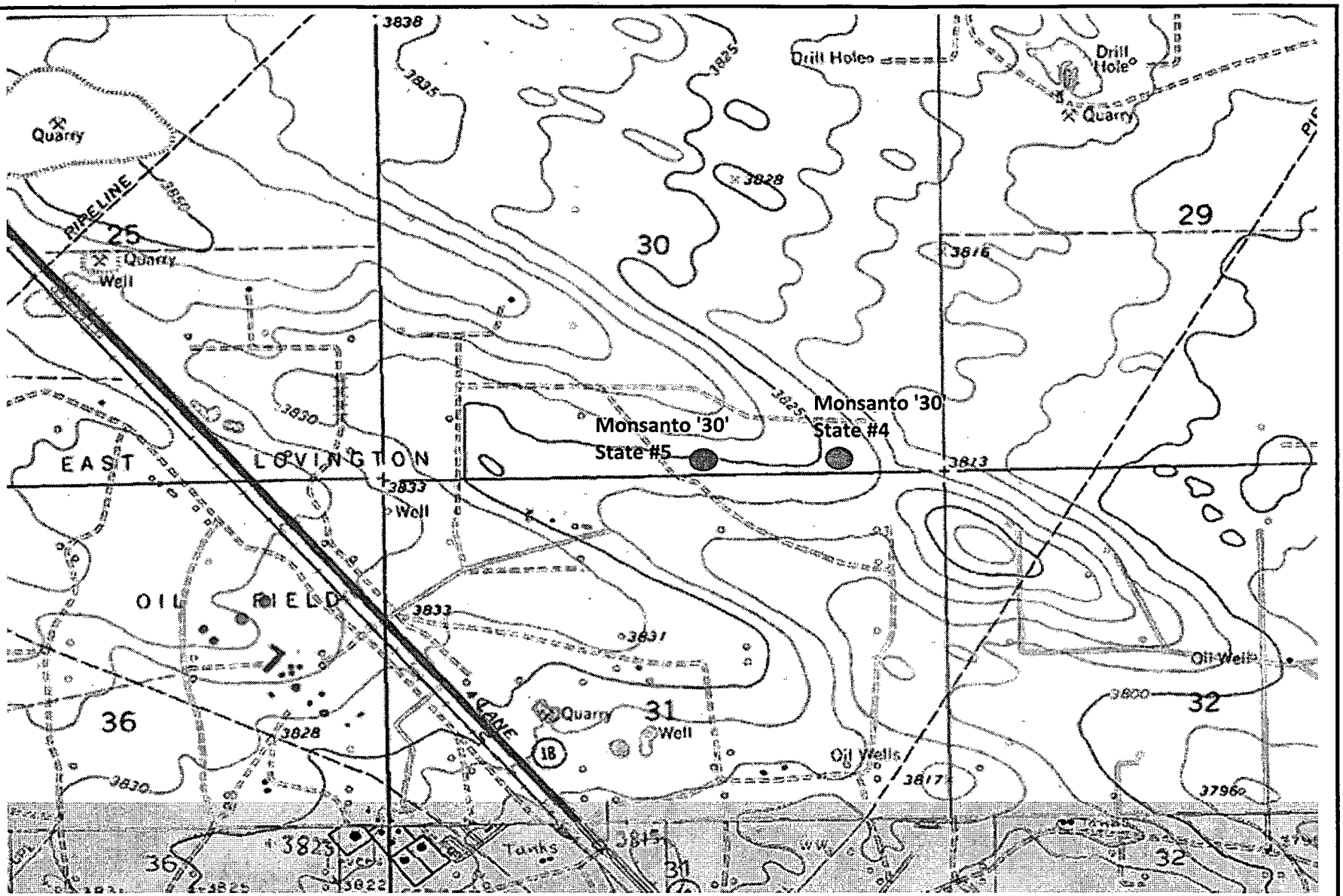
Figure 2d - Groundwater Gradient Map - 9/27/2010

Figure 3a - Groundwater Chloride Concentration Map - 3/11/2011

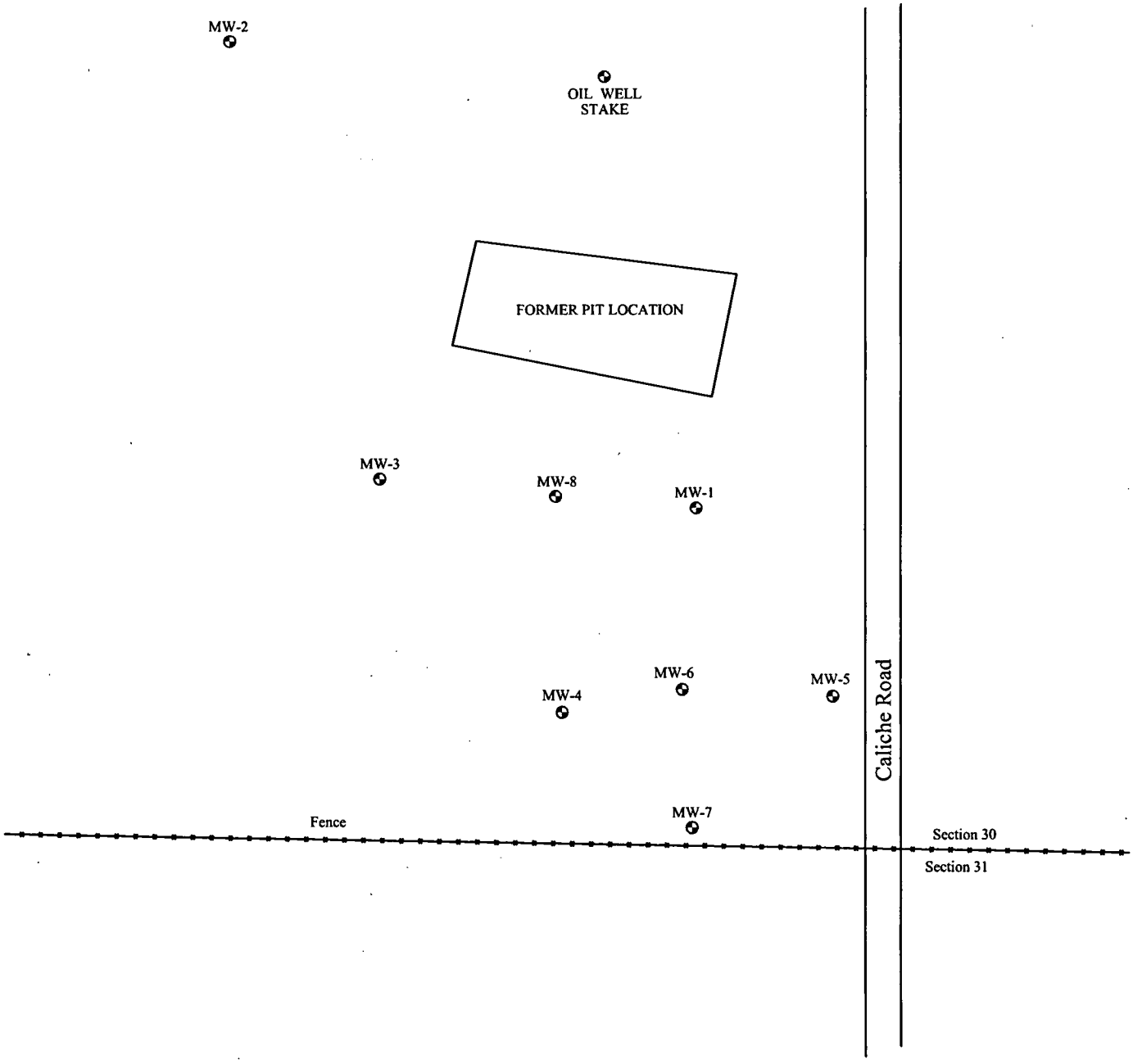
Figure 3b - Groundwater Chloride Concentration Map - 3/27/2010

Figure 3c - Groundwater Chloride Concentration Map - 6/9/2010

Figure 3d - Groundwater Chloride Concentration Map - 9/9/2010



TALON LPE	**Figure 1b - Topographic Map** **Monsanto '30' State #4 & #5** **Date: March 9, 2011** **Prepared by: S. R. Killingsworth, PG**	**Legacy Reserves Operating, LP** **303 W. Wall, Suite 1600** **Midland, Texas 79702** **Not to scale**



N

0 30 60

Scale in Feet

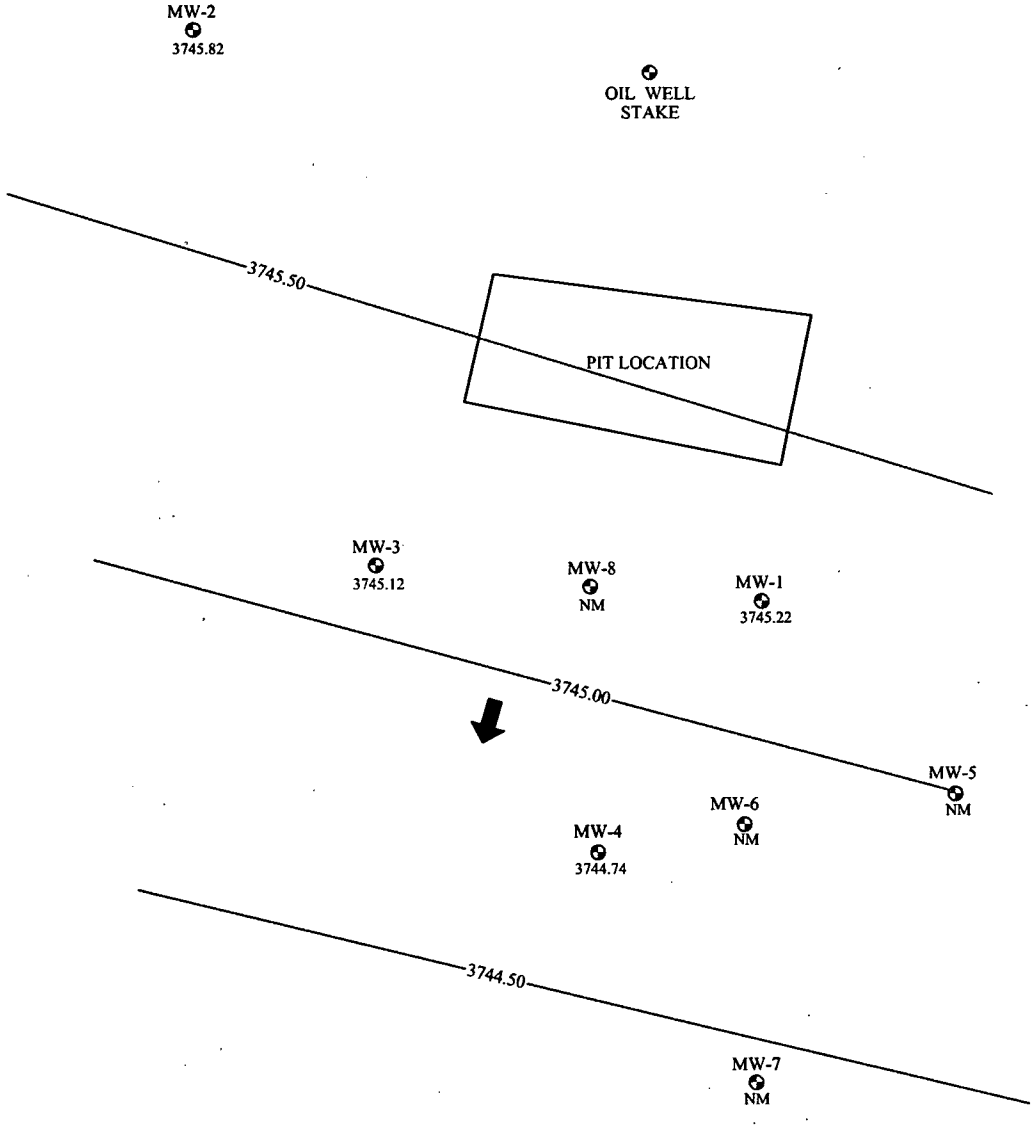
Legend

- Monitor Well
- Soil Boring
- Surface Soil Samples
- Groundwater Gradient Contour Line
- *81.30* - Groundwater Gradient Contour Elevation
- Groundwater Flow Direction
- Groundwater Chloride Contour Line
- *29.6* - Chloride Concentration in ppm

TALON LPE

Date: 10/21/2011
Scale: 1" = 60'
Drawn By: TJS

Monsanto '30' State #5
Legacy Reserves Operating, L.P.
Hobbs, Lea County, New Mexico
Figure 1 - Site Plan



Gradient
0.0031 ft/ft
16.29 ft/mi

N

0 30 60

Scale in Feet

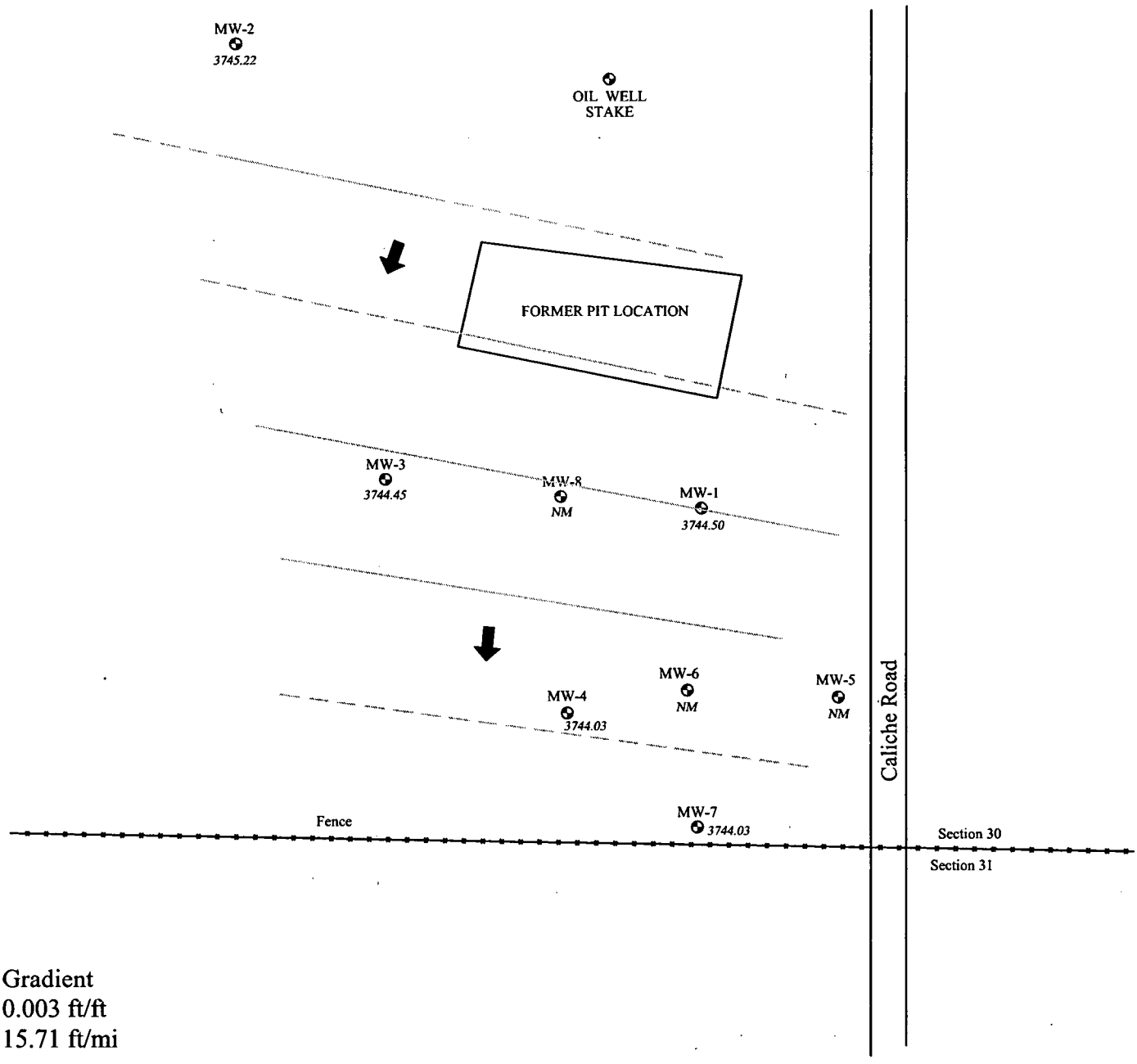
Legend

- Monitor Well
- Soil Boring
- Surface Soil Samples
- Groundwater Gradient Contour Line
- *81.30* - Groundwater Gradient Contour Elevation
- Groundwater Flow Direction
- Groundwater Chloride Contour Line
- *29.6* - Chloride Concentration in ppm

TALON LPE

Date: 03/28/2011
Scale: 1" = 60'
Drawn By: TJS

Monsanto '30' State #5
Legacy Reserves Operating, L.P.
Hobbs, Lea County, New Mexico
Figure 2a - Groundwater Gradient Map, (03/10/2011)



Gradient
0.003 ft/ft
15.71 ft/mi

N

0 30 60

Scale in Feet

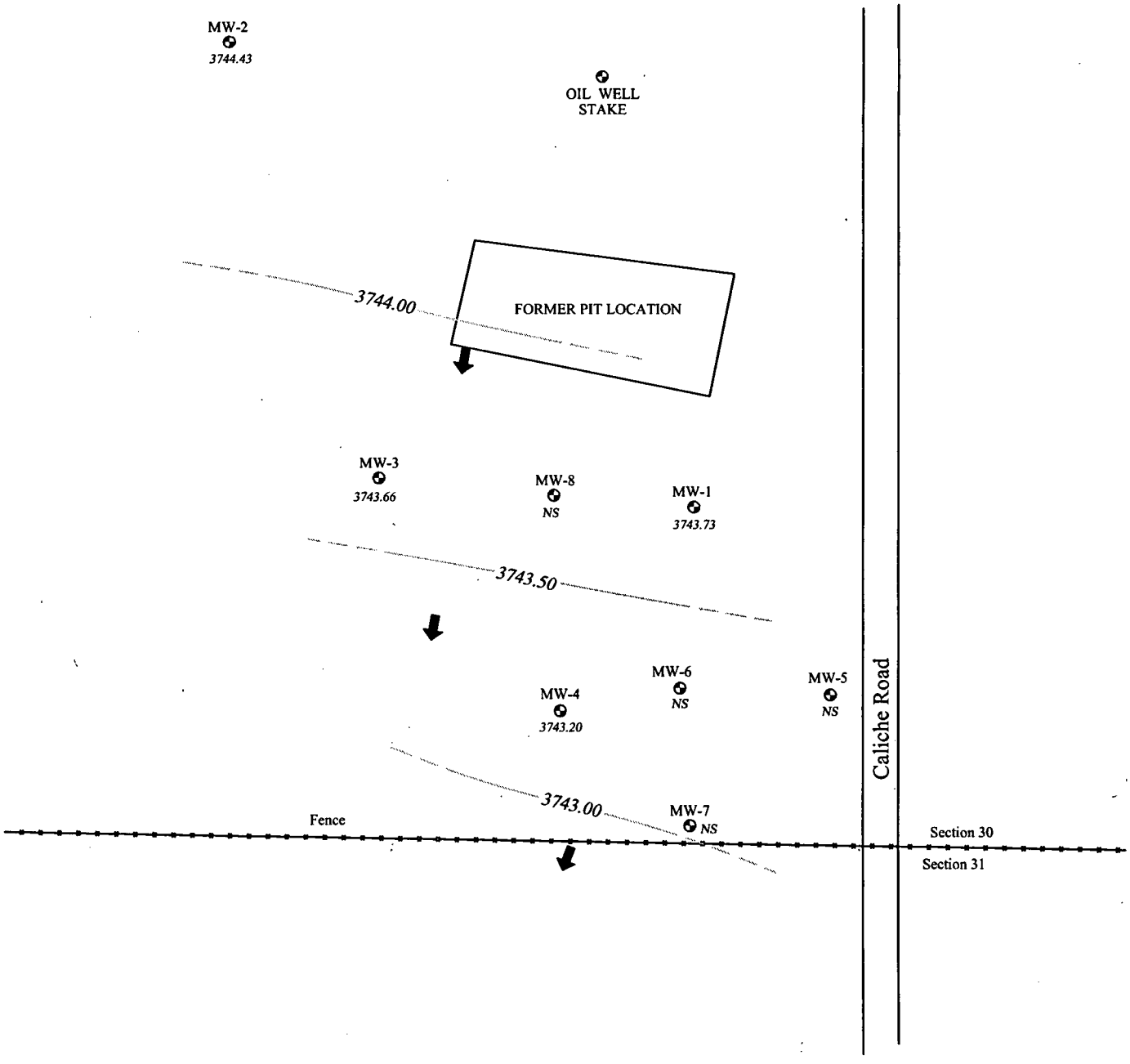
Legend

- Monitor Well
- Soil Boring
- Surface Soil Samples
- Groundwater Gradient Contour Line
- 81.30 - Groundwater Gradient Contour Elevation
- Groundwater Flow Direction
- Groundwater Chloride Contour Line
- 29.6 - Chloride Concentration in ppm

TALON LPE

Date: 06/29/2011
Scale: 1" = 60'
Drawn By: TJS

Monsanto '30' State #5
Legacy Reserves Operating, L.P.
Hobbs, Lea County, New Mexico
Figure 2b - Groundwater Gradient Map, (06/17/2011)



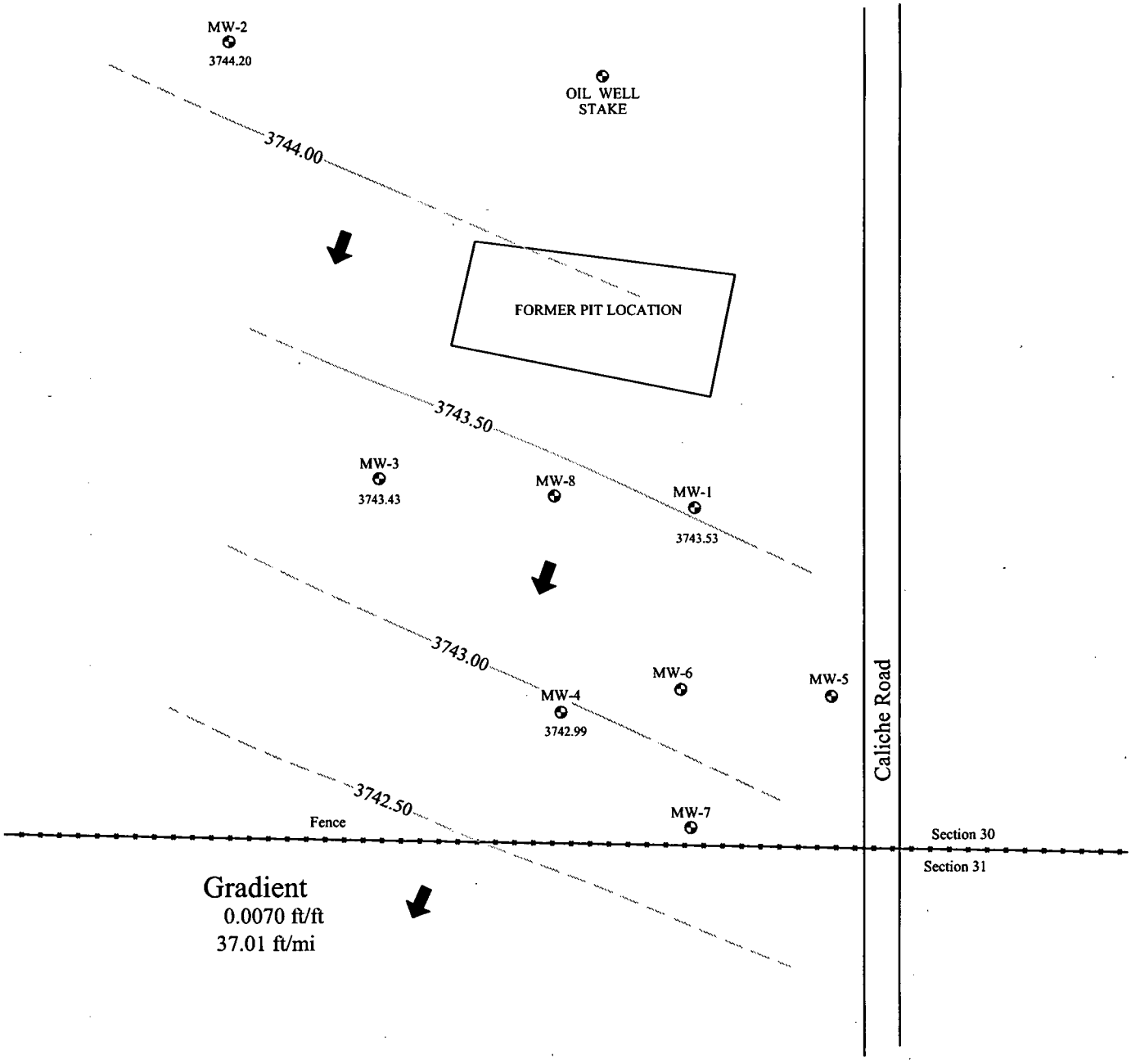
TALON LPE

Date:	10/21/2011
Scale:	1" = 60'
Drawn By:	TJS

Monsanto '30' State #5

Legacy Reserves Operating, L.P.
Hobbs, Lea County, New Mexico

Figure 2c - Groundwater Gradient Map, (09/28/2011)



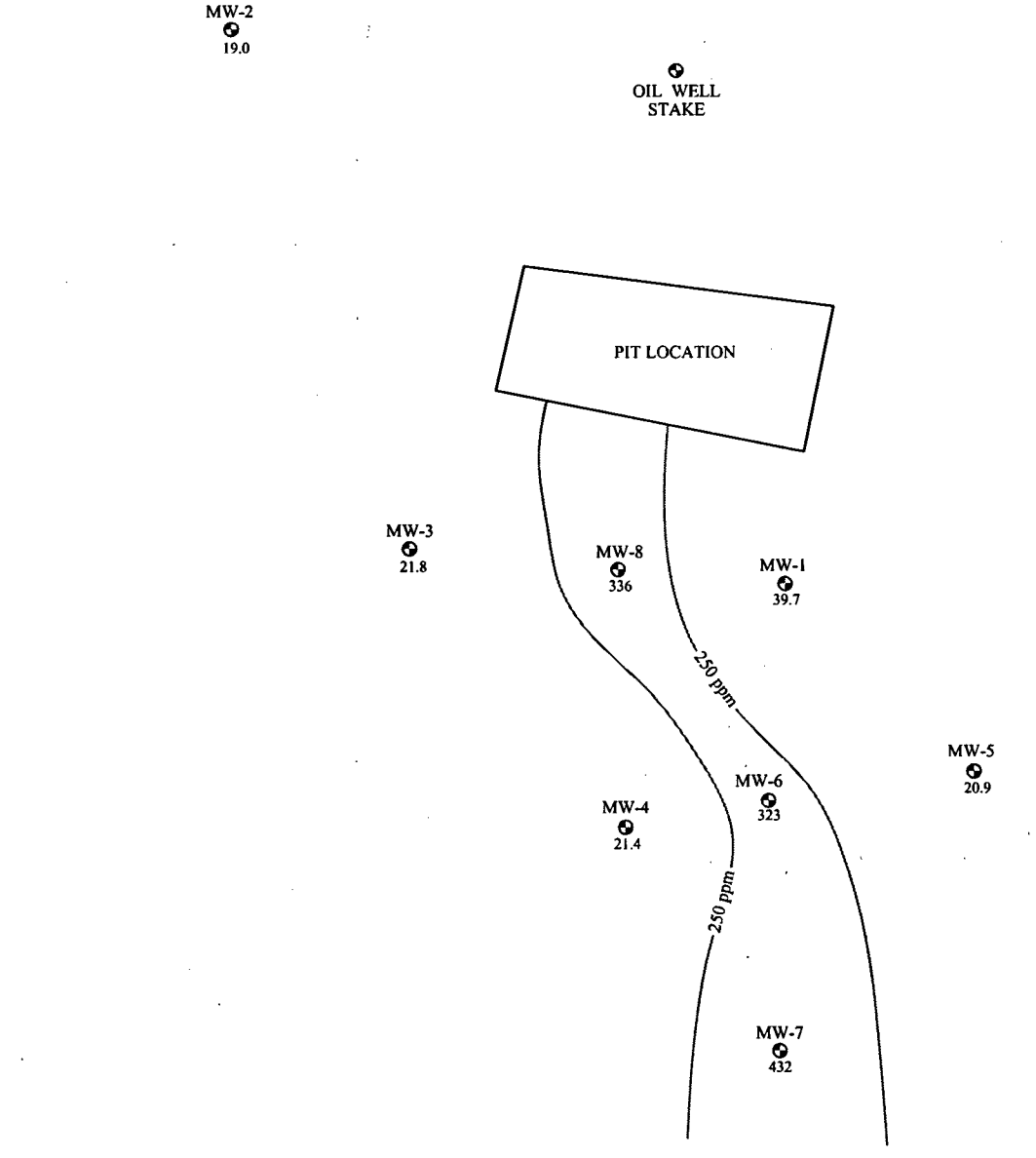
TALON LPE

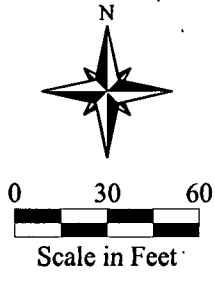
Date: 01/04/2012
Scale: 1" = 60'
Drawn By: TJS

Monsanto '30' State #5

Legacy Reserves Operating, L.P.
Hobbs, Lea County, New Mexico

Figure 2d - Groundwater Gradient Map, (12/21/2011)





Legend

- Monitor Well
- Soil Boring
- Surface Soil Samples
- Groundwater Gradient Contour Line
- *81.30* - Groundwater Gradient Contour Elevation
- Groundwater Flow Direction
- Groundwater Chloride Contour Line
- *29.6* - Chloride Concentration in ppm

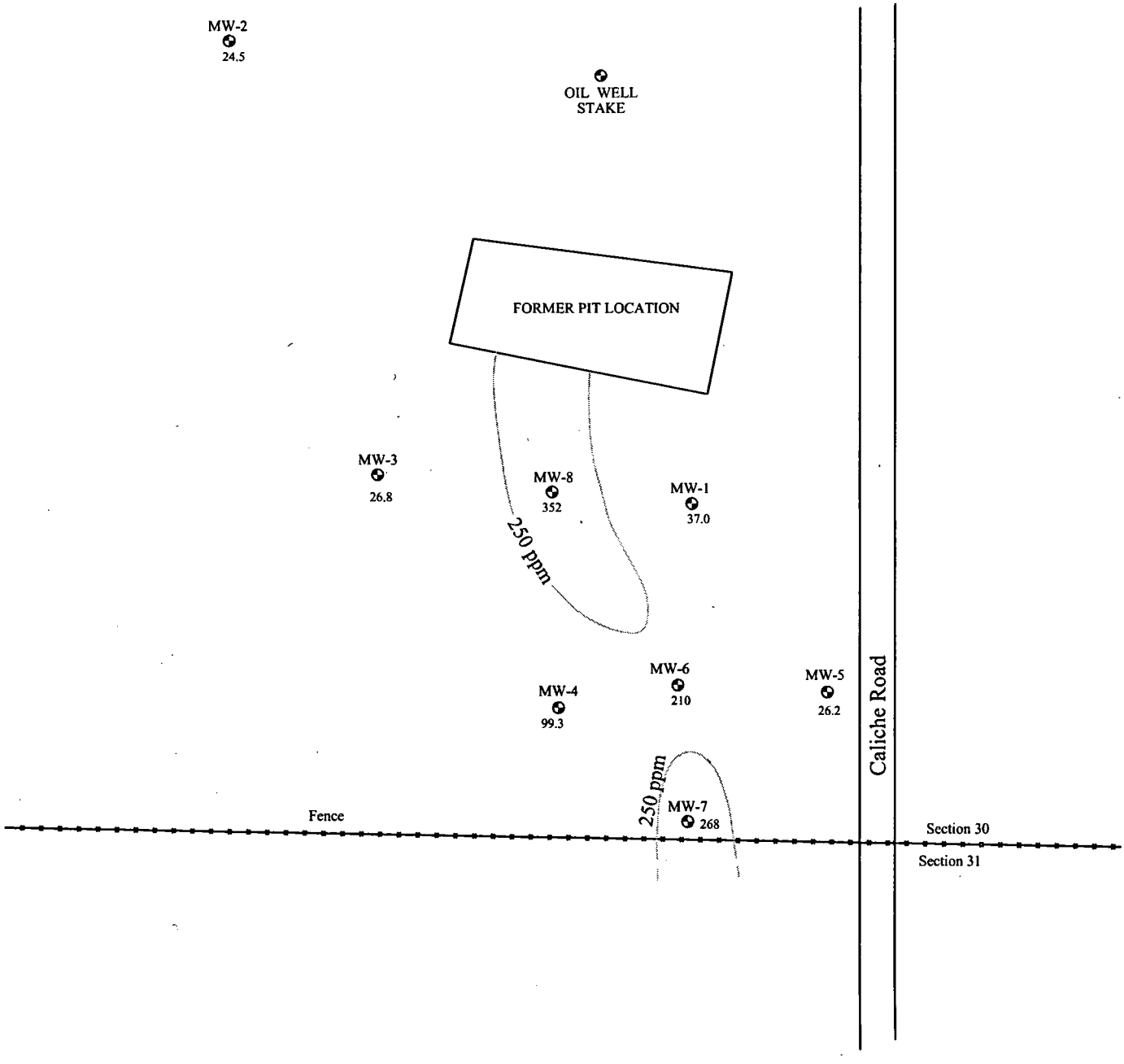
TALON LPE

Date: 03/28/2011
Scale: 1" = 60'
Drawn By: TJS

Monsanto '30' State #5

Legacy Reserves Operating, L.P.
Hobbs, Lea County, New Mexico

Figure 3a - Groundwater Chloride Distribution Map, (03/10/2011)



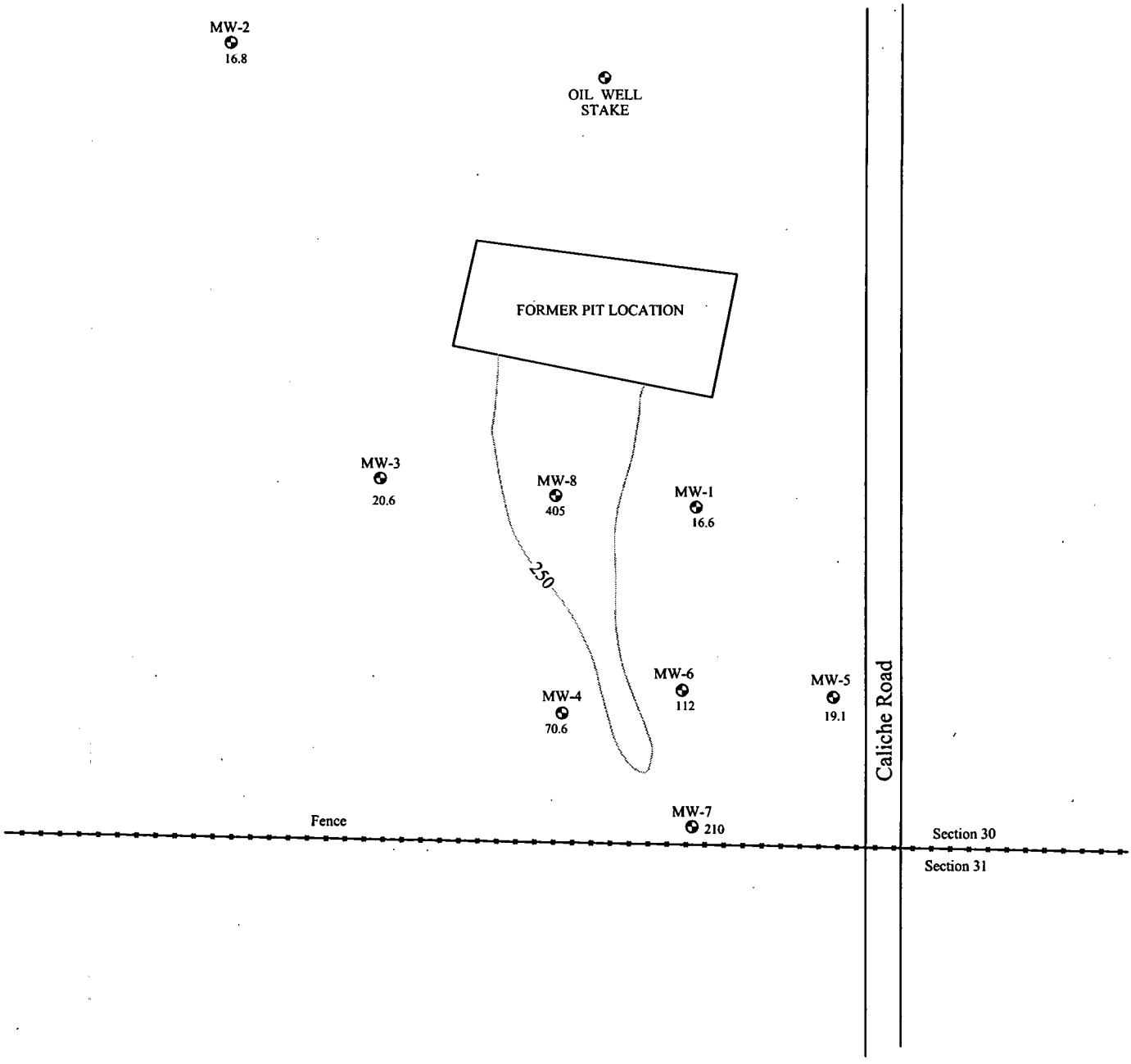
TALON LPE

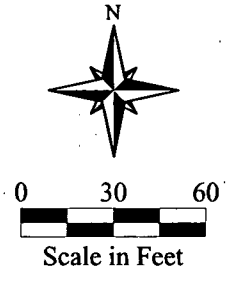
Date: 06/29/2011
Scale: 1" = 60'
Drawn By: TJS

Monsanto '30' State #5

Legacy Reserves Operating, L.P.
Hobbs, Lea County, New Mexico

Figure 3b - Groundwater Chloride Distribution Map, (06/17/2011)





Legend

- ⊙ - Monitor Well
- ◆ - Soil Boring
- △ - Surface Soil Samples
- ~ - Groundwater Gradient Contour Line
- *81.30* - Groundwater Gradient Contour Elevation
- ➡ - Groundwater Flow Direction
- ~ - Groundwater Chloride Contour Line
- *29.6* - Chloride Concentration in ppm

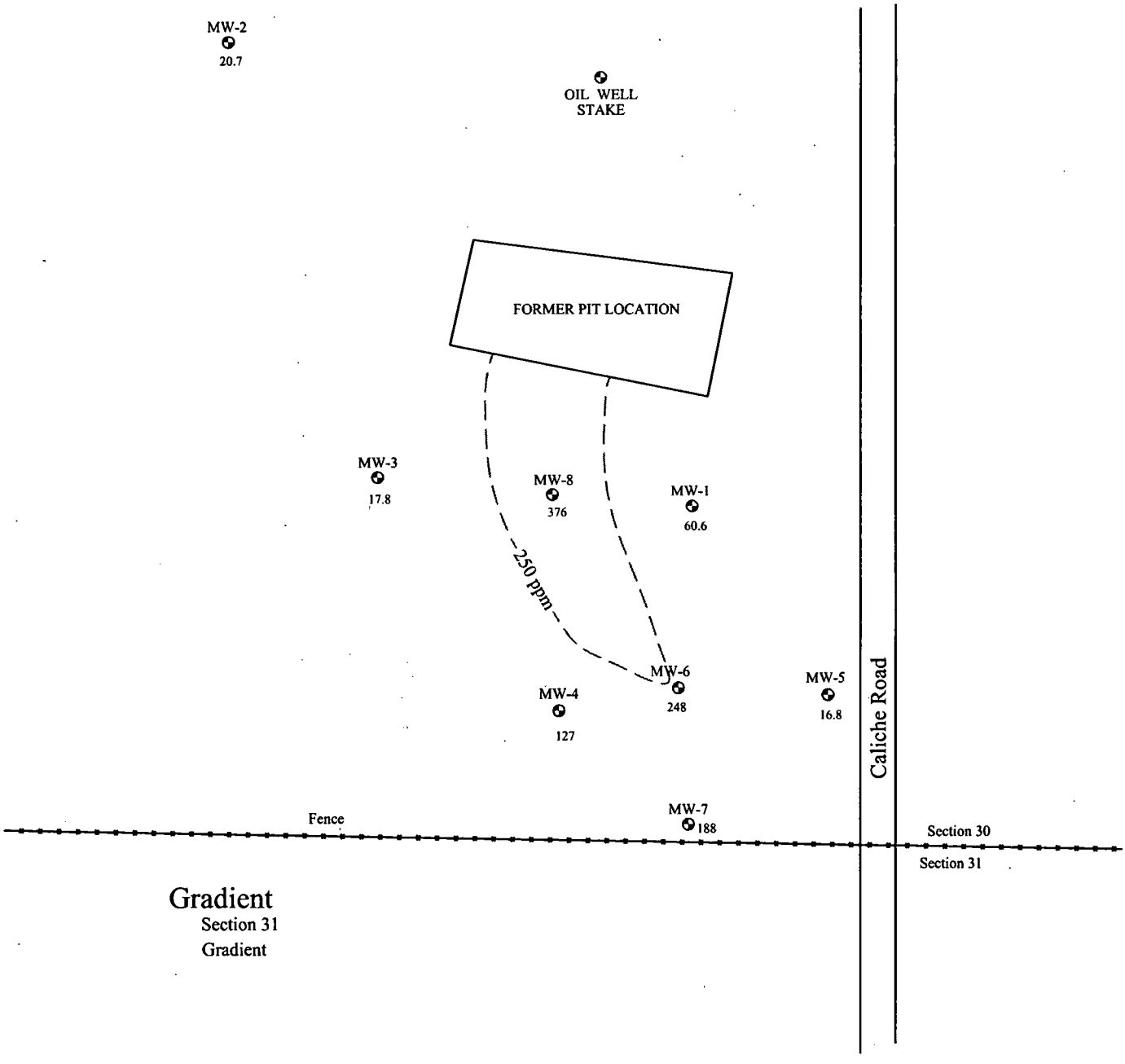
TALON LPE

Date: 10/21/2011
Scale: 1" = 60'
Drawn By: TJS

Monsanto '30' State #5

Legacy Reserves Operating, L.P.
Hobbs, Lea County, New Mexico

Figure 3c - Groundwater Chloride Distribution Map, (09/28/2011)



TALON LPE

Date: 01/04/2012
Scale: 1" = 60'
Drawn By: TJS

Monsanto '30' State #5

Legacy Reserves Operating, L.P.
Hobbs, Lea County, New Mexico

Figure 3d - Groundwater Chloride Distribution Map, (12/21/2011)

Appendix B

Tables

Table 1 - Summary of Historical Fluid Level Measurements
Table 2 - Summary of Chloride and TDS Groundwater Analytical Data

TABLE 1
SUMMARY OF FLUID LEVEL MEASUREMENTS
LEGACY RESERVES OPERATING, L.P.
MONSANTO '30' STATE #5
NMOCD REF. # 1R-0777
LEA COUNTY, NEW MEXICO
TALON/LPE PROJECT NUMBER 701047.015.01

Monitor Well	Date Gauged	Relative Top of Casing Elevation (ft amsl)	Depth to Water Below Top of Casing (ft btoc)	Groundwater Elevation (ft amsl)
MW-1	03/31/10	3,841.40	95.59	3,745.81
MW-1	06/09/10		95.82	3,745.58
MW-1	09/16/10		97.03	3,744.37
MW-1	03/10/11		96.18	3,745.22
MW-1	06/17/11		96.90	3,744.50
MW-1	09/28/11		97.67	3,743.73
MW-1	12/21/11		97.87	3,743.53
MW-2	03/31/10	3,843.42	96.84	3,746.58
MW-2	06/09/10		97.04	3,746.38
MW-2	09/16/10		98.38	3,745.04
MW-2	03/10/11		97.60	3,745.82
MW-2	06/17/11		98.20	3,745.22
MW-2	09/28/11		98.99	3,744.43
MW-2	12/21/11		99.22	3,744.20
MW-3	03/31/10	3,841.18	95.40	3,745.78
MW-3	06/09/10		95.66	3,745.52
MW-3	09/16/10		96.89	3,744.29
MW-3	03/10/11		96.06	3,745.12
MW-3	06/17/11		96.73	3,744.45
MW-3	09/28/11		97.52	3,743.66
MW-3	12/21/11		97.75	3,743.43
MW-4	03/31/10	3,838.97	93.64	3,745.33
MW-4	06/09/10		93.91	3,745.06
MW-4	09/16/10		95.13	3,743.84
MW-4	03/10/11		94.23	3,744.74
MW-4	06/17/11		94.94	3,744.03
MW-4	09/28/11		95.77	3,743.20
MW-4	12/21/11		95.98	3,742.99

TALON LPE

TABLE 1
SUMMARY OF FLUID LEVEL MEASUREMENTS
LEGACY RESERVES OPERATING, L.P.
MONSANTO '30' STATE #5
NMOCD REF. # 1R-0777
LEA COUNTY, NEW MEXICO
TALON/LPE PROJECT NUMBER 701047.015.01

Monitor Well	Date Gauged	Relative Top of Casing Elevation (ft amsl)	Depth to Water Below Top of Casing (ft btoc)	Groundwater Elevation (ft amsl)
MW-5	03/31/10	NM	95.54	
MW-5	06/09/10		95.76	
MW-5	09/16/10		96.98	
MW-5	03/10/11		96.06	
MW-5	06/17/11		96.80	
MW-5	09/28/11		97.59	
MW-5	12/21/11		97.76	
MW-6	03/31/10	NM	94.57	
MW-6	06/09/10		94.78	
MW-6	09/16/10		95.30	
MW-6	03/10/11		95.12	
MW-6	06/17/11		95.88	
MW-6	09/28/11		96.69	
MW-6	12/21/11		96.88	
MW-7	03/31/10	NM	94.11	
MW-7	06/09/10		94.37	
MW-7	09/16/10		94.75	
MW-7	03/10/11		94.64	
MW-7	06/17/11		95.42	
MW-7	09/28/11		96.26	
MW-7	12/21/11		96.42	
MW-8	03/31/10	NM	95.19	
MW-8	06/09/10		95.40	
MW-8	09/16/10		96.70	
MW-8	03/10/11		95.84	
MW-8	06/17/11		96.53	
MW-8	09/28/11		97.32	
MW-8	12/21/11		97.54	

amsl = above mean sea level
btoc = below top of casing

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TABLE 2
GROUNDWATER ANALYTICAL RESULTS
LEGACY RESERVES OPERATING, L.P.
MONSANTO '30' STATE #5
NMOCD REF. # 1R-0777
LEA COUNTY, NEW MEXICO
Talon/LPE Project Number 701047.015.01

All concentrations are in mg/L

Sample Location	Sample Date	Chloride	TDS
MW-1	03/31/10	**681**	**1,110**
MW-1	06/09/10	**506**	**11,210**
MW-1	09/16/10	110	566
MW-1	03/11/10	39.7	412
MW-1	06/17/11	37.0	387
MW-1	09/28/11	16.6	385
MW-1	12/21/11	60.6	431
MW-2	03/31/10	21.4	393
MW-2	06/09/10	21.5	379
MW-2	09/16/10	17.1	377
MW-2	03/11/11	19.0	419
MW-2	06/17/11	24.5	387
MW-2	09/28/11	16.8	**1,320**
MW-2	12/21/11	20.7	421
MW-3	03/31/10	20.7	398
MW-3	06/09/10	23.5	372
MW-3	09/16/10	21.8	356
MW-3	03/11/11	21.8	400
MW-3	06/17/11	26.8	382
MW-3	09/28/11	20.6	402
MW-3	12/21/11	17.8	343
MW-4	03/31/10	23.2	348
MW-4	06/09/10	23.2	393
MW-4	09/16/10	18.1	352
MW-4	03/11/11	21.4	399
MW-4	06/17/11	99.3	486
MW-4	09/28/11	70.6	440
MW-4	12/21/11	127.0	595

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
LEGACY RESERVES OPERATING, L.P.
MONSANTO '30' STATE #5
NMOCD REF. # 1R-0777
LEA COUNTY, NEW MEXICO
Talon/LPE Project Number 701047.015.01

All concentrations are in mg/L

Sample Location	Sample Date	Chloride	TDS
MW-5	03/31/10	21.1	390
MW-5	06/09/10	23.8	412
MW-5	09/16/10	19.0	347
MW-5	03/11/11	20.9	433
MW-5	06/17/11	26.2	389
MW-5	09/28/11	19.1	350
MW-5	12/21/11	16.8	125
MW-6	03/31/10	**377**	922
MW-6	06/09/10	**457**	**1,020**
MW-6	09/16/10	**289**	934
MW-6	03/11/11	**323**	1,000
MW-6	06/17/11	210	678
MW-6	09/28/11	112	561
MW-6	12/21/11	248	654
MW-7	03/31/10	**418**	940
MW-7	06/09/10	**443**	**1,050**
MW-7	09/16/10	**300**	944
MW-7	03/11/11	**432**	**1,030**
MW-7	06/17/11	**268**	770
MW-7	09/28/11	210	566
MW-7	12/21/11	188	652
MW-8	03/31/10	**478**	892
MW-8	06/09/10	**479**	**1,010**
MW-8	09/16/10	**524**	**1,640**
MW-8	03/11/11	**336**	828
MW-8	06/17/11	**352**	804
MW-8	09/28/11	**405**	**1,356**
MW-8	12/21/11	**376**	**1,102**
NMWQCC Remedial Limits		250	1,000

***Bolded** values are in excess of the NMWQCC Remediation Thresholds*

Appendix C

Laboratory Analytical Data Reports and Chain of Custody Documentation

Summary Report

Steve Killingsworth
Talon LPE-Midland
2901 State Highway 349
Midland, TX 79706

Report Date: March 22, 2011

Work Order: 11031131

Project Location: Hobbs, NM
Project Name: Monsanto #5
Project Number: 701047.015.01

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
260348	MW-1	water	2011-03-11	11:24	2011-03-11
260349	MW-2	water	2011-03-11	11:29	2011-03-11
260350	MW-3	water	2011-03-11	11:37	2011-03-11
260351	MW-4	water	2011-03-11	11:49	2011-03-11
260352	MW-5	water	2011-03-11	11:40	2011-03-11
260353	MW-6	water	2011-03-11	11:52	2011-03-11
260354	MW-7	water	2011-03-11	11:59	2011-03-11
260355	MW-8	water	2011-03-11	11:50	2011-03-11

Sample: 260348 - MW-1

Param	Flag	Result	Units	RL
Chloride		**39.7**	mg/L	2.50
Total Dissolved Solids		**412**	mg/L	10.0

Sample: 260349 - MW-2

Param	Flag	Result	Units	RL
Chloride		**19.0**	mg/L	2.50
Total Dissolved Solids		**419**	mg/L	10.0

Sample: 260350 - MW-3

Param	Flag	Result	Units	RL
Chloride		**21.8**	mg/L	2.50
Total Dissolved Solids		**400**	mg/L	10.0

Sample: 260351 - MW-4

Param	Flag	Result	Units	RL
Chloride		**21.4**	mg/L	2.50
Total Dissolved Solids		**399**	mg/L	10.0

Sample: 260352 - MW-5

Param	Flag	Result	Units	RL
Chloride		**20.9**	mg/L	2.50
Total Dissolved Solids		**433**	mg/L	10.0

Sample: 260353 - MW-6

Param	Flag	Result	Units	RL
Chloride		**323**	mg/L	2.50
Total Dissolved Solids		**1000**	mg/L	10.0

Sample: 260354 - MW-7

Param	Flag	Result	Units	RL
Chloride		**432**	mg/L	2.50
Total Dissolved Solids		**1030**	mg/L	10.0

Sample: 260355 - MW-8

Param	Flag	Result	Units	RL
Chloride		**336**	mg/L	2.50
Total Dissolved Solids		**828**	mg/L	10.0

Summary Report

Steve Killingsworth
Talon LPE-Midland
2901 State Highway 349
Midland, TX 79706

Report Date: March 22, 2011

Work Order: 11031131

Project Location: Hobbs, NM
Project Name: Monsanto #5
Project Number: 701047.015.01

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
260348	MW-1	water	2011-03-11	11:24	2011-03-11
260349	MW-2	water	2011-03-11	11:29	2011-03-11
260350	MW-3	water	2011-03-11	11:37	2011-03-11
260351	MW-4	water	2011-03-11	11:49	2011-03-11
260352	MW-5	water	2011-03-11	11:40	2011-03-11
260353	MW-6	water	2011-03-11	11:52	2011-03-11
260354	MW-7	water	2011-03-11	11:59	2011-03-11
260355	MW-8	water	2011-03-11	11:50	2011-03-11

Sample: 260348 - MW-1

Param	Flag	Result	Units	RL
Chloride		**39.7**	mg/L	2.50
Total Dissolved Solids		**412**	mg/L	10.0

Sample: 260349 - MW-2

Param	Flag	Result	Units	RL
Chloride		**19.0**	mg/L	2.50
Total Dissolved Solids		**419**	mg/L	10.0

Sample: 260350 - MW-3

Param	Flag	Result	Units	RL
Chloride		**21.8**	mg/L	2.50
Total Dissolved Solids		**400**	mg/L	10.0

Sample: 260351 - MW-4

Param	Flag	Result	Units	RL
Chloride		**21.4**	mg/L	2.50
Total Dissolved Solids		**399**	mg/L	10.0

Sample: 260352 - MW-5

Param	Flag	Result	Units	RL
Chloride		**20.9**	mg/L	2.50
Total Dissolved Solids		**433**	mg/L	10.0

Sample: 260353 - MW-6

Param	Flag	Result	Units	RL
Chloride		**323**	mg/L	2.50
Total Dissolved Solids		**1000**	mg/L	10.0

Sample: 260354 - MW-7

Param	Flag	Result	Units	RL
Chloride		**432**	mg/L	2.50
Total Dissolved Solids		**1030**	mg/L	10.0

Sample: 260355 - MW-8

Param	Flag	Result	Units	RL
Chloride		**336**	mg/L	2.50
Total Dissolved Solids		**828**	mg/L	10.0

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•589•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Steve Killingsworth
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: June 24, 2011

Work Order: 11062005

Project Location: Hobbs, NM
Project Name: Monsanto #5
Project Number: 701047.015.01

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
269883	MW-1	water	2011-06-17	11:42	2011-06-17
269884	MW-2	water	2011-06-17	11:50	2011-06-17
269885	MW-3	water	2011-06-17	11:35	2011-06-17
269886	MW-4	water	2011-06-17	10:58	2011-06-17
269887	MW-5	water	2011-06-17	11:14	2011-06-17
269888	MW-6	water	2011-06-17	11:29	2011-06-17
269889	MW-7	water	2011-06-17	11:20	2011-06-17
269890	MW-8	water	2011-06-17	11:05	2011-06-17

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Michael Abel

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Monsanto #5 were received by TraceAnalysis, Inc. on 2011-06-17 and assigned to work order 11062005. Samples for work order 11062005 were received intact at a temperature of 0.4 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (IC)	E 300.0	69948	2011-06-20 at 09:43	82374	2011-06-20 at 20:44
TDS	SM 2540C	69963	2011-06-21 at 13:26	82469	2011-06-23 at 15:00

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11062005 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 269883 - MW-1

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**37.0**	mg/L	5	2.50

Sample: 269883 - MW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**387**	mg/L	1	10.0

Sample: 269884 - MW-2

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**24.5**	mg/L	5	2.50

Sample: 269884 - MW-2

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**387**	mg/L	1	10.0

Sample: 269885 - MW-3

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**26.8**	mg/L	5	2.50

Sample: 269885 - MW-3

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**382**	mg/L	1	10.0

Sample: 269886 - MW-4

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**99.3**	mg/L	5	2.50

Sample: 269886 - MW-4

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**486**	mg/L	1	10.0

Sample: 269887 - MW-5

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**26.2**	mg/L	5	2.50

Sample: 269887 - MW-5

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**389**	mg/L	1	10.0

Sample: 269888 - MW-6

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**210**	mg/L	10	2.50

Sample: 269888 - MW-6

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**678**	mg/L	2	10.0

Sample: 269889 - MW-7

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**268**	mg/L	10	2.50

Sample: 269889 - MW-7

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

continued ...

sample 269889 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**770**	mg/L	2	10.0

Sample: 269890 - MW-8

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**352**	mg/L	10	2.50

Sample: 269890 - MW-8

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**804**	mg/L	2	10.0

Method Blanks

Method Blank (1) QC Batch: 82374

QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	QC Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	1.02	mg/L	2.5

Method Blank (1) QC Batch: 82469

QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	QC Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Total Dissolved Solids		1	<9.75	mg/L	10

Duplicates (1) Duplicated Sample: 269890

QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	QC Preparation:	2011-06-21	Prepared By:	AR

Param		Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1	844	804	mg/L	2	5	10

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 82374 | Date Analyzed: 2011-06-20 | Analyzed By: AR
Prep Batch: 69948 | QC Preparation: 2011-06-20 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	26.1	mg/L	1	25.0	<0.265	104	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	26.6	mg/L	1	25.0	<0.265	106	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 82469 | Date Analyzed: 2011-06-23 | Analyzed By: AR
Prep Batch: 69963 | QC Preparation: 2011-06-21 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids		1	1020	mg/L	1	1000	<9.75	102	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	989	mg/L	1	1000	<9.75	99	90 - 110	3	10

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 269890

QC Batch: 82374 | Date Analyzed: 2011-06-20 | Analyzed By: AR
Prep Batch: 69948 | QC Preparation: 2011-06-20 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	644	mg/L	10	275	352	106	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	649	mg/L	10	275	352	108	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Calibration Standards

Standard (ICV-1)

QC Batch: 82374 | Date Analyzed: 2011-06-20 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	26.9	108	90 - 110	2011-06-20

Standard (CCV-1)

QC Batch: 82374 | Date Analyzed: 2011-06-20 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	25.9	104	90 - 110	2011-06-20

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 11062005

Page _____ of _____

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name: Talon LPE

Phone #:

Address: (Street, City, Zip) 2901 Hwy 349, Midland, 79701

Fax #:

Contact Person: Steve Killingsworth

E-mail: skillingsworth@talonlpe.com

Invoice to: (If different from above)

Project #: 701047.015.01

Project Name: Monsanto #5

Project Location (including state): Hobbs, NM

Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, Fl, S04, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
269883	MW-1	1	500ml	X								X		6/17/11	1142																	X							
884	MW-2														1150																								
885	MW-3														1135																								
886	MW-4														1058																								
887	MW-5														1114																								
888	MW-6														1129																								
889	MW-7														1120																								
890	MW-8														1105																								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	Talon LPE	6/17/11	1640		T/A	6/17/11	16:45	INST ____ OBS -0.4 °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ OBS ____ °C COR ____ °C

LAB USE ONLY

Intact Y / N

Headspace Y / N / NA

Log-In-Review

REMARKS:

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # _____

ORIGINAL COPY

Summary Report

Steve Killingsworth
Talon LPE-Midland
2901 State Highway 349
Midland, TX 79706

Report Date: June 24, 2011

Work Order: 11062005

Project Location: Hobbs, NM
Project Name: Monsanto #5
Project Number: 701047.015.01

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
269883	MW-1	water	2011-06-17	11:42	2011-06-17
269884	MW-2	water	2011-06-17	11:50	2011-06-17
269885	MW-3	water	2011-06-17	11:35	2011-06-17
269886	MW-4	water	2011-06-17	10:58	2011-06-17
269887	MW-5	water	2011-06-17	11:14	2011-06-17
269888	MW-6	water	2011-06-17	11:29	2011-06-17
269889	MW-7	water	2011-06-17	11:20	2011-06-17
269890	MW-8	water	2011-06-17	11:05	2011-06-17

Sample: 269883 - MW-1

Param	Flag	Result	Units	RL
Chloride		**37.0**	mg/L	2.5
Total Dissolved Solids		**387**	mg/L	10

Sample: 269884 - MW-2

Param	Flag	Result	Units	RL
Chloride		**24.5**	mg/L	2.5
Total Dissolved Solids		**387**	mg/L	10

Sample: 269885 - MW-3

Param	Flag	Result	Units	RL
Chloride		**26.8**	mg/L	2.5
Total Dissolved Solids		**382**	mg/L	10

Sample: 269886 - MW-4

Param	Flag	Result	Units	RL
Chloride		**99.3**	mg/L	2.5
Total Dissolved Solids		**486**	mg/L	10

Sample: 269887 - MW-5

Param	Flag	Result	Units	RL
Chloride		**26.2**	mg/L	2.5
Total Dissolved Solids		**389**	mg/L	10

Sample: 269888 - MW-6

Param	Flag	Result	Units	RL
Chloride		**210**	mg/L	2.5
Total Dissolved Solids		**678**	mg/L	10

Sample: 269889 - MW-7

Param	Flag	Result	Units	RL
Chloride		**268**	mg/L	2.5
Total Dissolved Solids		**770**	mg/L	10

Sample: 269890 - MW-8

Param	Flag	Result	Units	RL
Chloride		**352**	mg/L	2.5
Total Dissolved Solids		**804**	mg/L	10

TRACEANALYSIS, INC.
6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Steve Killingsworth
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: June 24, 2011

Work Order: 11062005

Project Location: Hobbs, NM
Project Name: Monsanto #5
Project Number: 701047.015.01

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
269883	MW-1	water	2011-06-17	11:42	2011-06-17
269884	MW-2	water	2011-06-17	11:50	2011-06-17
269885	MW-3	water	2011-06-17	11:35	2011-06-17
269886	MW-4	water	2011-06-17	10:58	2011-06-17
269887	MW-5	water	2011-06-17	11:14	2011-06-17
269888	MW-6	water	2011-06-17	11:29	2011-06-17
269889	MW-7	water	2011-06-17	11:20	2011-06-17
269890	MW-8	water	2011-06-17	11:05	2011-06-17

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Michael Abel

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Monsanto #5 were received by TraceAnalysis, Inc. on 2011-06-17 and assigned to work order 11062005. Samples for work order 11062005 were received intact at a temperature of 0.4 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (IC)	E 300.0	69948	2011-06-20 at 09:43	82374	2011-06-20 at 20:44
TDS	SM 2540C	69963	2011-06-21 at 13:26	82469	2011-06-23 at 15:00

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11062005 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 269883 - MW-1

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**37.0**	mg/L	5	2.50

Sample: 269883 - MW-1

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**387**	mg/L	1	10.0

Sample: 269884 - MW-2

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**24.5**	mg/L	5	2.50

Sample: 269884 - MW-2

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**387**	mg/L	1	10.0

Sample: 269885 - MW-3

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**26.8**	mg/L	5	2.50

Sample: 269885 - MW-3

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**382**	mg/L	1	10.0

Sample: 269886 - MW-4

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**99.3**	mg/L	5	2.50

Sample: 269886 - MW-4

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**486**	mg/L	1	10.0

Sample: 269887 - MW-5

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**26.2**	mg/L	5	2.50

Sample: 269887 - MW-5

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**389**	mg/L	1	10.0

Sample: 269888 - MW-6

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**210**	mg/L	10	2.50

Sample: 269888 - MW-6

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**678**	mg/L	2	10.0

Sample: 269889 - MW-7

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**268**	mg/L	10	2.50

Sample: 269889 - MW-7

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

continued ...

sample 269889 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**770**	mg/L	2	10.0

Sample: 269890 - MW-8

Laboratory:	Midland				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	82374	Date Analyzed:	2011-06-20	Analyzed By:	AR
Prep Batch:	69948	Sample Preparation:	2011-06-20	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**352**	mg/L	10	2.50

Sample: 269890 - MW-8

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	82469	Date Analyzed:	2011-06-23	Analyzed By:	AR
Prep Batch:	69963	Sample Preparation:	2011-06-21	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**804**	mg/L	2	10.0

Method Blanks

Method Blank (1) QC Batch: 82374

QC Batch: 82374 | Date Analyzed: 2011-06-20 | Analyzed By: AR
Prep Batch: 69948 | QC Preparation: 2011-06-20 | Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	1.02	mg/L	2.5

Method Blank (1) QC Batch: 82469

QC Batch: 82469 | Date Analyzed: 2011-06-23 | Analyzed By: AR
Prep Batch: 69963 | QC Preparation: 2011-06-21 | Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Total Dissolved Solids		1	<9.75	mg/L	10

Duplicates (1) Duplicated Sample: 269890

QC Batch: 82469 | Date Analyzed: 2011-06-23 | Analyzed By: AR
Prep Batch: 69963 | QC Preparation: 2011-06-21 | Prepared By: AR

Param		Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1	844	804	mg/L	2	5	10

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 82374 | Date Analyzed: 2011-06-20 | Analyzed By: AR
Prep Batch: 69948 | QC Preparation: 2011-06-20 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	26.1	mg/L	1	25.0	<0.265	104	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	26.6	mg/L	1	25.0	<0.265	106	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 82469 | Date Analyzed: 2011-06-23 | Analyzed By: AR
Prep Batch: 69963 | QC Preparation: 2011-06-21 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids		1	1020	mg/L	1	1000	<9.75	102	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	989	mg/L	1	1000	<9.75	99	90 - 110	3	10

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 269890

QC Batch: 82374 | Date Analyzed: 2011-06-20 | Analyzed By: AR
Prep Batch: 69948 | QC Preparation: 2011-06-20 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	644	mg/L	10	275	352	106	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	649	mg/L	10	275	352	108	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Calibration Standards

Standard (ICV-1)

QC Batch: 82374 | Date Analyzed: 2011-06-20 | Analyzed By: AR

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	26.9	108	90 - 110	2011-06-20

Standard (CCV-1)

QC Batch: 82374 | Date Analyzed: 2011-06-20 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	25.9	104	90 - 110	2011-06-20

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-10-TX	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 11062005

Page _____ of _____

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name: Talon LPE

Phone #:

Address: (Street, City, Zip) 2901 Hwy 349, Midland, 79701

Fax #:

Contact Person: Steve Killingsworth

E-mail: skillingsworth@talonlpe.com

Invoice to: (If different from above)

Project #: 701047.015.01

Project Name: Monsanto #5

Project Location (including state): Hobbs, NM

Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
269883	MW-1	1	500ml	X								X		6/17/11	1142
884	MW-2														1150
885	MW-3														1135
886	MW-4														1058
887	MW-5														1114
888	MW-6														1129
889	MW-7														1120
890	MW-8														1105

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, Fl, S04, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC						Turn Around Time if different from standard	Hold
																	X								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	Talon LPE	6/17/11	1640		T/A	6/17/11	16:45	INST ____ OBS -0.4 °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ OBS ____ °C COR ____ °C

LAB USE ONLY

Intact Y / N

Headspace Y / N / NA

Log-in-Review

REMARKS:

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # _____

ORIGINAL COPY

Summary Report

Steve Killingsworth
Talon LPE-Midland
2901 State Highway 349
Midland, TX 79706

Report Date: October 5, 2011

Work Order: 11092902

Project Location: Hobbs, NM
Project Name: Monsanto #5
Project Number: 701047.015.01

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
278551	MW-1	water	2011-09-28	11:15	2011-09-28
278552	MW-2	water	2011-09-28	11:30	2011-09-28
278553	MW-3	water	2011-09-28	11:35	2011-09-28
278554	MW-4	water	2011-09-28	11:40	2011-09-28
278555	MW-5	water	2011-09-28	12:00	2011-09-28
278556	MW-6	water	2011-09-28	12:10	2011-09-28
278557	MW-7	water	2011-09-28	12:20	2011-09-28
278558	MW-8	water	2011-09-28	12:30	2011-09-28

Sample: 278551 - MW-1

Param	Flag	Result	Units	RL
Chloride	Qs	**16.6**	mg/L	2.5
Total Dissolved Solids		**385.0**	mg/L	10

Sample: 278552 - MW-2

Param	Flag	Result	Units	RL
Chloride	Qs	**16.8**	mg/L	2.5
Total Dissolved Solids		**1320**	mg/L	10

Sample: 278553 - MW-3

Param	Flag	Result	Units	RL
Chloride	Qs	**20.6**	mg/L	2.5
Total Dissolved Solids		**402.0**	mg/L	10

Sample: 278554 - MW-4

Param	Flag	Result	Units	RL
Chloride	Qs	**70.6**	mg/L	2.5
Total Dissolved Solids		**449.0**	mg/L	10

Sample: 278555 - MW-5

Param	Flag	Result	Units	RL
Chloride	Qs	**19.1**	mg/L	2.5
Total Dissolved Solids		**350.0**	mg/L	10

Sample: 278556 - MW-6

Param	Flag	Result	Units	RL
Chloride	Qs	**112**	mg/L	2.5
Total Dissolved Solids		**561.0**	mg/L	10

Sample: 278557 - MW-7

Param	Flag	Result	Units	RL
Chloride	Qs	**210**	mg/L	2.5
Total Dissolved Solids		**566.0**	mg/L	10

Sample: 278558 - MW-8

Param	Flag	Result	Units	RL
Chloride	Qs	**405**	mg/L	2.5
Total Dissolved Solids		**1356**	mg/L	10

TRACEANALYSIS, INC.
6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
5015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Steve Killingsworth
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: October 5, 2011

Work Order: 11092902

Project Location: Hobbs, NM
Project Name: Monsanto #5
Project Number: 701047.015.01

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
278551	MW-1	water	2011-09-28	11:15	2011-09-28
278552	MW-2	water	2011-09-28	11:30	2011-09-28
278553	MW-3	water	2011-09-28	11:35	2011-09-28
278554	MW-4	water	2011-09-28	11:40	2011-09-28
278555	MW-5	water	2011-09-28	12:00	2011-09-28
278556	MW-6	water	2011-09-28	12:10	2011-09-28
278557	MW-7	water	2011-09-28	12:20	2011-09-28
278558	MW-8	water	2011-09-28	12:30	2011-09-28

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Michael Abel

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Monsanto #5 were received by TraceAnalysis, Inc. on 2011-09-28 and assigned to work order 11092902. Samples for work order 11092902 were received intact at a temperature of 5.0 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (IC)	E 300.0	72344	2011-10-03 at 11:42	85209	2011-10-03 at 11:48
Chloride (IC)	E 300.0	72403	2011-10-05 at 10:29	85286	2011-10-05 at 10:42
TDS	SM 2540C	72341	2011-10-03 at 11:11	85206	2011-10-03 at 11:13

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11092902 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 278551 - MW-1

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	85209	Date Analyzed:	2011-10-03	Analyzed By:	CR
Prep Batch:	72344	Sample Preparation:	2011-09-30	Prepared By:	CR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	1	**16.6**	mg/L	6	2.50

Sample: 278551 - MW-1

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	85206	Date Analyzed:	2011-10-03	Analyzed By:	RL
Prep Batch:	72341	Sample Preparation:	2011-09-30	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**385.0**	mg/L	1	10.00

Sample: 278552 - MW-2

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	85286	Date Analyzed:	2011-10-05	Analyzed By:	CR
Prep Batch:	72403	Sample Preparation:	2011-10-04	Prepared By:	CR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	1	**16.8**	mg/L	5	2.50

Sample: 278552 - MW-2

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	85206	Date Analyzed:	2011-10-03	Analyzed By:	RL
Prep Batch:	72341	Sample Preparation:	2011-09-30	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**1320**	mg/L	20	10.00

Sample: 278553 - MW-3

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	85209	Date Analyzed:	2011-10-03	Analyzed By:	CR
Prep Batch:	72344	Sample Preparation:	2011-09-30	Prepared By:	CR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	1	**20.6**	mg/L	6	2.50

Sample: 278553 - MW-3

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	85206	Date Analyzed:	2011-10-03	Analyzed By:	RL
Prep Batch:	72341	Sample Preparation:	2011-09-30	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**402.0**	mg/L	1	10.00

Sample: 278554 - MW-4

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	85209	Date Analyzed:	2011-10-03	Analyzed By:	CR
Prep Batch:	72344	Sample Preparation:	2011-09-30	Prepared By:	CR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Qs	1	**70.6**	mg/L	5	2.50

Sample: 278554 - MW-4

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	85206	Date Analyzed:	2011-10-03	Analyzed By:	RL
Prep Batch:	72341	Sample Preparation:	2011-09-30	Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**449.0**	mg/L	1	10.00

Sample: 278555 - MW-5

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	85209	Date Analyzed:	2011-10-03	Analyzed By:	CR
Prep Batch:	72344	Sample Preparation:	2011-09-30	Prepared By:	CR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Qs	1	**19.1**	mg/L	6	2.50

Sample: 278555 - MW-5

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	85206	Date Analyzed:	2011-10-03	Analyzed By:	RL
Prep Batch:	72341	Sample Preparation:	2011-09-30	Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**350.0**	mg/L	1	10.00

Sample: 278556 - MW-6

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	85209	Date Analyzed:	2011-10-03	Analyzed By:	CR
Prep Batch:	72344	Sample Preparation:	2011-09-30	Prepared By:	CR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Qs	1	**112**	mg/L	6	2.50

Sample: 278556 - MW-6

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	85206	Date Analyzed:	2011-10-03	Analyzed By:	RL
Prep Batch:	72341	Sample Preparation:	2011-09-30	Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**561.0**	mg/L	1	10.00

Sample: 278557 - MW-7

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	85209	Date Analyzed:	2011-10-03	Analyzed By:	CR
Prep Batch:	72344	Sample Preparation:	2011-09-30	Prepared By:	CR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride	Qs	1	**210**	mg/L	10	2.50

Sample: 278557 - MW-7

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	85206	Date Analyzed:	2011-10-03	Analyzed By:	RL
Prep Batch:	72341	Sample Preparation:	2011-09-30	Prepared By:	RL

continued ...

sample 278557 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**566.0**	mg/L	2	10.00

Sample: 278558 - MW-8

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	85209	Date Analyzed:	2011-10-03	Analyzed By:	CR
Prep Batch:	72344	Sample Preparation:	2011-09-30	Prepared By:	CR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	1	**405**	mg/L	10	2.50

Sample: 278558 - MW-8

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	85206	Date Analyzed:	2011-10-03	Analyzed By:	RL
Prep Batch:	72341	Sample Preparation:	2011-09-30	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**1356**	mg/L	2	10.00

Method Blanks

Method Blank (1) QC Batch: 85206

QC Batch: 85206 | Date Analyzed: 2011-10-03 | Analyzed By: RL
Prep Batch: 72341 | QC Preparation: 2011-10-03 | Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Total Dissolved Solids		1	<5.000	mg/L	10

Method Blank (1) QC Batch: 85209

QC Batch: 85209 | Date Analyzed: 2011-10-03 | Analyzed By: CR
Prep Batch: 72344 | QC Preparation: 2011-10-03 | Prepared By: CR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	<0.0319	mg/L	2.5

Method Blank (1) QC Batch: 85286

QC Batch: 85286 | Date Analyzed: 2011-10-05 | Analyzed By: CR
Prep Batch: 72403 | QC Preparation: 2011-10-05 | Prepared By: CR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	0.108	mg/L	2.5

Duplicates (1) Duplicated Sample: 278558

QC Batch: 85206 | Date Analyzed: 2011-10-03 | Analyzed By: RL
Prep Batch: 72341 | QC Preparation: 2011-10-03 | Prepared By: RL

Param		Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1	1312	1356	mg/L	2	3	10

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 85206 | Date Analyzed: 2011-10-03 | Analyzed By: RL
Prep Batch: 72341 | QC Preparation: 2011-10-03 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids		1	1010	mg/L	1	1000	<5.00	101	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	1020	mg/L	1	1000	<5.00	102	90 - 110	1	10

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 85209 | Date Analyzed: 2011-10-03 | Analyzed By: CR
Prep Batch: 72344 | QC Preparation: 2011-10-03 | Prepared By: CR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	24.1	mg/L	1	25.0	<0.0319	96	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	23.8	mg/L	1	25.0	<0.0319	95	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 85286 | Date Analyzed: 2011-10-05 | Analyzed By: CR
Prep Batch: 72403 | QC Preparation: 2011-10-05 | Prepared By: CR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	23.9	mg/L	1	25.0	0.108	95	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	23.4	mg/L	1	25.0	0.108	93	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 278554

QC Batch: 85209 | Date Analyzed: 2011-10-03 | Analyzed By: CR
Prep Batch: 72344 | QC Preparation: 2011-10-03 | Prepared By: CR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Qs	1	198	mg/L	6	150	70.6	85	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Qs	1	195	mg/L	6	150	70.6	83	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-2) Spiked Sample: 278575

QC Batch: 85209 | Date Analyzed: 2011-10-03 | Analyzed By: CR
Prep Batch: 72344 | QC Preparation: 2011-10-03 | Prepared By: CR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Qs	1	148	mg/L	6	150	25	82	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Qs	1	147	mg/L	6	150	25	81	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 278694

QC Batch: 85286 | Date Analyzed: 2011-10-05 | Analyzed By: CR
Prep Batch: 72403 | QC Preparation: 2011-10-05 | Prepared By: CR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	561	mg/L	12	300	275	95	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	549	mg/L	12	300	275	91	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-2) Spiked Sample: 278887

QC Batch: 85286 | Date Analyzed: 2011-10-05 | Analyzed By: CR
Prep Batch: 72403 | QC Preparation: 2011-10-05 | Prepared By: CR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Qs	1	166	mg/L	6	150	42	83	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Qs	1	163	mg/L	6	150	42	81	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Calibration Standards

Standard (CCV-1)

QC Batch: 85209 | Date Analyzed: 2011-10-03 | Analyzed By: CR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	23.3	93	90 - 110	2011-10-03

Standard (CCV-2)

QC Batch: 85209 | Date Analyzed: 2011-10-03 | Analyzed By: CR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	26.6	106	90 - 110	2011-10-03

Standard (CCV-1)

QC Batch: 85286 | Date Analyzed: 2011-10-05 | Analyzed By: CR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	24.9	100	90 - 110	2011-10-05

Standard (CCV-2)

QC Batch: 85286 | Date Analyzed: 2011-10-05 | Analyzed By: CR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	23.4	94	90 - 110	2011-10-05

Appendix

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-11-4	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 1092902

Page 1 of 1

TraceAnalysis, Inc.

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6701 Aberdeen Avenue, Suite 9
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Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name: Talon LPE — Phone #:

Address: (Street, City, Zip) 2901 State Hwy 349 Midland TX — Fax #:

Contact Person: Steve Kellingsworth — E-mail: Sk.Kellingsworth@talonlpe.com

Invoice to: (If different from above)

Project #: 701047.015.01 — Project Name: Monsanto #5

Project Location (including state): Hobbs NM — Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
27855	MW1	1	500mL	X								X		9/28	1115
552	MW2														1130
553	MW3														1135
554	MW4														1140
555	MW5														1200
556	MW6														1210
557	MW7														1220
558	MW8														1230

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC			Turn Around Time if different from standard	Hold
																	X	X TDS				

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
	Talon	9/28	1710		HA	9/28/11	17:05	INST Prob 4.4 °C OBS 5.0 °C COR 5.0 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ___ °C OBS ___ °C COR ___ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ___ °C OBS ___ °C COR ___ °C

LAB USE ONLY

Intact Y / N

Headspace Y / N / NA

Log-In-Review MA

REMARKS:

- [x] Dry Weight Basis Required
- [ ] TRRP Report Required
- [ ] Check If Special Reporting Limits Are Needed

Carrier #

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

ORIGINAL COPY

Summary Report

Steve Killingsworth
Talon LPE-Midland
2901 State Highway 349
Midland, TX 79706

Report Date: December 30, 2011

Work Order: 11122205

Project Location: Hobbs, NM
Project Name: Monsanto #5
Project Number: 701047.015.01

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
285035	MW-1	water	2011-12-21	12:45	2011-12-21
285036	MW-2	water	2011-12-21	12:50	2011-12-21
285037	MW-3	water	2011-12-21	12:55	2011-12-21
285038	MW-4	water	2011-12-21	13:05	2011-12-21
285039	MW-5	water	2011-12-21	13:15	2011-12-21
285040	MW-6	water	2011-12-21	13:20	2011-12-21
285041	MW-7	water	2011-12-21	13:25	2011-12-21
285042	MW-8	water	2011-12-21	13:35	2011-12-21

Sample: 285035 - MW-1

Param	Flag	Result	Units	RL
Chloride	Qs	**60.6**	mg/L	2.5
Total Dissolved Solids		**431.0**	mg/L	10

Sample: 285036 - MW-2

Param	Flag	Result	Units	RL
Chloride	Qs	**20.7**	mg/L	2.5
Total Dissolved Solids		**421.0**	mg/L	10

Sample: 285037 - MW-3

Param	Flag	Result	Units	RL
Chloride	Qs	**17.8**	mg/L	2.5
Total Dissolved Solids		**343.0**	mg/L	10

Sample: 285038 - MW-4

Param	Flag	Result	Units	RL
Chloride		**127**	mg/L	2.5
Total Dissolved Solids		**595.0**	mg/L	10

Sample: 285039 - MW-5

Param	Flag	Result	Units	RL
Chloride		**16.8**	mg/L	2.5
Total Dissolved Solids		**1256**	mg/L	10

Sample: 285040 - MW-6

Param	Flag	Result	Units	RL
Chloride		**248**	mg/L	2.5
Total Dissolved Solids		**654.0**	mg/L	10

Sample: 285041 - MW-7

Param	Flag	Result	Units	RL
Chloride		**188**	mg/L	2.5
Total Dissolved Solids		**652.0**	mg/L	10

Sample: 285042 - MW-8

Param	Flag	Result	Units	RL
Chloride		**376**	mg/L	2.5
Total Dissolved Solids		**1102**	mg/L	10

TRACEANALYSIS, INC.
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E-Mail: lab@traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Steve Killingsworth
Talon LPE-Midland
2901 State Highway 349
Midland, TX, 79706

Report Date: December 30, 2011

Work Order: 11122205

Project Location: Hobbs, NM
Project Name: Monsanto #5
Project Number: 701047.015.01

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
285035	MW-1	water	2011-12-21	12:45	2011-12-21
285036	MW-2	water	2011-12-21	12:50	2011-12-21
285037	MW-3	water	2011-12-21	12:55	2011-12-21
285038	MW-4	water	2011-12-21	13:05	2011-12-21
285039	MW-5	water	2011-12-21	13:15	2011-12-21
285040	MW-6	water	2011-12-21	13:20	2011-12-21
285041	MW-7	water	2011-12-21	13:25	2011-12-21
285042	MW-8	water	2011-12-21	13:35	2011-12-21

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Blair Leftwich

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Monsanto #5 were received by TraceAnalysis, Inc. on 2011-12-21 and assigned to work order 11122205. Samples for work order 11122205 were received intact at a temperature of 3.4 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (IC)	E 300.0	74245	2011-12-27 at 11:24	87430	2011-12-27 at 11:25
Chloride (IC)	E 300.0	74246	2011-12-27 at 11:43	87431	2011-12-27 at 11:48
TDS	SM 2540C	74312	2011-12-30 at 14:39	87516	2011-12-30 at 14:40

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 11122205 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 285035 - MW-1

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	87430	Date Analyzed:	2011-12-27	Analyzed By:	RL
Prep Batch:	74245	Sample Preparation:	2011-12-23	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	1	**60.6**	mg/L	5	2.50

Sample: 285035 - MW-1

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	87516	Date Analyzed:	2011-12-30	Analyzed By:	RL
Prep Batch:	74312	Sample Preparation:	2011-12-28	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**431.0**	mg/L	1	10.00

Sample: 285036 - MW-2

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	87430	Date Analyzed:	2011-12-27	Analyzed By:	RL
Prep Batch:	74245	Sample Preparation:	2011-12-23	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	1	**20.7**	mg/L	5	2.50

Sample: 285036 - MW-2

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	87516	Date Analyzed:	2011-12-30	Analyzed By:	RL
Prep Batch:	74312	Sample Preparation:	2011-12-28	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**421.0**	mg/L	1	10.00

Sample: 285037 - MW-3

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	87430	Date Analyzed:	2011-12-27	Analyzed By:	RL
Prep Batch:	74245	Sample Preparation:	2011-12-23	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	Qs	1	**17.8**	mg/L	5	2.50

Sample: 285037 - MW-3

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	87516	Date Analyzed:	2011-12-30	Analyzed By:	RL
Prep Batch:	74312	Sample Preparation:	2011-12-28	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**343.0**	mg/L	1	10.00

Sample: 285038 - MW-4

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	87431	Date Analyzed:	2011-12-27	Analyzed By:	RL
Prep Batch:	74246	Sample Preparation:	2011-12-23	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**127**	mg/L	5	2.50

Sample: 285038 - MW-4

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	87516	Date Analyzed:	2011-12-30	Analyzed By:	RL
Prep Batch:	74312	Sample Preparation:	2011-12-28	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**595.0**	mg/L	1	10.00

Sample: 285039 - MW-5

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	87431	Date Analyzed:	2011-12-27	Analyzed By:	RL
Prep Batch:	74246	Sample Preparation:	2011-12-23	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**16.8**	mg/L	5	2.50

Sample: 285039 - MW-5

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	87516	Date Analyzed:	2011-12-30	Analyzed By:	RL
Prep Batch:	74312	Sample Preparation:	2011-12-28	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**1256**	mg/L	1	10.00

Sample: 285040 - MW-6

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	87431	Date Analyzed:	2011-12-27	Analyzed By:	RL
Prep Batch:	74246	Sample Preparation:	2011-12-23	Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**248**	mg/L	5	2.50

Sample: 285040 - MW-6

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	87516	Date Analyzed:	2011-12-30	Analyzed By:	RL
Prep Batch:	74312	Sample Preparation:	2011-12-28	Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Total Dissolved Solids		1	**654.0**	mg/L	1	10.00

Sample: 285041 - MW-7

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	87431	Date Analyzed:	2011-12-27	Analyzed By:	RL
Prep Batch:	74246	Sample Preparation:	2011-12-23	Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		1	**188**	mg/L	5	2.50

Sample: 285041 - MW-7

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	87516	Date Analyzed:	2011-12-30	Analyzed By:	RL
Prep Batch:	74312	Sample Preparation:	2011-12-28	Prepared By:	RL

continued ...

sample 285041 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**652.0**	mg/L	1	10.00

Sample: 285042 - MW-8

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	87431	Date Analyzed:	2011-12-27	Analyzed By:	RL
Prep Batch:	74246	Sample Preparation:	2011-12-23	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		1	**376**	mg/L	10	2.50

Sample: 285042 - MW-8

Laboratory:	Lubbock				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	87516	Date Analyzed:	2011-12-30	Analyzed By:	RL
Prep Batch:	74312	Sample Preparation:	2011-12-28	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Total Dissolved Solids		1	**1102**	mg/L	1	10.00

Method Blanks

Method Blank (1) QC Batch: 87430

QC Batch: 87430 | Date Analyzed: 2011-12-27 | Analyzed By: RL
Prep Batch: 74245 | QC Preparation: 2011-12-27 | Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	0.613	mg/L	2.5

Method Blank (1) QC Batch: 87431

QC Batch: 87431 | Date Analyzed: 2011-12-27 | Analyzed By: RL
Prep Batch: 74246 | QC Preparation: 2011-12-27 | Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		1	0.0679	mg/L	2.5

Method Blank (1) QC Batch: 87516

QC Batch: 87516 | Date Analyzed: 2011-12-30 | Analyzed By: RL
Prep Batch: 74312 | QC Preparation: 2011-12-30 | Prepared By: RL

Parameter	Flag	Cert	MDL Result	Units	RL
Total Dissolved Solids		1	<5.000	mg/L	10

Duplicates (1) Duplicated Sample: 285042

QC Batch: 87516 | Date Analyzed: 2011-12-30 | Analyzed By: RL
Prep Batch: 74312 | QC Preparation: 2011-12-30 | Prepared By: RL

Param		Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1	1042	1102	mg/L	1	6	10

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 87430 | Date Analyzed: 2011-12-27 | Analyzed By: RL
Prep Batch: 74245 | QC Preparation: 2011-12-27 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	24.7	mg/L	1	25.0	<0.0319	99	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	23.5	mg/L	1	25.0	<0.0319	94	90 - 110	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 87431 | Date Analyzed: 2011-12-27 | Analyzed By: RL
Prep Batch: 74246 | QC Preparation: 2011-12-27 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	22.5	mg/L	1	25.0	<0.0319	90	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	24.1	mg/L	1	25.0	<0.0319	96	90 - 110	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 87516 | Date Analyzed: 2011-12-30 | Analyzed By: RL
Prep Batch: 74312 | QC Preparation: 2011-12-30 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Dissolved Solids		1	989	mg/L	1	1000	<5.00	99	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Dissolved Solids		1	999	mg/L	1	1000	<5.00	100	90 - 110	1	10

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 285037

QC Batch: 87430 | Date Analyzed: 2011-12-27 | Analyzed By: RL
Prep Batch: 74245 | QC Preparation: 2011-12-27 | Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	Qs Qs	1	379	mg/L	5	125	17.8	289	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	Qs Qs	1	372	mg/L	5	125	17.8	283	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 285047

QC Batch: 87431 | Date Analyzed: 2011-12-27 | Analyzed By: RL
Prep Batch: 74246 | QC Preparation: 2011-12-27 | Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1	182	mg/L	5	104	78	100	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		1	183	mg/L	5	104	78	101	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Calibration Standards

Standard (CCV-1)

QC Batch: 87430 | Date Analyzed: 2011-12-27 | Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	25.5	102	90 - 110	2011-12-27

Standard (CCV-2)

QC Batch: 87430 | Date Analyzed: 2011-12-27 | Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	22.5	90	90 - 110	2011-12-27

Standard (CCV-1)

QC Batch: 87431 | Date Analyzed: 2011-12-27 | Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	22.5	90	90 - 110	2011-12-27

Standard (CCV-2)

QC Batch: 87431 | Date Analyzed: 2011-12-27 | Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1	mg/L	25.0	25.0	100	90 - 110	2011-12-27

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-11-5	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 11122205 Page _____ of _____

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name: Talon LPE
Phone #:
Address: (Street, City, Zip) 2901 State Hwy 349 Midland 79701
Fax #:
Contact Person: Steve Killingsworth
E-mail: skillingsworth@talonlpe.com
Invoice to: (If different from above)
Project #: ~~7000~~ 701047.015.01
Project Name: Monsanto #5
Project Location (including state): Hobbs NM
Sampler Signature: Brad Ivy

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
285035	MW1	1	40z	X				X				X	X	12/21	1245
036	MW2	↓	↓	↓								↓	↓	↓	1250
037	MW3														1259
038	MW4														1305
039	MW5														1315
040	MW6														1320
041	MW7														1325
042	MW8	↓	↓	↓								↓	↓	↓	1335

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, Fl, S04, NO3, NO2, Alkalinity	Na, Ca, Mg, K, TDS, EC	TDS & total chlorides	Turn Around Time if different from standard	Hold
																			X			

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Brad Ivy	Talon	12/21/11	4:00 pm					INST ____ °C
								OBS ____ °C
								COR ____ °C
								INST ____ °C
								OBS ____ °C
								COR ____ °C
				Brenda Ward	Trace Lubbock	12/21/11	4:00 pm	INST FR °C
								OBS 3.3 °C
								COR 3.2 °C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-In-Review

REMARKS:

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Carrier # Carrier

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

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