CLASS I INJECTION WELL OPERATION PERMIT APPLICATION OKEECHOBEE LANDFILL, INC. OKEECHOBEE, FLORIDA

July 2011

Prepared by:

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OKEECHOBEE LANDFILL, INC.
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Permit No. 040842-022 UC

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1.2 Area of Review

The Area of Review (AOR) limit of 4-miles provided with the Construction and Testing permit application is conservatively large given the relatively low injection rates at the OLI facility and the high transmissivity of the injection zone. A 1-mile AOR is suitable and appropriate for this site and the change in the radius of the area of review is reflected below in the calculation of the radius of influence. The updated well inventory data is tabulated below and an updated well location Map is presented as **Figure 3**.

Area of Review = $\sqrt{\text{V/pi X aq thickness X porosity}}$ = 4113.88 feet = 0.779144493 mile

V = volume after 20 years injection at design rate = 32,850,000,000 gallons
Aquifer thickness = 413 feet
Porosity = 20%

Map ID	Owner	Diameter (inches)	Well Depth (feet)	Use	Aquifer
1	OLI Injection Well	10.75	3150	Waste Disposal	Lower Floridan Aq.
2	OLI DMW	4	1850/1700	Monitoring	Upper Floridan Aq.
3	OLI ADMIN COMPLEX	4	130	PWS	Surficial Aq.
4	ROBERT CAPOTE	4	140	Irrigation	Surficial Aq.

2.0 SUMMARY OF INFORMATION OBTAINED DURING CONSTRUCTION

The testing program conducted during construction of the OLI Injection System verified confinement through physical examination of the drilled sample cuttings, packer pumping tests evaluation, core analysis, geophysical log interpretation, video survey analysis, radioactive tracer survey (RTS) analysis and the short-term injection test analysis. These tests helped identify the Avon Park Formation and upper Oldsmar Formation (2,290 to 2,740 feet below land surface) that serve as the Primary Confining Unit separating the injection zone from the overlying Underground Source of Drinking Water (USDW). Packer test water quality data and total dissolved solids (TDS) derived from the geophysical logs identified the base of the USDW at approximately 1,770 feet below land surface (bls). An injection zone capable of accepting the Okeechobee Landfill, Inc. injectate was identified below the Primary Confining Unit in the lower Oldsmar Formation (2,737 to 3,150 feet bls).

The following summary of the information collected during construction of IW-I and MW-I is submitted in support of the OLI Injection Well Operation Permit as required by Section 62-528.455 FAC. Specific references are provided for information required by this section of the rule that has been previously submitted to the FDEP.

2.1 Lithologic & Geophysical Logs

Lithologic logs of IW-I and MW-I were previously submitted to the FDEP in the following reports:

-Request for Final Casing-Setting Depth Approval Class I Injection Well Construction Okeechobee Landfill, Inc. Okeechobee, Florida FDEP Permit No. 040842-017-UC, L.S. Sims & Associates, Inc., October 14, 2008, Appendix A.

-Class I Injection Well Construction Monitoring Zone Requests, Okeechobee Landfill, Inc. Okeechobee, Florida, FDEP Permit No. 040842-019-UC, L.S. Sims & Associates, Inc., May 9, 2008, Appendix A.

-Operational Testing Request Okeechobee Landfill, Inc. Class I Injection Well System Okeechobee, Florida, L.S. Sims & Associates, Inc., July 1, 2009, Appendix C.

Geophysical Logs for IW-I and MW-I were previously submitted to the FDEP in the following reports:

-Request for Final Casing-Setting Depth Approval Class I Injection Well Construction Okeechobee Landfill, Inc. Okeechobee, Florida FDEP Permit No. 040842-017-UC, L.S. Sims & Associates, Inc., October 14, 2008, Appendix C; and Appendix D.

-Class I Injection Well Construction Okeechobee Landfill, Inc. FDEP Permit No. 040842-017-UC Injection Test Request, L.S. Sims & Associates, Inc., May 29, 2009, Appendix A; Appendix B; and Appendix C.

-Operational Testing Request Okeechobee Landfill, Inc. Class I Injection Well System Okeechobee, Florida, L.S. Sims & Associates, Inc., July 1, 2009, Attachment.

The geophysical logs conducted on the pilot-holes included; natural gamma ray, caliper, fluid conductivity, temperature (static and ΔT), flowmeter (dynamic and static), dual induction, and sonic. The logs were correlated with the lithologic logs derived from the cuttings examination and core analysis. Using these logs, the following geologic formations and hydrogeologic units were identified at the OLI Injection Well System and are represented in the geologic cross sections presented as **Figure 4** and **Figure 5** along the lines A-A' and B–B' as shown on **Figure 1**:

Table 2.1 Hydrogeologic Units Identified Using Site Logs

Geologic Units	
Depth (bls)	**Geologic Units**
0 to 140	Undifferentiated Marine Terrace Deposits
140 to 670	Hawthorn Group
670 to 800	Ocala Limestone
800 to 2,290	Avon Park Formation
2,290 to 3,150	Oldsmar Formation
3,150 to 3,506	Cedar Keys
Hydrogeologic Units	
Depth (bls)	**Hydrogeologic Units**
0 to 140	Surficial Aquifer System
140 to 800	Intermediate Confining Unit
800 to 2290	Upper Floridan Aquifer System
2290 to 2737	Primary Confining Unit
2737 to 3150	Lower Floridan Aquifer System

2.2 Straddle Packer Tests

During construction of IW-I and MW-I a total of 13 straddle packer tests were conducted at various depths within the pilot holes of each well. The details of these tests have been provided in the following previous correspondence and reports:

-Request for Final Casing-Setting Depth Approval Class I Injection Well Construction Okeechobee Landfill, Inc. Okeechobee, Florida FDEP Permit No. 040842-017-UC, L.S. Sims & Associates, Inc., October 14, 2008, Section 2.2; and Appendix B.

-Class I Injection Well Construction Monitoring Zone Requests, Okeechobee Landfill, Inc. Okeechobee, Florida, L.S. Sims & Associates, Inc., May 9, 2008, pgs. 7–10; Table 2; and Appendix C.

-Operational Testing Request Okeechobee Landfill, Inc. Class I Injection Well System Okeechobee, Florida, L.S. Sims & Associates, Inc., July, 2009, Section 13.2.

The packer test results were utilized to determine the hydraulic characteristics of the Primary Confining Unit. The following table summarizes the depth and interval of straddle packer tests completed in the injection well pilot-hole from 1,746 feet to 2,724 feet bls. Horizontal hydraulic conductivity (K) and transmissivity estimates are also included in the table.

Table 2.2 Summary of Straddle Packer Test Data

OLI EW-1 Packer Test Program							
Packer Test No.	Date	Depth Interval Tested	Q gpm	Pumping K (cm/sec)	Pumping T (cm^2/sec)	Recovery K (cm/sec)	Recovery T (cm^2/sec)
1	4/22/08	1898-1922	21	1.1×10^{-4}	7.8×10^{-2}		
2	4/23/08	1858-1882	35	4.1×10^{-3}	3.0		
3	4/24/08	1818-1842	71	1.2×10^{-3}	0.85		
4	4/25/08	1774-1798	40	2.1×10^{-4}	0.15		
5	4/26/08	1746-1770	22	2.0×10^{-6}		1.7×10^{-4}	0.12
C1	9/02/08	2324-2342	0			3.8×10^{-10}	2.0×10^{-7}
C2	9/03/08	2608-2626	1			3.6×10^{-6}	2.0×10^{-3}
C3	9/06/08	2706-2724	15			1.1×10^{-4}	4×10^{-11}
C4	9/07/08	2480-2497	4.3			6.2×10^{-5}	3.2×10^{-2}
C5	9/07/08	2206-2223	32			2.1×10^{-4}	0.11

The packer testing showed most of the tested intervals within the Avon Park and upper Oldsmar Formations should be suitable for confinement of the injection zone.

2.3 Core Collection and Analysis

A total of 10 cores were collected during drilling of the IW-I pilot hole between depths of 1,950 to 2,707 feet bls. The details of the core test procedures and laboratory test results have been previously submitted to FDEP in the following previous correspondence and reports:

-Request for Final Casing-Setting Depth Approval Class I Injection Well Construction Okeechobee Landfill, Inc. Okeechobee, Florida FDEP Permit No. 040842-017-UC, L.S. Sims & Associates, Inc., October 14, 2009, Section 2.1; Table 1; and Appendix A.

-Class I Injection Well Construction Monitoring Zone Requests, Okeechobee Landfill, Inc. Okeechobee, Florida, L.S. Sims & Associates, Inc., May 9, 2008, Table 4.

-Operational Testing Request Okeechobee Landfill, Inc. Class I Injection Well System Okeechobee, Florida, L.S. Sims & Associates, Inc., July, 2009, Section 13.4; Table 13.2; Table 13.3; and Appendix D.

Core samples were used to obtain lithologic descriptions of undisturbed (compared to drilled sample cuttings) samples of the formation. Sections of each core were sent to a laboratory where K values were measured. The core results showed very low vertical K values for sections of the formation comprising the Primary Confining Unit. The following table summarizes the depth of the core samples and vertical K values measured by the testing laboratory.

Table 2.3 Summary of Core Test Results

Depth (ft) BPL*	Hydraulic Conductivity (K)	
	Vertical	Horizontal
2054	4.7e-10	3.3e-9
2112	6.7e-11	------
2167	9.3e-6	1.3e-5
2211	5.5e-5	5.2e-5
2262	2.1e-8	1.9e-5
2326	5.4e-8	7.1e-8
2390	1.3e-4	2.0e-4
2424	6.9e-10	1.6e-10
2502	9.1e-5	1.4e-4
2585	3.5e-6	4.0e-6
2592	1.7e-5	4.8e-7

*Below Pad Level

2.4 Mechanical Integrity Tests

The details of the Mechanical Integrity Tests (MIT) conducted on IW-I and MW-I have been provided in the following previous reports submitted to FDEP:

-Class I Injection Well Construction Okeechobee Landfill, Inc. FDEP Permit No. 040842-017-UC Injection Test Request, L.S. Sims & Associates, Inc., May 29, 2009, page 6; Appendix C; and Appendix D.

-Operational Testing Request Okeechobee Landfill, Inc. Class I Injection Well System Okeechobee, Florida, L.S. Sims & Associates, Inc., July 2009, Section 6.0.

Mechanical integrity of IW-I has been verified and demonstrated using results of multiple MIT including, hydrostatic pressure tests of the intermediate casing, the final casing string, and the annular space between the final casing string and the FRP tubing. The mechanical integrity of IW-I has also been verified by the cement bond logs (CBL) and

radioactive tracer surveys (RTS) conducted in the well. Data collected during the short term injection test also confirms the well's mechanical integrity. A summary of the mechanical integrity tests conducted to date is provided in the table below:

Table 2.4 Summary of Mechanical Integrity Test

Mechanical Integrity Test	Date	Result
Pressure test 26" casing IW	06/16/08	Passed at 70 psi
Video inside 26" Casing	08/31/08	No visible defects in casing
CBL 16" casing IW	11/17/08	Good Bond
Pressure test 16" casing IW	11/21/09	Passed at 102 psi
Video inside 16" Casing IW	11/26/08	No visible defects in casing
CBL 16" casing DMW	12/28/08	Good Bond
Pressure test 10-¾" annulus IW	12/31/08	Passed at 101 psi
Pressure test 16" casing DMW	12/31/08	Passed at 95 psi
Video inside 16" Casing DMW	01/07/09	No visible defects in casing
Pressure test 6-5/8" DMW	01/14/09	Passed at 50 psi
Video inside 6-5/8" DMW	01/21/09	No visible defects in casing
Video inside 11-3/4" IW	01/21/09	No visible defects in casing
RTS Injection Well	05/19/09	Good, no upward tracer movement

2.4.1 Radioactive Tracer Survey

Information regarding the radioactive tracer survey test procedures and test results have been previously submitted to FDEP in the following documents:

> *-Class I Injection Well Construction Okeechobee Landfill, Inc. FDEP Permit No. 040842-022-UC Injection Test Request,* June 2009, and *Mechanical Integrity Test Report* L.S. Sims & Associates, Inc., May 2009, Section 3.6, page 12 and Appendix A.

All Webbs Enterprises, Geophysical Logging Division conducted RTS tests on May 19, 2009. A diagram of the tool used to complete the surveys is shown in the RTS Log. The RTS tool was equipped with three gamma detectors and two ejection ports for the radioactive tracer (Iodine 131). Documentation for the radioactive Iodine 131 demonstrating that the material was within the half-life specifications was provided in the MIT Report. The tool assembly was equipped with a casing collar locator (CCL) and a temperature sensor.

The wellhead was fitted with a stand pipe and stripper-head assembly for use during the RTS testing. A background Gamma Ray Temperature log was run from the total depth of 3,150 feet bls to surface on May 18, 2009. The temperature log displayed a gradual increase in temperature from 75.0° F at land surface to 96.4° F at the total depth of the well. The absence of temperature anomalies or abrupt changes in fluid temperature indicates that water movement is not occurring in the well when the injection pumps are turned off. The background logs were run with the injection well under static conditions (no flow). The CCL log on the RTS tool was used to locate the bottom of the 16-inch casing at 2,737 feet bls and to position the RTS tool for the radioactive tracer surveys.

Two dynamic tracer tests were run for this MIT program. Dynamic conditions were established with a flow rate of 46 gallons per minute (gpm) [fluid velocity of five (5) feet per minute]. The flow rate was established using a calibrated 1-inch diameter flow-meter. A copy of the flow-meter's calibration certificate was provided with the MIT Report.

The first of two RTS began on Thursday morning May 19, 2009. The RTS tool was loaded with 6 cubic centimeters (cc) of Iodine 131. The RTS tool was positioned so that the ejector port was located 5 feet above the casing shoe. The top (GRT) and middle (GRM) gamma ray detectors were positioned within the 16-inch casing and the bottom gamma ray detector (GRB) was positioned in the open hole. A flow rate of approximately 46 gpm was established using fresh water from the supply well located approximately 800 feet northwest of the injection well. Time-drive gamma monitoring was then commenced and 1.0 millicurie (mCi) of radioactive Iodine ejected. Tracer was detected at the middle detector GRM, located below the ejector ports approximately 20 seconds after ejection. The tracer slug was detected at the bottom detector GRB after approximately 1.5 minute. The tracer was never detected at the top detector GRT, located above the ejector ports, during 60 minutes of time-drive monitoring. The RTS was then logged out of position to 2,500 feet bls. A Gamma Ray response of about 30 API units was detected at 2,717 feet bls by the GRB detector and attributed to Tool Dribble which is a very small volume of radioactive iodine that escapes the RTS when the tool bumps into the packer while logging out of position. The gamma ray response can be identified as tool dribble because it is not detected by GRT when logging out of position.

The injection well was then flushed with about 20,000 gallons of fresh water (nearly 2 casing volumes). The log after flush (LAF) was completed from 2,500 feet bls to below the bottom of the casing. A 10 API gamma ray response was observed by all detectors at this depth when logging after flush. The RTS tool was then repositioned as in the previous test. A flow rate of 47 gpm was established and a second dynamic test was conducted. Time-drive gamma monitoring commenced and another 1.0 mCi of radioactive Iodine ejected for the second test. Tracer was detected at the middle detector

GRM, located below the ejector ports approximately 20 seconds after ejection. The tracer slug was detected at the bottom detector GRB after approximately 1.5 minute. The tracer was never detected at the top detector GRT, located above the ejector ports, during 30 minutes of time-drive monitoring. The RTS was then logged out of position to 2,500 feet bls. A Gamma Ray response of about 25 API units was detected at 2,717 feet bls by the GRB detector and again attributed to Tool Dribble. The tool was lowered to a depth of about 3,150 feet bls. The well was flushed at a rate of approximately 400 gpm and the remaining tracer material was ejected at this depth during the flush. When the flush was complete the final gamma log was run from 3,150 feet to land surface.

2.5 Short-Term Injection Test

Information regarding the short-term injection test procedures and test results has been previously submitted to FDEP in the following documents:

-Class I Injection Well Construction Okeechobee Landfill, Inc. FDEP Permit No. 040842-022-UC Injection Test Request, L.S. Sims & Associates, Inc., June 2009, page 4.

-Operational Testing Request Okeechobee Landfill, Inc. Class I Injection Well System Okeechobee, Florida, L.S. Sims & Associates, Inc., July 2009, Section 3.0; section 13.7; Table 3.1; Figure 3.1.

During the injection test no pressure build-up was observed in the injection zone and there was no indication of a change in pressure in the upper or lower monitor zone before, during or after the test. The absence of a response to injection in either of the two monitoring zones demonstrates that the sequence of rocks between 2,290 and 2,737 feet bls should provide effective confinement.

A thorough review of available data from all of the tests described in this section confirm the presence and effectiveness of a thick confining sequence of rocks between 2,290 and 2,737 bls. The confining sequence of rocks collectively possesses sufficient thickness and areal extent, and appropriate lithologic and hydrologic characteristics to prevent the upward migration of injected fluids from the injection zone resulting in impacts to the USDW.

2.6 Fluid Compatibility

The Okeechobee Landfill, Inc. injectate is compatible with the injection zone formation water at the site for purposes of successful operation of the Class I injection well system. The following table shows a comparison of the major dissolved constituents in the injection zone formation water at the OLI site and in the Okeechobee Landfill, Inc. injectate.

Table 2.6 Injection Zone and Injectate Water Quality Comparison

Parameter	Injection Zone 1/14/2009	Injectate 2009	Injectate 4/2011
Chloride (mg/L)	20,000	3,588	4,700
Calcium (mg/L)	NM	250	200
Bicarbonate (mg/L) as CaCO3	NM	4,099	< 5000
Iron (mg/L)	0.48	209	2.0
Magnesium (mg/L)	NM	88	120
Ammonia as N (mg/L)	NM	780	1300
Total kjeldahl nitrogen as N (mg/L)	NM	718	1700
Nitrate as N (mg/L)	< 0.0075	0.2	0.31
gross alpha (pCi/L)	200	15.5	12
radium 226 (pCi/L)	46	2.2	1.4
radium 228 (pCi/L)	0.4	2.9	0.5
pH (standard units)(field)	7.30	7.5	7.26
Phosphorous, total as P (mg/L)	NM	5.7	11
Potassium (mg/L)	NM	925	1600
Total dissolved solids (mg/L)	32,000	7,725	14,000
Sodium (mg/L)	10,000	1,684	3100
Specific Conductance (umohs/cm)(field)	33100	17,831	27,400
Sulfate (mg/L)	2700	451	180
Temperature •C (field)	31.5	21.2	27.6
Total suspended solids (mg/L)	NM	42.0	46

The pH of the fluids is similar (within 1 standard pH unit). The total phosphorous, and nitrate levels in the injectate are higher than in the injection zone formation water but should not result in operational problems. The remaining principal constituents in the injectate are less than the levels in the injection zone formation water.

3.0 AS-BUILT RECORD DRAWINGS

The As-Built Record Drawings sealed by the Engineer of Record were previously submitted to FDEP in the following document:

-Operational Testing Request Okeechobee Landfill, Inc. Class I Injection Well System Okeechobee, Florida, L.S. Sims & Associates, Inc., July 2009, Appendix A.

Copies of the As-Built Record Drawings are provided in **Appendix B**.

4.0 ENGINEER'S CERTIFICATION OF WELL CONSTRUCTION COMPLETION

The certification of well completion by the Engineer of Record was previously submitted to FDEP in the following document:

-Operational Testing Request Okeechobee Landfill, Inc. Class I Injection Well System Okeechobee, Florida, L.S. Sims & Associates, Inc., July 2009, Appendix A.

A copy of the engineer's certificate of completion is provided in **Appendix B.**

5.0 OPERATION & MAINTENANCE MANUAL/FINANCIAL RESPONSIBILITY

The Operation & Maintenance (O&M) Manual for the OLI Injection System was prepared and submitted by L.S. Sims & Associates, Inc. in July 2009. The O&M Manual includes the actual injection procedures and emergency discharge procedures for the system which are currently in place and operational. Since the O&M Manual submittal to the FDEP in July 2009, the only operational change requiring updating pertain to substitution of compressed air from an electric air compressor for the nitrogen bottle previously used to maintain pressure in the annular system. The revised pages of the O&M Manual (page 5 and page 9) are provided in **Appendix C**.

The Plugging & Abandonment Plan (P&A) was updated for the O&M Manual in July, 2010 to reflect As-Built specifics (e.g. depths, etc.). The anticipated P&A costs were updated in April 2011 to ensure sufficient that financial responsibility vehicles would cover these costs. A copy of the financial responsibility instrument and updated P&A cost estimate is included in **Appendix C**.

6.0 PROPOSED MONITORING & REPORTING

The proposed monitoring and reporting program during system operation under the FDEP Operation Permit will be similar to the monitoring and reporting currently being conducted during the test operational period. The injectate flow rates, injectate pH, well-head pressures, annulus pressures and monitor zone well-head pressures will continue to be entered into a programmable logic controller (PLC). Monthly Operating Reports (MORs) will continue to be submitted to the FDEP on forms provided by the Department as an attachment to Construction Permit No. 0040842-022-UC. The MORs will be submitted by last day of the month immediately following the month of record.

6.1 Injection Well Data

The injection well operating data is archived as real time analog values to the OLI Utilities database via the PLC. OLI's standard is that these values get captured at 60 sec intervals. This data will be used to generate reports and plots of critical system data for operations management and regulatory reporting.

This data is displayed, and reports created using proprietary software. The following data will be reported on the MORs:

- Injectate flow rate in million gallons per day (daily maximum, daily minimum, daily average, monthly maximum, monthly minimum and monthly average)
- Injectate volume in million gallons (totalizer reading ,daily volume injected, monthly maximum, monthly minimum and monthly average)
- Annulus pressure (daily maximum, daily minimum, daily average, monthly maximum, monthly minimum and monthly average)
- Well-head pressure (daily maximum, daily minimum, daily average, monthly maximum, monthly minimum and monthly average)
- Deep and shallow monitor zone water levels (daily maximum, daily minimum, daily average, monthly maximum, monthly minimum and monthly average)

6.2 Monitor Well Sampling

The monitor zones will be sampled monthly in accordance with Chapter 62-58.450(3)(d) FAC. The sampling parameters will be as specified by FDEP Construction Permit No. 0040842-022-UC:

Upper Zone	Lower Zone
Chloride (mg/L)	Chloride (mg/L)
Calcium (mg/L)	Calcium (mg/L)
Bicarbonate (mg/L) as CaCO3	Sodium (mg/L)
Iron (mg/L)	Magnesium (mg/L)
Magnesium (mg/L)	Bicarbonate (mg/L) as CaCO3
Ammonia as N (mg/L)	Iron (mg/L)
Total kjeldahl nitrogen as N (mg/L)	Ammonia as N (mg/L)
Nitrate as N (mg/L)	Total kjeldahl nitrogen as N (mg/L)
Nitrite as N (mg/L)	Nitrate as N (mg/L)
pH (standard units)(field)	Nitrite as N (mg/L)
Phosphorous, total as P (mg/L)	pH (standard units) (field)
Potassium (mg/L)	Phosphorous, total as P (mg/L)
Total dissolved solids (mg/L)	Potassium (mg/L)
Sodium (mg/L)	Total dissolved solids (mg/L)
Specific Conductance (umohs/cm)(field)	Specific Conductance (umohs/cm)(field)
Sulfate (mg/L)	Sulfate, total as SO4 (mg/L)
Temperature •C (field)	gross alpha (pCi/L)
	radium 226 (pCi/L)
	radium 228 (pCi/L)
	Temperature •C (field)

The upper and lower monitor zones are each equipped with a 2.5-inch submersible pump. Prior to sample collection, the pumps will be activated until 5 casing volumes have been purged from each zone. Purge water will be routed back to the OLI injection well. Samples will be collected directly from the pump discharge line from each of the monitor zones.

6.3 Injectate Sampling

The injectate will be sampled monthly for the parameters specified by FDEP Construction Permit No. 0040842-022-UC:

Table 6.3 FDEP Sampling Parameters

Chloride (mg/L)
Calcium (mg/L)
Bicarbonate (mg/L) as CaCO3
Iron (mg/L)
Magnesium (mg/L)
Ammonia as N (mg/L)
Total kjeldahl nitrogen as N (mg/L)
Nitrate as N (mg/L)
gross alpha (pCi/L)
radium 226 (pCi/L)
radium 228 (pCi/L)
pH (standard units)(field)
Phosphorous, total as P (mg/L)
Potassium (mg/L)
Total dissolved solids (mg/L)
Sodium (mg/L)
Specific Conductance (umohs/cm)(field)
Sulfate (mg/L)
Temperature •C (field)
Total suspended solids (mg/L)

A 24-hour composite sample of the injectate will be collected annually. This sample will be analyzed for the Primary and Secondary Drinking Water Standards (Chapter 62-550 FAC with exceptions noted in the OLI operating permit). Grab samples of the injectate will be collected for the volatile organic compounds and biologic parameters. Test results will be submitted to FDEP within 120 days of sample collection.

6.4 Specific Injectivity Testing

Injectivity Tests will continue to be conducted monthly during operation of the injection system. Test results will be submitted on the appropriate FDEP form as part of the MOR.

The test procedures for the OLI System are as follows:

- Shut-in well for a minimum of 30 minutes (turn off flow and shut injectate pump valves).
- Record shut-in static well-head pressure (at 10 sec., 20 sec., 30 sec., and 30 minutes after shut-in).
- Record initial totalizer flow reading.
- Open injectate pump valve and establish constant flow rate using the maximum flow rate that can be repeated on a monthly basis.
- Record flow rate and well-head pressure every 2 minutes for 10 minutes.
- Record final totalizer flow reading.
- Shut well in (turn off injectate pumps and shut valve) and record pressure fall off until static pressure is reached (minimum of 5 minutes).
- Exercise well-head values manually

The specific injectivity index will then be calculated by dividing the constant injection rate by the change in the injection pressure (well-head pressure minus the static or non-pumping pressure). Injectivity testing will be conducted at the same injection rate so that test comparisons can be made. Water levels in both monitor zones will be recorded before, during and after injectivity testing.

$$\text{Injectivity Index} = \frac{\text{Injection rate}}{\text{Injection pressure} - \text{Shut-in pressure}}$$

7.0 SITE SURVEY

A copy of the As-Built site survey is included in **Appendix B**. Okeechobee Landfill, Inc. has recorded the survey with the Okeechobee County Property Appraisers Office. A copy of the receipt for that filing is included in **Appendix C**.

8.0 CASING MILL CERTIFICATES

The casings used for construction of IW-I and MW-I conform to the American Society for Testing and Materials (ASTM) Designation A 53/A 53M-02 for seamless steel casings; ASTM Designation A 139-00 for spiral weld steel casing; and ASTM Designation D 2996-01 for FRP tubing. Copies of the mill certificates for casing used for well construction are included in **Appendix D**.

The casings used for construction of IW-I are as follows:

Table 8.1 IW-I Casing Data

IW-I Casing String	Casing Interval
42-inch NPS Conductor Casing	0 – 250 ft
36-inch NPS Surface Casing	0 – 674 ft
26-inch NPS Intermediate Casing	0 - 1,994 ft
16-inch NPS Injection Casing	0 - 2,737 ft
10.72-inch FRP Tubing	0 – 2723 ft

NPS-Nominal Pipe size ft-Feet Below Land Surface

The casings used for construction of MW-I are as follows:

Table 8.2 MW-I Casing Data

MW-I Casing String	Casing Interval
34-inch NPS Conductor Casing	0 – 251 ft
24-inchNPS Surface Casing	0 – 684 ft
16-inch NPS Upper Monitor Zone Casing	0 - 1,789 ft
6-5/8-inch Lower Monitor Zone FRP Tubing	0 - 1,960 ft

9.0 OPERATIONAL TESTING DATA

The data collected during the first 20 months of operational testing is presented in tabular and graphical form in **Appendix E**. The operational data collected during this time demonstrates that the well is functioning as designed in accordance with FDEP regulations and permit conditions.

9.1 Flow

Injectate average daily flow rates ranged between zero (0) and approximately 609,000 gallons per day (gpd) during the operational test period from October 16, 2009 to May 31, 2011. The OLI landfill typically operates all year long but generates leachate at a higher rate during the rainy season from June through December. Leachate is collected and temporarily stored on site in lined and covered ponds; the ponds can store approximately two weeks leachate. Typically, the leachate is allowed to accumulate two to three days before the injection well is used to dispose of the waste water. As a result, the injection well is operated approximately three days each week. The flow data collected during the operational test period covers more than twelve months and is representative of the flows expected in the future. The current flow rates are much less than the injection well system's design flow rate of 3.3 million gallons per day (mgd) or the tested injection rate of 3.16 mgd. Monthly injected volumes are graphically depicted in **Appendix E**.

9.1.1 Alternate Discharge

During scheduled maintenance and testing of the injection well system (e.g. 5-year MIT) the injection well system will be offline. During this time the wastewater will be stored in the lined and covered ponds. If required, flows from the landfill can be diverted to the Waste Management owned and operated landfill in Pompano Beach, Florida by tanker truck as disposed prior to injection well operation. Detailed information regarding emergency disposal methods is included in Section 2.4 of the facilities O&M Manual (Operation and Maintenance Manual, Injection Well System, Okeechobee Landfill, Inc. Okeechobee, Florida; L.S. Sims & Associates, Inc., July, 2009).

9.2 Well-Head Pressures

The injection well-head pressures recorded during the operational test period generally ranged between -4 and 27 pounds per square inch (psi) with the average being 1.6 psi. The maximum pressures (peak pressure sustained for at least 15 minutes) recorded was 27.0 psi and the minimum pressures recorded (minimum pressure sustained for 15 minutes) were negative numbers. It should be noted that during the first several months of operation, a valve on the well-head was kept partially closed to ensure the pH meter that continuously monitors injectate pH was kept wet. It was determined in August 2010 that the pH meter was immersed sufficiently in the injectate stream without the valve being partially closed and the practice was discontinued. With the valve partially closed, backpressure against the waste stream was generated and resulted in an artificially elevated well-head pressure,

The OLI injection well has a much higher surface elevation than most injection well systems in Florida. As a result, the potentiometric surface of the lower Floridan Aquifer System (injection zone) at the site is about 50 feet below ground surface. When only one injection pump is operating (flow rate below 300 gpm) the falling water in the injection tubing creates a vacuum and is reflected by the negative injection pressures that are common at the OLI facility. The average well-head pressures do not correlate with the average flow rates as a result of the artificially elevated injection pressure early in operational testing and the naturally low elevation of the injection zone potentiometric surface. Additionally, the recorded well-head pressures are much less than the maximum permitted well-head pressure of 72.6 psi (66% of the injection casing and injection tubing annulus mechanical integrity test pressure).

After some initial adjustments in late 2009 and early 2010, including replacing nitrogen with compressed air to adjust annular pressure in Mid February, 2010, the annular pressure was maintained between 55 to 79 psi. From March 2010 to the close of this reporting period (May 31, 2011) the annular pressure remained fairly constant with an average of 61.9 psi. No fluid was added to the annulus during the first 20 months of test operation. A graph of the well-head pressures recorded from the systems start up through May, 2011 is provided in **Appendix E**. Annular pressure changes appear seasonal and it is suspected that these pressure changes would correlate with ambient temperature and the temperature of injectate but the temperature data is not available to verify this.

9.3 Injectivity Testing

OLI's injection well is rather unique in that the well-head pressure is typically zero (0) if read from the analog gauge on the wellhead and the injection rates are relatively low. The digital gauge that is used to record well-head pressures for monthly operating reports record negative pressures as well as positive pressures. Negative pressures are common at the OLI facility because a vacuum is created by the falling water in the injection well casing. As can be seen below in the fall-off test during the May 4, 2011 Injectivity Test, negative pressures persist after the injection pumps are turned off and the valves are closed isolating the well from the injection pumps and piping.

Table 9.3 Post Injection/After Shut-In (5/4/2011)

Time	Start (Min)	Shut-In Pressure (psig)
13:01	0	-10.7
	0.5	-10.6
	1	-10.2
	1.5	-10.3
	2	-10.0
	3	-10.1
	4	-10.0
13:06	5	-10.0

During the May 4, 2011 Injectivity test the well-head pressure was -4.7 psi prior to turning off the injection pumps, when the pumps were turned off and the valve shut, the water column in the well continued to fall increasing the vacuum pressure in the well-head to -10.7 psi. This fluctuation in the pressure is typical for a confined aquifer after turning of a pump. After 5 minutes, the shut-in pressure increased to -10.0 psi and would likely continue for several more minutes. The shut-in pressure data confirm that the injection zone has high transmissivity and there is very little stress being placed on the aquifer as a result of injection.

A summary table and corresponding graphic chart of the monthly injectivity testing results are provided in **Appendix E**.

9.4 Monitor Zone Water Levels

During the first 20 months of operation the upper monitoring zone water levels ranged between 17.3 to 27.2 feet NAVD(1988). The average elevation during operational tsting was 21.5 feet. The lower monitoring zone water levels generally ranged between 3.0 to 10.8 feet NAVD(1988) during this reporting period with an average elevation of 6.7 feet during operational testing.

During October and November 2009, data recording errors made water level measurements unavailable until November 18, 2009. Subsequent data recording errors plagued the system throughout the first 12 months of operational testing. Various equipment and software failures accounted for the data gaps during this time frame. The causes for lapses in data collection and / or recording have included software glitches in the database recording computer and equipment failure due to power surges. One significant data gap occurred after a direct lightning strike to the well's PLC panel which destroyed several instruments and the radio equipment used to transmit the data to the recording computer.

In March 2011 a fiber optic cable was installed to transmit the operational data to the database computer which has eliminated most of the data collection and storage issues. At present, a new SCADA (supervisory control and data acquisition) system is in design and scheduled to be installed at the site before the end of 2011. The replacement system is expected to be significantly more reliable.

Submersible Pumps were replaced in April 2011. At that time, the level sensors were removed with the pumps and recalibrated. Water level data reflects this service and is evident in the graph of this data presented in **Appendix E**.

9.5 Water Quality Data

9.5.1 Lower Monitor Zone

During the first 20 months of operation the lower monitoring zone was sampled every week for 34 weeks and then monthly for an additional 12 months. (total samples $n = 46$). The average ($\bar{x}$) total dissolved solids (TDS) concentration in these samples is approximately 26,000 milligrams per liter (mg/L). As depicted on the graph in **Appendix E**, the TDS concentrations were generally stable and consistent until May 2010. Subsequently, TDS concentrations showed a general decline over time. Quality assurance questions arose over the TDS data due to related measurements (Chloride, Sodium, and Specific Conductance, etc.) not showing similar changes in concentration during this same time frame. After several months of discussions on this issue, the contracted laboratory, TestAmerica initiated an investigation and eventually determined that a new laboratory technician, who started in May 2010 utilized dilution techniques on high TDS samples which resulted in erroneous TDS values. A letter from the laboratory addressing this issue and proposed changes in procedures for high TDS samples is included in **Appendix E**. The major dissolved cations and anions in the lower monitoring zone formation water include chloride (Cl), sodium (Na), sulfate (SO4), magnesium (Mg), calcium (Ca), potassium (K), and bicarbonate (HCO3).

The principal constituents in the lower monitoring zone samples are Na ($\bar{x} = 10{,}700$ mg/L; $n = 46$) and Cl ($\bar{x} = 20{,}000$ mg/L; $n = 46$). These constituents typically comprise approximately 85% of the TDS in the lower monitoring zone samples. Due to the issues with recent TDS analyses, the proportions are not reflected in the most recent data for TDS. Both the Na and Cl concentrations were generally stable and consistent over the first 20 months of operation.

Other major dissolved constituents (SO4, Mg, Ca, K, and HCO3) in the lower monitoring zone formation water were also generally stable and consistent over the first 20 months of operation.

Several forms of nitrogen are monitored in the lower monitoring zone formation water including nitrite (NO2), nitrate (NO3), ammonia (NH3) and total kjeldahl nitrogen (TKN). The NO2 and NO3 compounds are basically absent in the lower monitoring zone samples. The NH3 concentrations have generally maintained initial values averaging 0.363 mg/L. The TKN levels also generally maintained initial values with an average of 0.67 mg/L. The highest TKN value measured was 3.90 mg/L on November 24, 2009. The lowest concentration measured was below the Method Detection Limit (MDL) and occurred six times during operational testing, the most recent occurred in May, 2010. Overall, NH3 and TKN are expected to maintain average concentrations as the impacts of the initial drilling operations appear to have subsided.

9.5.2 Upper Monitor Zone

During the first 20 months of operation the upper monitoring zone was also sampled every week for 34 weeks followed by monthly sample collection for 12 months (total samples $n = 46$). The average total dissolved solids (TDS) concentration in these samples is $\bar{x} = 18{,}500$ mg/L. As depicted on the graph in **Appendix E**, the TDS concentrations showed variability during the first three months of operation but remained comparatively stable after that until May 2010 when the quality assurance problems with TDS values described in the previous section arose. The decrease in TDS values after May 2010 is attributed to the inappropriate dilution technique used by the laboratory technician. There was no similar change in associated inorganic analytes (eg. Chloride, Sodium, Specific Conductance) during the same time frame. As previously discussed, the laboratory has altered dilution techniques and has implemented a re-training program for analysts.

The major dissolved cations and anions in the upper zone formation water also include CL, Na, SO4, Mg, Ca, K, and HCO3 but at lower concentrations than in the lower monitor zone. The principal constituents in the lower zone samples are also Na ($\bar{x} = 6{,}400$ mg/L; $n = 46$) and Cl ($\bar{x} = 13{,}000$ mg/L; $n = 46$). These constituents typically comprise approximately 85% of the TDS in the upper zone samples. Due to the issues with recent TDS analyses, the proportions are not reflected in the most recent data for TDS.

The Cl concentrations were generally stable and consistent over the first 20 months of operation except for a relatively high value of 21,000 mg/L reported for the October 29, 2009 sample and a relatively low value of 11,000 mg/L reported for the November 19, 2009 and April 14, 2010 samples. The SO4 concentrations were generally consistent over the first 20 months of operation with range of values between 950 and 2,500 mg/L and an average concentration of 1,414 mg/L.

The Na concentrations ranged from 6,000 to 7,000 mg/L during the first 20 months of operation. The average Sodium concentration was 6,472 mg/L. Other dissolved constituents (Mg and K) in the upper monitoring zone formation water also have remained relatively consistent during the first 20 months of operation.

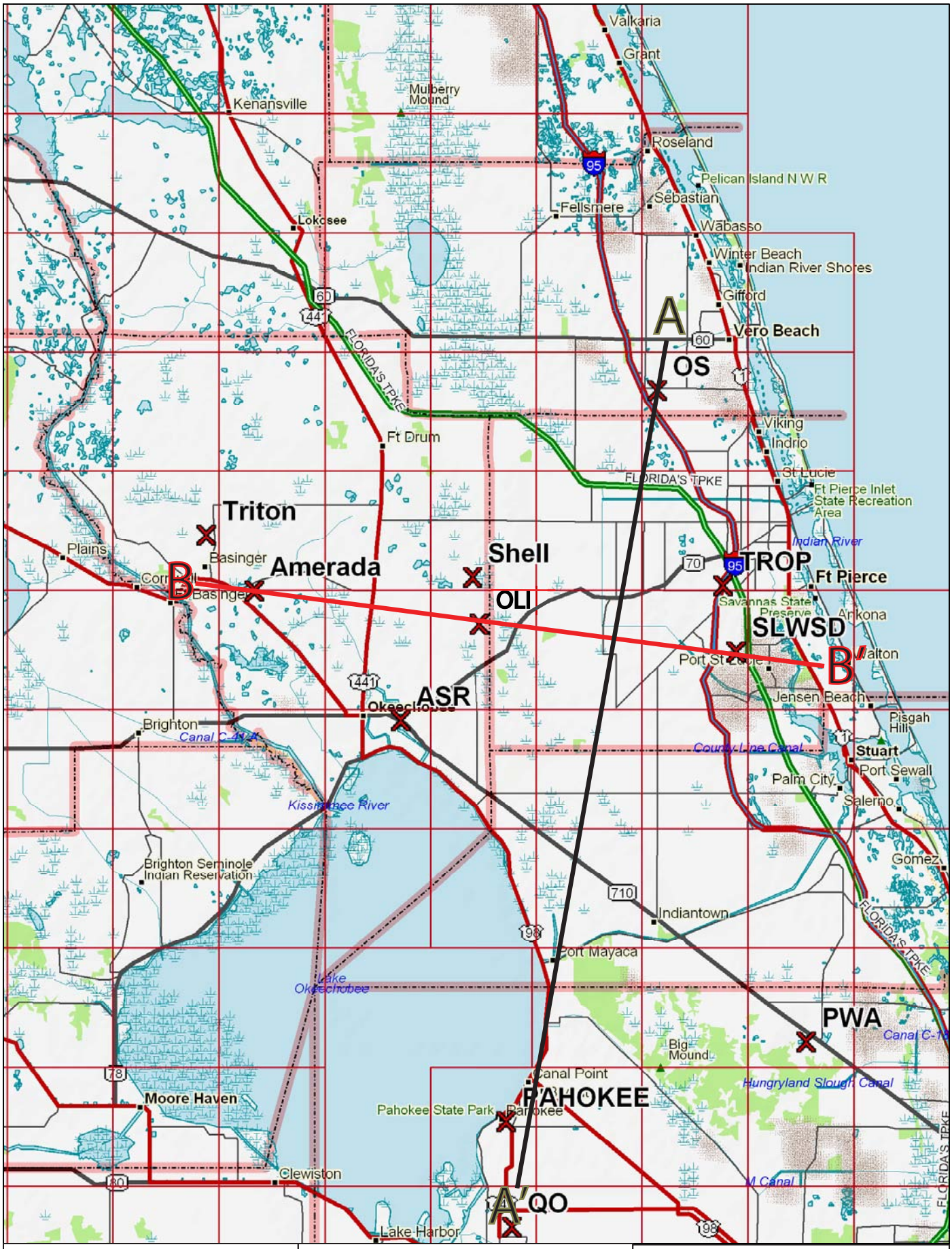
The bicarbonate concentrations in the upper monitoring zone samples have remained relatively constant throughout the initial 20 months of operation. The lowest value of 55 mg/L was obtained in Feb 2011 and the highest sample result (140 mg/L) was observed in the sample collected in March, 2010. The laboratory inadvertently did not analyze for bicarbonate during the first two and one half monthly sampling events. Average bicarbonate concentration has been 114 mg/L during the first 20 months of operation and values have been consistently close to that concentration for the last 15 months.

The NH3 concentrations averaged 1.662 mg/L during the first 20 months of operation. A high value of 2.00 mg/L was measured in February, May and December 2010. The lowest value of 0.24 was detected in December 2009 and March of 2010. Concentrations have remained relatively stable near the average value for the last 13 months. The TKN concentrations in the upper monitoring zone samples varied during the first 20 months of test operation reaching a maximum concentration of 3.10 mg/L in the sample collected March 2010 and the lowest concentration measured was below the Method Detection Limit (MDL) and occurred twice in October 2009 and February 2010. The average TKN concentration was 1.35 mg/L during operational testing. The TKN concentrations appear to have stabilized and have remained below 2.0 mg/L since April 2010.

9.5.3 Injectate

During the first 20 months of operation the injectate was sampled every month (total samples n = 20). The average total dissolved solids (TDS) concentration in these samples is $\bar{x}$ = 7,000 mg/L. The total suspended solids (TSS) content ranged from 15.0 mg/L to 85 mg/L. The average TSS concentration was 47 mg/L during operational testing. The principal cations and anions in the injectate include HCO3 ($\bar{x}$ = 800 mg/L; n = 20), Na ($\bar{x}$ = 2,000 mg/L; n = 20), Cl ($\bar{x}$ = 4,000 mg/L; n = 20), and K ($\bar{x}$ = 1,200 mg/L; n = 20).

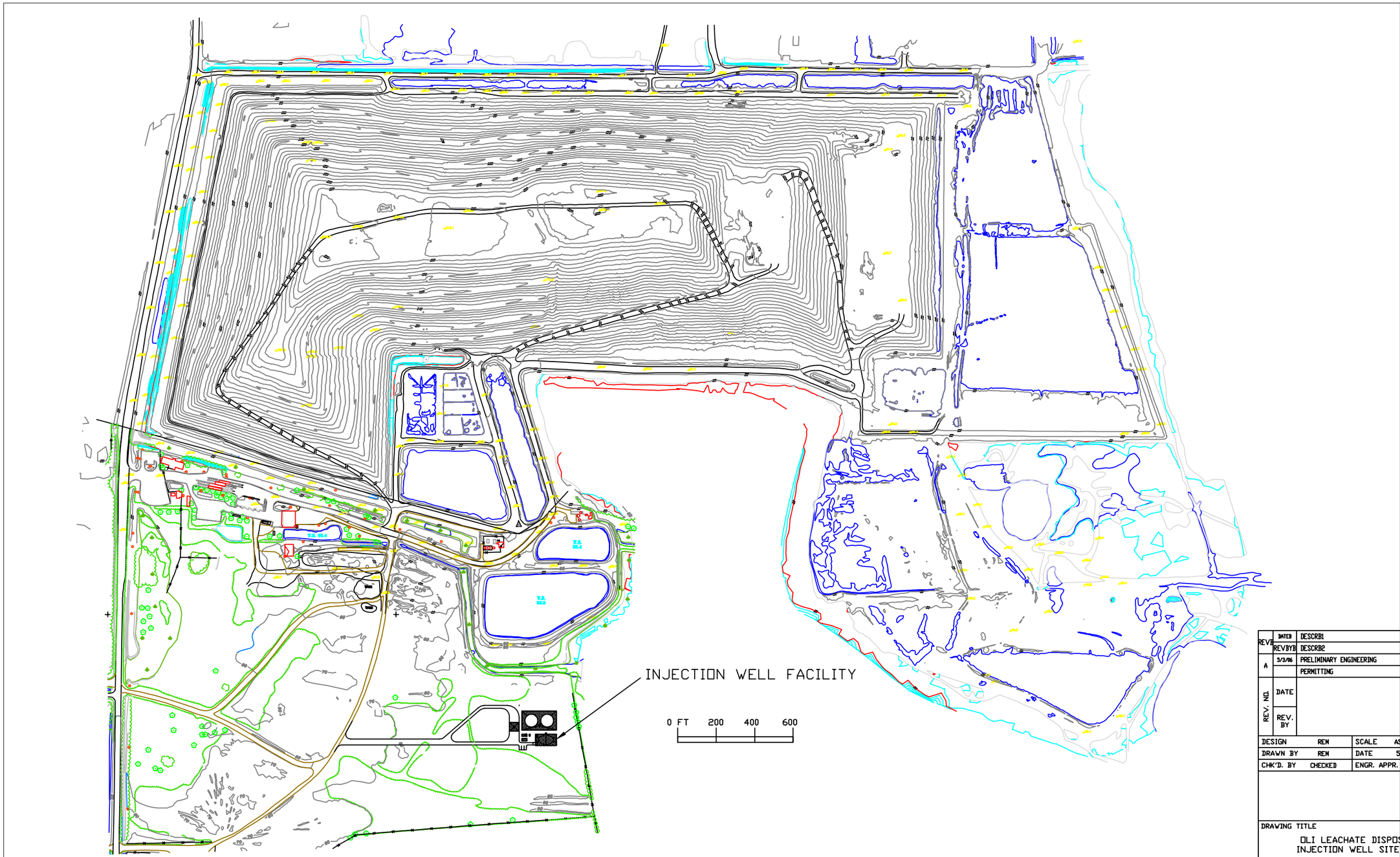
All of the monitored nitrogen compounds are generally present in the injectate. TKN concentrations ranged from 45 to 1,800 mg/L during the first 20 months of test operation. The NH3 levels ranged from 410 to 1,500 mg/L. The NO3 levels ranged from Below Detection Limit (0.005 = MDL/2) to 0.50 mg/L. A copy of the annual analytical laboratory test report for Primary and Secondary Drinking Water Standards from April 2011 is included in **Appendix E**.



L.S. SIMS & ASSOCIATES
Environmental Consulting

FIGURE 1
OKEECHOBEE LANDFILL, INC. (OLI)
SITE LOCATION MAP
OKEECHOBEE, FLORIDA

Scale 1 : 600 000
1" = 9 47 mi
0 3 6 9 12 15 mi
0 4 8 12 16 20 km
TN
MN
5.1°W



REV. NO.	DATE	DESCRIPTION
	DATE	DESCRIPTION
	REV BY	DESCRIPTION
A	5/3/06	PRELIMINARY ENGINEERING
		PERMITTING

DESIGN	REN	SCALE	AS NOTED
DRAWN BY	REN	DATE	5/3/06
CHK'D. BY	CHECKED	ENGR. APPR.	APPR

DRAWING TITLE

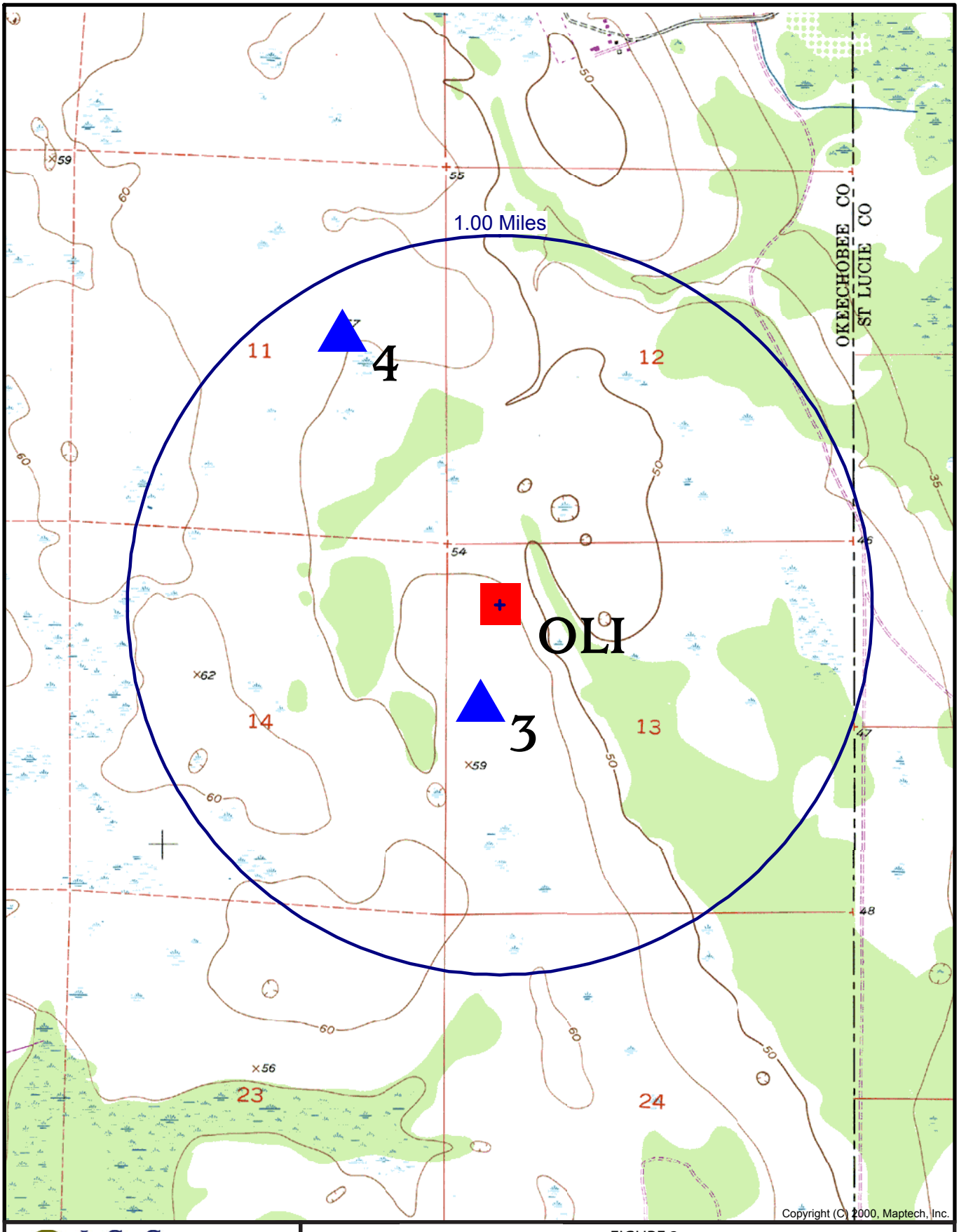
OLI LEACHATE DISPOSAL
INJECTION WELL SITE PLAN

AREA | JOB NO.

D | DWG. NO. FIGURE 2 | REV.

ROGER E. MAYFIELD, P.E.
FL #46092
4270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
ENVIRONMENTAL CONSULTING



L.S. SIMS & ASSOCIATES
Environmental Consulting

FIGURE 3
OKEECHOBEE LANDFILL, INC.
WELL INVENTORY MAP
OKEECHOBEE, FLORIDA

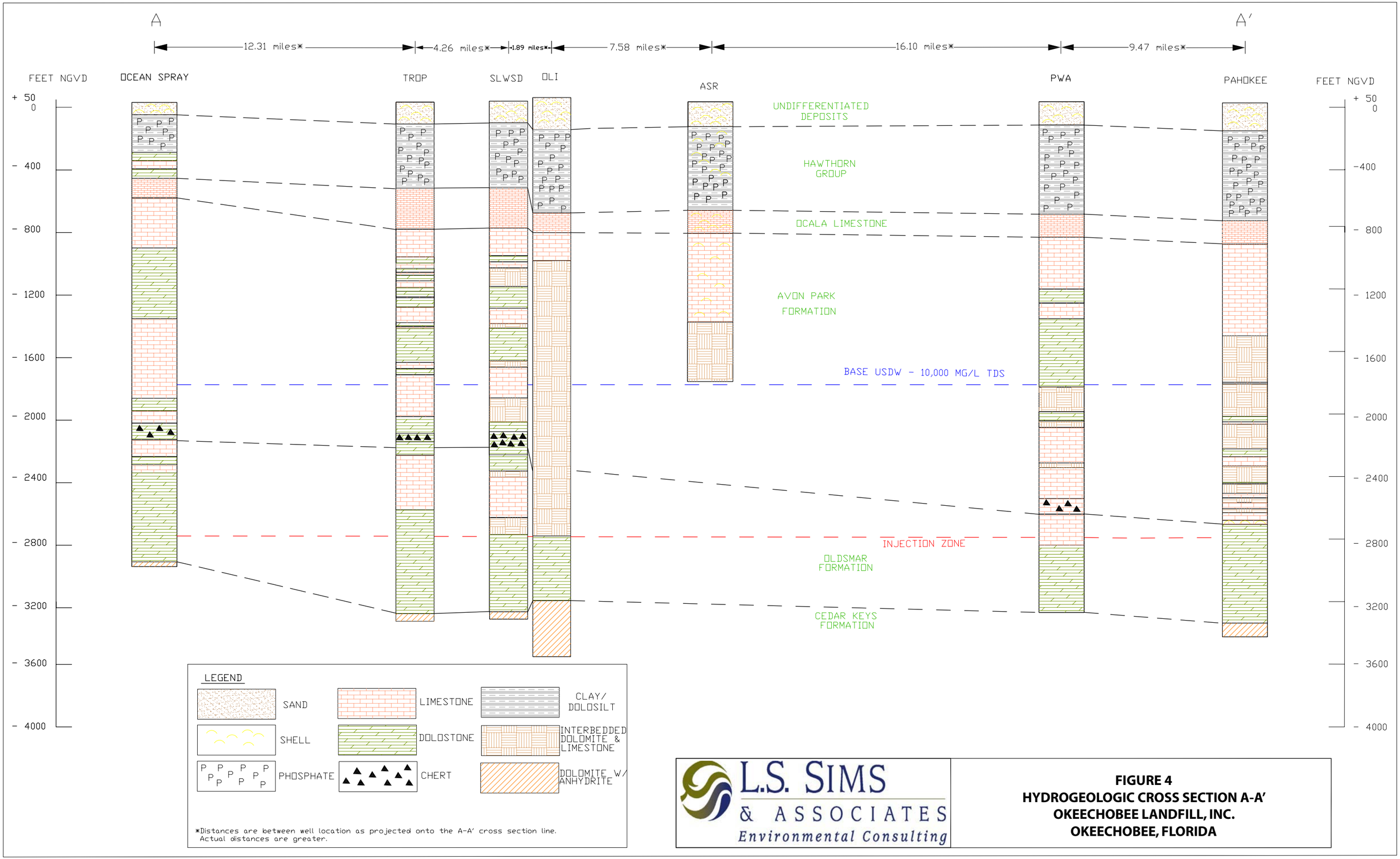


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FIGURE 4
HYDROGEOLOGIC CROSS SECTION A-A'
OKEECHOBEE LANDFILL, INC.
OKEECHOBEE, FLORIDA

B

B′

3.31 miles*

11.36 miles*

4.26 miles*

1.42 miles*

16.57 miles*

0.95 miles*

FEET NGVD

+ 100

0

- 400

- 800

- 1200

- 1600

- 2000

- 2400

- 2800

- 3200

- 3600

- 4000

TRITON

AMERADA

ASR

SHELL

OLI

TROP

SLWSD

FEET NGVD

+100

0

-400

- 800

- 1200

- 1600

- 2000

- 2400

- 2800

- 3200

- 3600

- 4000

UNDIFFERENTIATED DEPOSITS

HAWTHORN GROUP

OCALA LIMESTONE

AVON PARK FORMATION

BASE USDW - 10,000 MG/L TDS

OLDSMAR FORMATION

INJECTION ZONE

CEDAR KEYS FORMATION

LEGEND

SAND

SHELL

PHOSPHATE

LIMESTONE

DOLOSTONE

CHERT

CLAY/ DOLOSILT

INTERBEDDED DOLOMITE & LIMESTONE

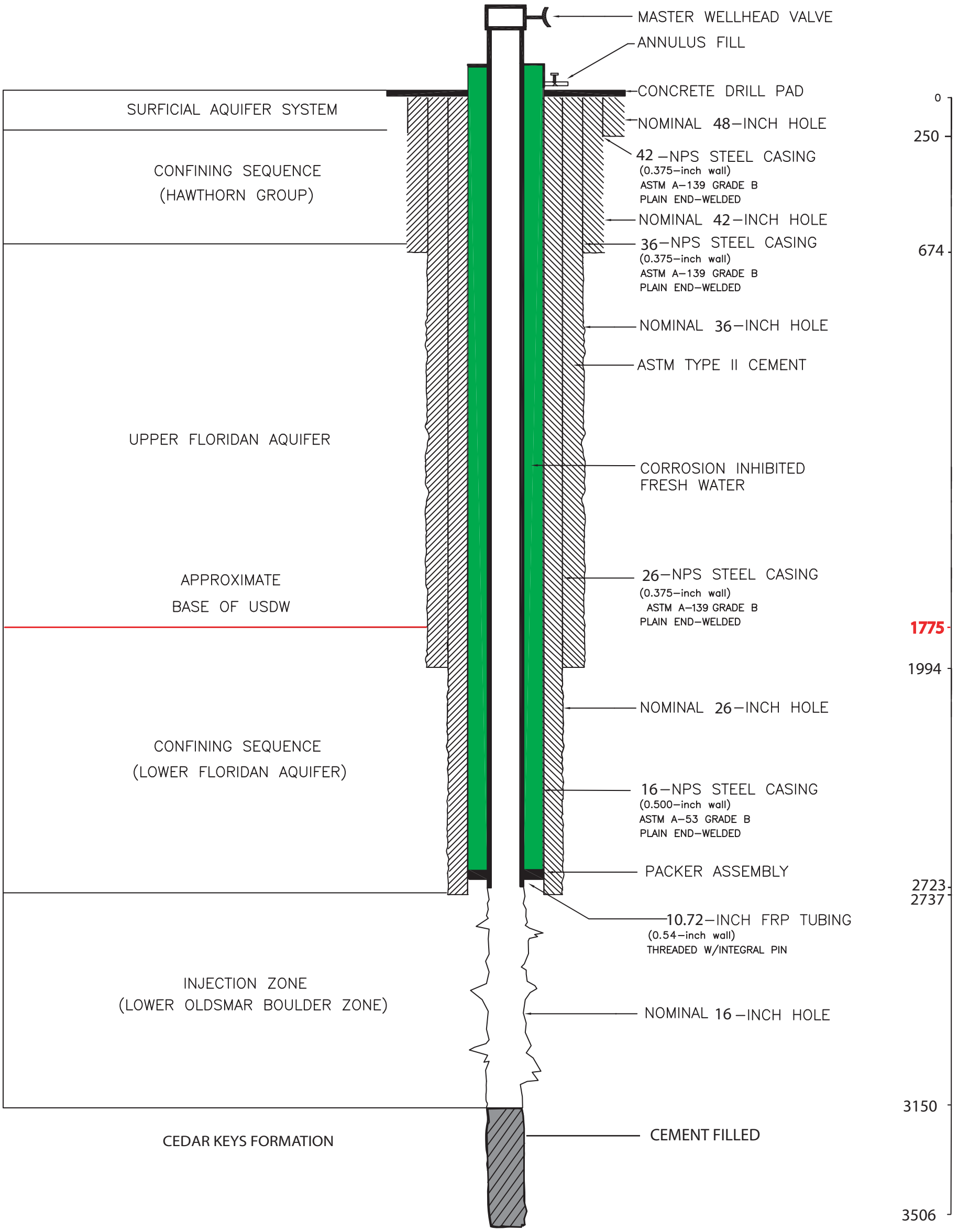
DOLOMITE W/ ANYHDRITE

*Distances are between well location as projected normally onto the B-B′ cross section line. Actual distances are greater.

L.S. SIMS & ASSOCIATES

Environmental Consulting

FIGURE 5
HYDROGEOLOGIC CROSS SECTION B-B′
OKEECHOBEE LANDFILL, INC.
OKEECHOBEE, FLORIDA

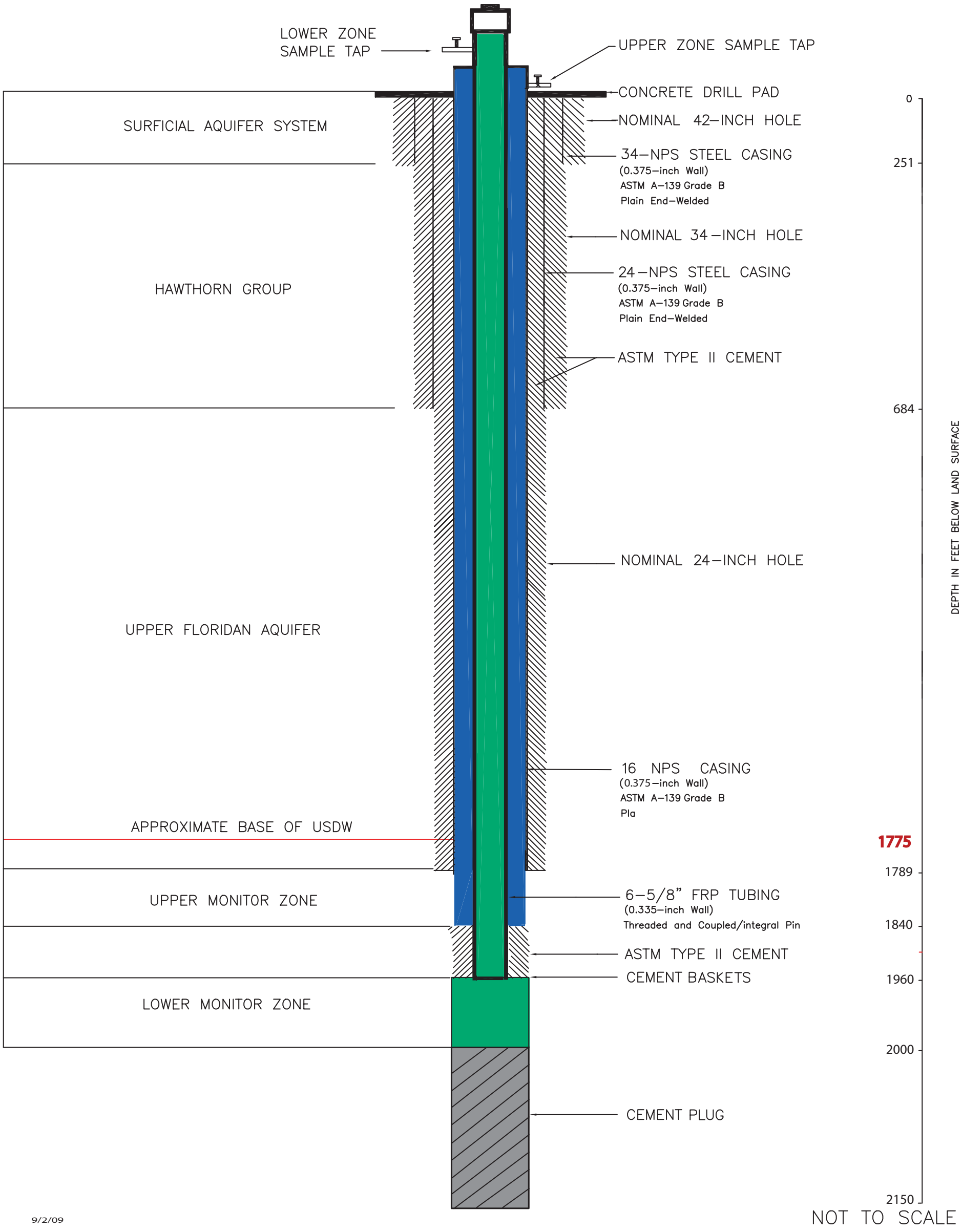


9/2/2009

NOT TO SCALE

L.S. SIMS & ASSOCIATES
Environmental Consulting

FIGURE 6
AS-BUILT INJECTION WELL CONSTRUCTION DIAGRAM
OKEECHOBEE LANDFILL, INC.
OKEECHOBEE, FLORIDA



L.S. SIMS & ASSOCIATES
Environmental Consulting

FIGURE 7
AS-BUILT MONITOR WELL CONSTRUCTION DIAGRAM
OKEECHOBEE LANDFILL, INC.
OKEECHOBEE, FLORIDA

Florida Department of Environmental Protection

Twin Towers Office Bldg., 2600 Blair Stone Road,
Tallahassee, Florida 32399-2400

DEP Form No:	62-528.900(1)
Form Title:	Application to Construct/ Operate/Abandon Class I, III, or V Injection Well Systems
Effective Date:	
DEP Application No.:	(Filled in by DEP)

APPLICATION TO CONSTRUCT/OPERATE/ABANDON
CLASS I, III, OR V INJECTION WELL SYSTEMS

Part I. Directions

A. All applicable items must be completed in full in order to avoid delay in processing this application. Where attached sheets or other technical documentation are utilized in lieu of the blank space provided, indicate appropriate cross-reference in the space and provide copies to the Department in accordance with C. below. Where certain items do not appear applicable to the project, indicate N/A in the appropriate spaces.

B. All information is to be typed or printed in ink.

C. Four (4) copies of this application and four (4) copies of supporting information such as plans, reports, drawings and other documents shall be submitted to the appropriate District/Subdistrict office. An engineering report is also required to be submitted to support this application pursuant to the applicable sections of Rule 62-528, F.A.C. The attached list* shall be used to determine completeness of supporting data submitted or previously received. A check for the application fee in accordance with Rule 62-4.050, F.A.C., made payable to the Department shall accompany the application.

D. For projects involving construction, this application is to be accompanied by four (4) sets of engineering drawings, specifications and design data as prepared by a Professional Engineer registered in Florida, where required by Chapter 471, Florida Statutes.

E. Attach 8 1/2″ x 11″ USGS site location map indicating township, range and section and latitude/longitude for the project.

PART II. General Information

A. Applicant Name Tim Hawkins Title Area Vice President

Address 2700 NW 48th Street

City Pompano Beach State Florida Zip 33073-0000

Telephone Number (954) 984-2035

B. Project Status: ☐ New ☒ Existing

☐ Modification (specify) _____

*"Engineering and Hydrogeologic Data Required for Support of Application to Construct, Operate and Abandon Class I, III, or V Injection Wells"

C. Well Type: ☐ Exploratory Well ☐ Test/Injection Well

D. Type of Permit Application

☐ Class I Test/Injection Well Construction and Testing Permit

☒ Class I Well Operation Permit

☐ Class I Well Operation Repermitting

☐ Class I Well Plugging and Abandonment Permit

☐ Class III Well Construction/Operation/Plugging and Abandonment Permit

☐ Class I Exploratory Well Construction and testing Permit

☐ Class V Well Construction Permit

☐ Class V Well Operation Permit

☐ Class V Well Plugging and Abandonment Permit

☐ Monitor Well Only

E. Facility Identification:

Name Okeechobee Landfill, Inc.

Facility Location: Street 10800 NE 128th Avenue

City Okeechobee County Okeechobee

SIC Code(s) 495303

F. Proposed facility located on Indian Lands: Yes ☐ No ☒

G. Well Identification:

Well No. 1 of 1 Wells
(total #)

Purpose (Proposed Use) Disposal of landfill leachate

Well Location: Latitude: N27° 20′ 10.879 Longitude: W80° 41′ 25.799
(attach separate sheet(s), if necessary, for multiple wells)

Subpart B. General Project Description:

H. General Project Description: Describe the nature, extent and schedule of the injection well project. Refer to existing and/or future pollution control facilities, expected improvement in performance of the facilities and state whether the project will result in full compliance with the requirements of Chapter 403, F.S., and all rules of the Department. Attach additional sheet(s) if necessary or cross-reference the engineering report.

See Operation Permit Application Support Document

Application Support Document, L.S. Sims & Associates, Inc., June, 2011

DEP Form No:	62-528.900(1)
Form Title:	Application to Construct/ Operate/Abandon Class I, III, or V Injection Well Systems
Effective Date:	
DEP Application No.:	(Filled in by DEP)

PART III. Statement by Applicant and Engineer

A. Applicant

I, the owner/authorized representative* of Okeechobee Landfill, Inc. , certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I understand that this certification also applies to all subsequent reports submitted pursuant to this permit. Where construction is involved, I agree to retain the design engineer, or other professional engineer registered in Florida, to provide inspection of construction in accordance with Rule 62-528.455(1)(c), F.A.C.

Signed _____ Date 5-17-11

Tim Hawkins, Area Vice President
Name and Title (Please Type)

(954) 984-2035
Telephone Number

*Attach a Letter of Authorization.

B. Professional Engineer Registered in Florida

This is to certify that the engineering features of this injection well have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgement, that the well, when properly maintained and operated, will discharge the effluent in compliance with all applicable statutes of the State of Florida and the rules of the Department. It is also agreed that the undersigned will furnish the applicant a set of instructions for proper maintenance and operation of the well.

ROGER E. MAYFIELD LICENSE No. 0046092 STATE OF FLORIDA PROFESSIONAL ENGINEER 7/5/2011
(Please Affix Seal)

Signed _____

Roger E. Mayfield, P.E.
Name (Please Type)

REM Associates, Inc.
Company Name (Please Type)

125 E. Merritt Island Cswy, #209-355, Merritt Island, Florida 32952
Mailing Address(Please Type)

Florida Registration No. 0046092 Date 7/5/2011 ~~05/16/11~~ Phone No. (407)300-8786 ~~(941) 812-1121~~

ENGINEERING AND HYDROLOGIC DATA
REQUIRED FOR SUPPORT OF APPLICATION
TO CONSTRUCT, OPERATE, AND ABANDON
CLASS I, III, OR V INJECTION WELL SYSTEMS

The following information shall be provided for each type of permit application.

A. CLASS I TEST/INJECTION WELL CONSTRUCTION AND TESTING PERMIT

1. A map showing the location of the proposed injection wells of well field area for which a permit is sought and the applicable area of review. Within the area of review, the map must show the number or name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, public water systems, mines (surface and subsurface), quarries, water wells and other pertinent surface features including residences and roads. The map should also show faults, if known or suspected. Only information of public record and pertinent information known to the applicant is required to be included on this map.

2. A tabulation of data on all wells within the area of review which penetrate into the proposed injection zone, confining zone, or proposed monitoring zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of plugging and/or completion, and any additional information the Department may require.

3. Maps and cross sections indicating the general vertical and lateral limits within the area of review of all underground sources of drinking water, their position relative to the injection formation and the direction of water movement, where known, in each underground source of drinking water which may be affected by the proposed injection.

4. Maps and cross sections detailing the hydrology and geologic structures of the local area.

5. Generalized maps and cross sections illustrating the regional geologic setting.

6. Proposed operating data.

   (a) Average and maximum daily rate and volume of the fluid to be injected;

   (b) Average and maximum injection pressure; and,

   (c) Source and an analysis of the chemical, physical, radiological and biological characteristics of injection fluids.

7. Proposed formation testing program to obtain an analysis of the chemical, physical and radiological characteristics of and other information on the injection zone.

8. Proposed stimulation program.

9. Proposed injection procedure.

10. Engineering drawings of the surface and subsurface construction details of the system.

11. Contingency plans to cope with all shut-ins or well failures, so as to protect the quality of the waters of the State as defined in Rule 62-3 and 62-520, F.A.C., including alternate or emergency discharge provisions.

12. Plans (including maps) and proposed monitoring data to be reported for meeting the monitoring requirements in Rule 62-528.425, F.A.C.

13. For wells within the area of review which penetrate the injection zone but are not properly completed or plugged, the corrective action proposed to be taken under Rule 62-528.300(5), F.A.C.

14. Construction procedures including a cementing and casing program, logging procedures, deviation checks, proposed methods for isolating drilling fluids from surficial aquifers, proposed blowout protection (if necessary), and a drilling, testing and coring program.

15. A certification that the applicant has ensured, through a performance bond or other appropriate means, the resources necessary to close, plug or abandon the well as required by Rule 62-528.435(9), F.A.C.

B. CLASS I INJECTION WELL OPERATION PERMIT

1. A report shall be submitted with each application for a Class I Well operating permit, which shall include, but not be limited to, the following information:

   (a) Results of the information obtained under the construction permit described in A. CLASS I TEST/INJECTION WELL CONSTRUCTION AND TESTING PERMIT, including:

      (1) All available logging and testing program data and construction data on the well or well field;

      (2) A satisfactory demonstration of mechanical integrity for all new wells pursuant to Rule 62-528.300(6), F.A.C;

      (3) The actual operating data, including injection pressures versus pumping rates where feasible, or the anticipated maximum pressure and flow rate at which the permittee will operate, if approved by the Department;

      (4) The actual injection procedure;

      (5) The compatibility of injected waste with fluids in the injection zone and minerals in both the injection zone and the confining zone; and,

      (6) The status of corrective action on defective wells in the area of review.

   (b) Record drawings, based upon inspections by the engineer or persons under his direct supervision, with all deviations noted;

   (c) Certification of completion submitted by the engineer of record;

   (d) If requested by the Department, operation manual including emergency procedures;

(e) Proposed monitoring program and data to be submitted;

(f) Proof that the existence of the well has been recorded on the surveyor's plan at the county courthouse; and,

(g) Proposed plugging and abandonment plan pursuant to Rule 62-528.435(2), F.A.C.

C. CLASS I WELL OPERATION REPERMITTING

1. An updated map showing the location of the injection wells or well field area for which a permit is sought and the applicable area of review. Within the area of review, the map must show the number or name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, public water systems, mines (surface and subsurface), quarries, water wells and other pertinent surface features including residences and roads. The map should also show faults, if known or suspected. Only information of pubic record and pertinent information known to the applicant is required to be included on this map.

2. A tabulation of data on all wells within the area of review which penetrate into the injection zone, confining zone, or monitoring zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of plugging and/or completion, and any additional information the Department may require.

3. Maps and cross sections indicating the general vertical and lateral limits within the area of review of all underground sources of drinking water, their position relative to the injection formation and the direction of water movement, where known, in each underground source of drinking water which may be affected by the injection.

4. Maps and cross sections detailing the hydrology and geologic structures of the local area.

5. Generalized maps and cross sections illustrating the regional geologic setting.

6. Contingency plans to cope with all shut-ins or well failures, so as to protect the quality of the waters of the State as defined in Rule 62-3 and 62-520, F.A.C., including alternate or emergency discharge provisions.

7. For wells within the area of review which penetrate the injection zone but are not properly completed or plugged, the corrective action proposed to be taken under Rule 62-528.300(5), F.A.C.

8. A certification that the applicant has ensured, through a performance bond or other appropriate means, the resources necessary to close, plug or abandon the well as required by Rule 62-528.435(9), F.A.C.

9. A report shall be submitted with each application for repermitting of Class I Well operation which shall include the following information:

   (a) All available logging and testing program data and construction data on the well or well field;

(b) A satisfactory demonstration of mechanical integrity for all wells pursuant to Rule 62-528.300(6), F.A.C.;

(c) The actual operating data, including injection pressures versus pumping rates where feasible, or the anticipated maximum pressure and flow rate at which the permittee will operate, if approved by the Department;

(d) The actual injection procedure;

(e) The compatibility of injected waste with fluids in the injection zone and minerals in both the injection zone and the confining zone;

(f) The status of corrective actin on defective wells in the area of review;

(g) Record drawings, based upon inspections by the engineer or persons under his direct supervision, with all deviations noted;

(h) Certification of completion submitted by the engineer of record;

(i) An updated operation manual including emergency procedures;

(j) Proposed revisions to the monitoring program or data to be submitted; and,

(k) Proposed plugging and abandonment plan pursuant to Rule 62-528.435(2), F.A.C.

D. CLASS I WELL PLUGGING AND ABANDONMENT PERMIT

1. The reasons for abandonment.

2. A proposed plan for plugging and abandonment describing the preferred and alternate methods, and justification for use.

   (a) The type and number of plugs to be used;

   (b) The placement of each plug including the elevation of the top and bottom;

   (c) The type and grade and quantity of cement or any other approved plugging material to be used; and,

   (d) The method for placement of the plugs.

3. The procedure to be used to meet the requirements of Rule 62-528.435, F.A.C.

E. CLASS III WELLS CONSTRUCTION/OPERATION/PLUGGING AND ABANDONMENT PERMIT

Construction Phase

1. A map showing the location of the proposed injection wells or well field area for which a permit is sought and the applicable area of review. Within the area of review, the map must show the number or name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, public water system, mines (surface and subsurface), quarries, water wells and other pertinent surface features including residences and roads. The map should also show faults, if known or suspected. Only information of public record and pertinent information known to the applicant is required to be included on this map.

2. A tabulation of data on all wells within the area of review which penetrate into the proposed injection zone, confining zone, or proposed monitoring zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of plugging and/or completion, and any additional information the Department may require.

3. Maps and cross sections indicating the general vertical and lateral limits within the area of review of all underground sources of drinking water, their position relative to the injection formation and the direction of water movement, where known, in each underground source of drinking water which may be affected by the proposed injection.

4. Maps and cross sections detailing the hydrology and geologic structures of the local area.

5. Generalized maps and cross sections illustrating the regional geologic setting.

6. Proposed operating data:

   (a) Average and maximum daily rate and volume of the fluid to be injected;

   (b) Average and maximum injection pressure; and,

   (c) Source and an analysis of the chemical, physical, radiological and biological characteristics of injection fluids, including any additives.

7. Proposed formation testing program to obtain an analysis of the chemical, physical and radiological characteristics of and other information on the injection zone.

8. Proposed stimulation program.

9. Proposed injection procedure.

10. Engineering drawings of the surface and subsurface construction details of the system.

11. Contingency plans to cope with all shut-ins or well failures or catastrophic collapse, so as to protect the quality of the waters of the State as defined in Rule 62-3 and 62-520, F.A.C., including alternate or emergency discharge provisions.

12. Plans (including maps) and proposed monitoring data to be reported for meeting the monitoring requirements in Rule 62-528.425, F.A.C.

13. For wells within the area of review which penetrate the injection zone but are not properly completed or plugged, the corrective action proposed to be taken under Rule 62-528.300(5), F.A.C.

14. Construction procedures including a cementing and casing program, logging procedures, deviation checks, proposed methods for isolating drilling fluids from surficial aquifers, and a drilling, testing and coring program.

15. A certificate that the applicant has ensured, through a performance bond or other appropriate means, the resources necessary to close, plug or abandon the well as required by Rule 62-528.435(9), F.A.C.

16. Expected changes in pressure, native fluid displacement, direction of movement of injection fluid.

17. A proposed monitoring plan, which includes a plan for detecting migration of fluids into underground sources of drinking water, a plan to detect water quality violation in the monitoring wells, and the proposed monitoring data to be submitted.

Operation Phase

1. The following information shall be provided to the Department prior to granting approval for the operation of the well or well field:

   (a) All available logging and testing program data and construction data on the well or well field;

   (b) A satisfactory demonstration of mechanical integrity for all new wells pursuant to Rule 62-528.300(6), F.A.C.;

   (c) The actual operating data, including injection pressure versus pumping rate where feasible, or the anticipated maximum pressure and flow rate at which the permittee will operate, if approved by the Department;

   (d) The results of the formation testing program;

   (e) The actual injection procedure; and,

   (f) The status of corrective action on defective wells in the area of review.

Plugging and abandonment Phase

1. The justification for abandonment.

2. A proposed plan for plugging and abandonment describing the preferred and alternate methods.

   (a) The type and number of plugs to be used;

   (b) The placement of each plug including the elevation of the top and bottom;

   (c) The type and grade and quantity of cement or any other approved plugging material to be used; and,

   (d) The method for placement of the plugs.

3. The procedure to be used to meet the requirements of Rule 62-528.435, F.A.C.

F. EXPLORATORY WELL CONSTRUCTION AND TESTING PERMIT

1. Conceptual plan of the injection project. Include number of injection wells, proposed injection zone, nature and volume of injection fluid, and proposed monitoring program.

2. Preliminary Area of Review Study. Include the proposed radius of the area of review with justification for that radius. Provide a map showing the location of the proposed injection well or well field area for which a permit is sought and the applicable area of review. Within the area of review, the map must show the number or name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, public water systems, mines (surface and subsurface), quarries, water wells and other pertinent surface features including residences and roads. The map should also show faults, if known or suspected. Only information of public record and pertinent information known to the applicant is required to be included on this map.

3. Proposed other uses of the exploratory well.

4. Drilling and testing plan for the exploratory well. The drilling plan must specify the proposed drilling program, sampling, coring, and testing procedures.

5. Abandonment Plan.

G. CLASS V WELL CONSTRUCTION PERMIT

(This form should be used for Class V Wells instead of Form 62-528.900(3), F.A.C., when there is a need for a Technical Advisory Committee and an engineering report.)

1. Type and number of proposed Class V Wells:

_____ Wells Receiving Domestic Waste

_____ Desalination Process Concentrate Wells (Reverse Osmosis, etc.)

_____ Aquifer Storage and Recovery Wells

_____ Aquifer Remediation Wells

_____ Salt-water Intrusion Barrier Wells

_____ Cooling Water Return Flow Wells Open-looped System

_____ Subsidence Control Wells

_____ Sand Backfill Wells

_____ Experimental Technology Wells

_____ Wells used to inject spent brine after halogen recovery

_____ Radioactive Waste Disposal Wells*

_____ Borehole Slurry Mining Wells

_____ Other non-hazardous Industrial or Commercial Disposal Wells

(explain) _____

_____ Other (explain) _____

*Provided the concentrations of the waste do not exceed drinking water standards contained in Chapter 62-550, F.A.C.

2. Project Description:

(a) Description and use of proposed injection system;

(b) Nature and volume of injected fluid (the Department may require an analysis including bacteriological analysis) in accordance with Rule 62-528.635(2)(b), F.A.C.; and,

(c) Proposed pretreatment.

3. Water well contractor’s name, title, state license number, address, phone number and signature.

4. Well Design and Construction Details. (For multi-casing configurations or unusual construction provisions, an elevation drawing of the proposed well should be attached.)

   (a) Proposed total depth;

   (b) Proposed depth and type of casing(s);

   (c) Diameter of well;

   (d) Cement type, depth, thickness; and,

   (e) Injection pumps (if applicable): _____ gpm @ _____ psi

   Controls: _____

   _____

   _____

5. Water Supply Wells - When required by Rule 62-528.635(1), F.A.C., attach a map section showing the locations of all water supply wells within a one-half (1/2) mile radius of the proposed well. The well depths and casing depths should be included. When required by Rule 62-528.635(2), F.A.C., results of bacteriological examinations of water from all water supply wells within one-half (1/2) mile and drilled to approximate depth of proposed well should be attached.

6. Area of review (When required by Rule 62-528.300(4), F.A.C.)

   Include the proposed radius of the area of review with justification for that radius. Provide a map showing the location of the proposed injection well or well field area for which a permit is sought and the applicable area of review. Within the area of review, the map must show the number or name, and location of all producing wells, injection wells, abandoned wells, dry holes, surface bodies of water, springs, public water systems, mines (surface and subsurface), quarries, water wells and other pertinent surface features including residences and roads. The map should also show faults, if known or suspected. Only information of public record and pertinent information known to the applicant is required to be included on this map.

H. CLASS V WELL OPERATION PERMIT

(Final report of the construction that includes the following information may be submitted with the application to operate.)

1. Permit Number of Class V Construction Permit: _____

2. Owner’s Name: _____

3. Type of Wells: _____

4. Construction and Testing Summary:

(a) Actual Dimensions:

Diameter (inches)	Well Depth (feet)	Casing Depth (feet)

(b) Result of Initial Testing

5. Proposed Operating Data:

(a) Injection Rate (GPM);

(b) Description of injected waste; and,

(c) Injection pressure and pump controls.

6. Proposed Monitoring Plan (if any):

(a) Number of monitoring wells;

(b) Depth(s);

(c) Parameters;

(d) Frequency of sampling; and,

(e) Instrumentation (if applicable) Flow _____

Pressure _____

I. CLASS V WELLS PLUGGING AND ABANDONMENT PERMIT

1. Permit number of Class V construction or operating permit.

2. Type of well.

3. Proposed plugging procedures, plans and specifications.

4. Reasons for abandonment.

J. MONITOR WELL PERMIT

This section should be used only when application is made for a monitor well only. If a monitor well is to be constructed under a Class I, III, or V injection well construction permit, it is necessary to fill in this section.

1. A site map showing the location of the proposed monitor wells for which a permit is sought. The map must be to scale and show the number or name, and location of all producing wells, injection wells, abandoned wells, dry holes, water wells and other pertinent surface features including structures and roads.

2. Maps and cross sections indicating the general vertical and lateral limits within the area of review of all underground sources of drinking water, their position relative to the injection formation and the direction of water movement, where known, in each underground source of drinking water which may be affected by the proposed injection.

3. Maps and cross sections detailing the hydrology and geologic structures of the local area.

4. Generalized maps and cross sections illustrating the regional geologic setting.

5. Proposed formation testing program to obtain an anlysis of the chemical, physical and radiological characteristics of and other information on the monitor zone(s).

6. Proposed monitoring procedure.

7. Engineering drawings of the surface and subsurface construction details of the monitoring system.

8. Proposed monitoring data to be reported for meeting the monitoring requirements in Rule 62-528.425, F.A.C.

9. Construction procedures including a cementing and casing program, logging procedures, deviation checks, proposed methods for isolating drilling fluids from surficial aquifers, proposed blowout protection (if necessary), and a drilling, testing and coring program

10. Monitor Well Information:

☒ On-site ☒ Multizone ☐ Single-zone

☐ Regional ☐ Other (specify) _____

Proposed Monitoring Interval(s) 1790-1840, and 1960-2000

Distance and Direction From Associated Injection Well 100 feet east

L.S. SIMS
& ASSOCIATES
Environmental Consulting

July 5, 2011

Mr. Gardner Strasser, P.G.
Florida Dept. of Environmental Protection
Underground Injection Control
400 N. Congress Avenue
West Palm Beach, Florida 33401

RE: **Class I, Injection Well System**
Okeechobee Landfill, Okeechobee, Florida
Permit No. 0040842-022-UC

Dear Mr. Strasser:

This is to certify that the construction of the injection well IW-1, monitor well MW-1 and surface equipment, have been completed in accordance with the plans and specifications submitted and approved by the Florida Department of Protection and in accordance with Chapter 62-528 of the FAC. Record drawings are enclosed.

If you should have any questions or wish to discuss this further, please call.

Sincerely,

Roger E. Mayfield, P.E.
Registration No. 0046092

Attachments

1530 U.S. Highway 1 Rockledge, Florida 32955 Phone (321) 504-4046 Fax (321) 504-4035

OKEECHOBEE LANDFILL INC.
LEACHATE DISPOSAL INJECTION WELL

AS BUILT CONDITIONS

DRAWING LIST

GENERAL
G-1 IW SLAB – DIMENSIONAL PLAN

CIVIL
C-1 LEACHATE TRANSFER PIPELINE ROUTING

STRUCTRUAL
S-1 STRUCTURAL NOTES
S-2 IW SLAB – STRUCTURAL PLAN
S-3 IW SLAB ELEVATION SCHEMATIC
S-4 CURB – SECTION A
S-5 CATCH BASIN – SECTION B
S-6 CONSTRUCTION JOINT DETAIL – SECTION C
S-7 STORMWATER SUMP – SECTION D
S-8 SLAB ACCESS RAMP – SECTION E
S-9 LEACHATE PUMP STATION – STRUCTURAL PLAN & DETAILS
S-10 IW SLAB – CONTROL JOINT PLAN

PIPING/MECHANICAL
P-1 WELLHEAD PIPING DETAIL
P-2 MW WELLHEAD PIPING DETAIL
P-3 LEACHATE PUMP STATION – PIPING PLAN
P-4 LEACHATE PUMP STATION – SECTION
P-5 INJECTION WELL PIPING PLAN
P-6 INJECTION WELL PIPING SECTION & DETAILS
P-7 ANNULUS VESSEL & STORMWATER PUMP
P-8 DUAL ZONE MONITORING WELL – INSTALLATION DETAILS

INSTRUMENTATION
I-1 PROCESS & INSTRUMENTATION DIAGRAM

REV. NO.	BY	
REVA		
REVB		AS BUILT CONDITIONS 6/24/09

DESIGN	REM	SCALE	
DRAWN BY		DATE	11/8/08
CHK'D. BY	REM	ENGR. APPR.	REM

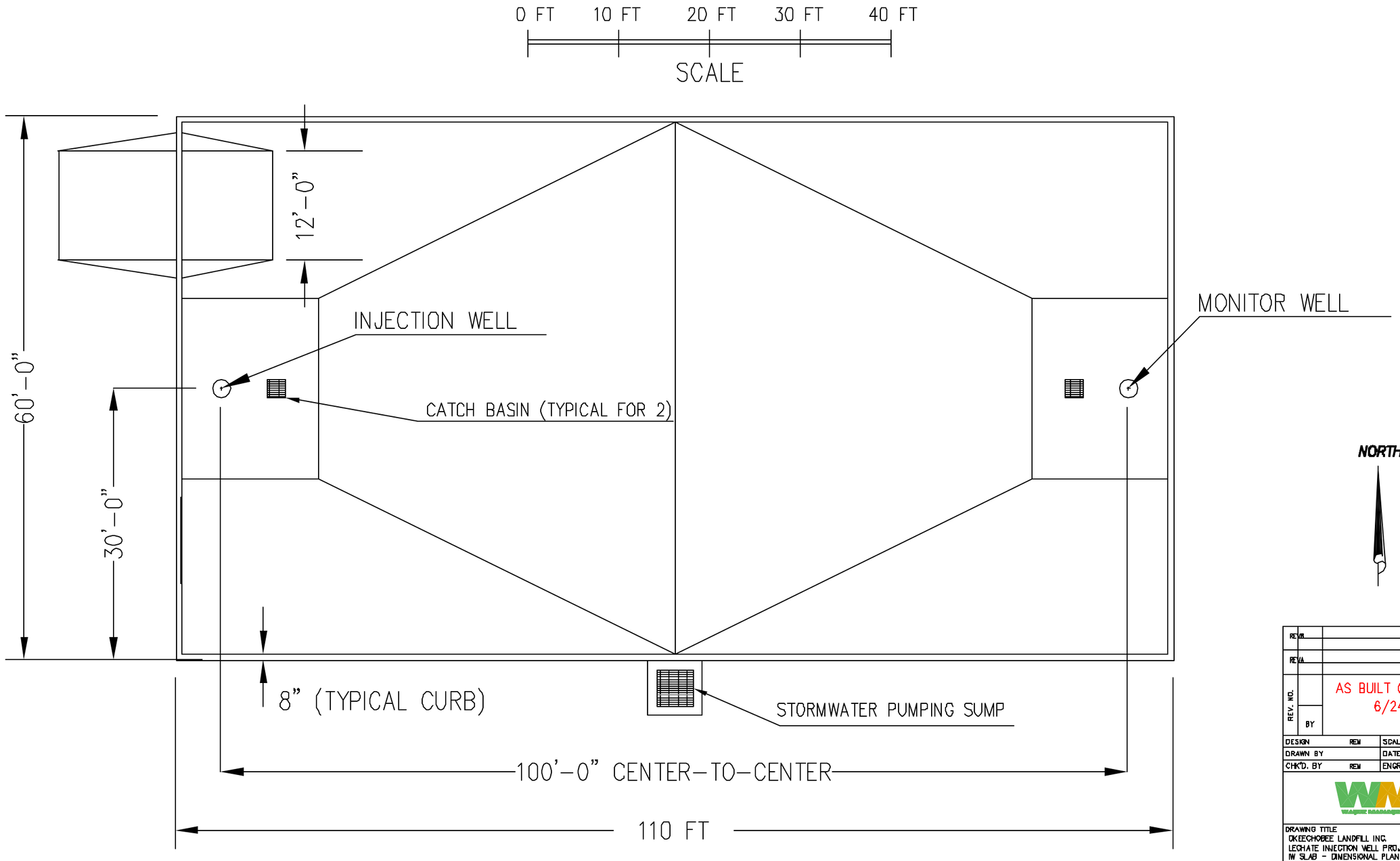
DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT

AREA | JOB NO.

D | DWG. NO. | REV. REV

ROGER E. MAYFIELD, P.E. FL #41092
REM ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION # 27387
4270 ALOMA AVE., #24-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES



REV. NO.	BY	
REVB		
REVA		
		AS BUILT CONDITIONS 6/24/09

DESIGN	REN	SCALE	
DRAWN BY		DATE	11/8/08
CHK'D. BY	REN	ENGR. APPR.	REN

DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
NW SLAB - DIMENSIONAL PLAN

AREA | JOB NO.

D | DWG. NO. G-1 | REV.

ROGER E. MAYFIELD, P.E. FL #46092
REN ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION # 27397
4270 ALONA AVE., #124-161
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
MULTIDISCIPLINARY CONSULTING

LANDFILL

LEACHATE PONDS

CONNECTION TO LEACHATE PUMP STATION

AS BUILT LEACHATE PIPELINE ROUTING SURVEYED BASED ON MARKERS ESTABLISHED BY PIPELINE CONTRACTOR

CONNECTION TO INJECTION WELL PIPING

N: 1091566.6784
E: 756643.0721

DEEP WELL INJECTION LOCATION

DEEP WELL INJECTION CONCRETE PAD 110 FT x 60 FT

112
1092483.07
757068.59
59.95

0 FT 100 FT 200 FT
SCALE

NORTH

AS BUILT CONDITIONS
6/24/2009

ISSUE CODE	A PRELIMINARY	B DESIGN	
C BIDS	D CONSTRUCTION	E APPRVAL	
DESIGN REM	SCALE NA		
DRAWN BY REM	DATE 6/26/08		
CHK'D. BY	ENGR. APPR. APPR		

DRAWING TITLE
LEACHATE TRANSFER PIPELINE ROUTING

AREA AREA | JOB NO. JOBNO

D | DWG. NO. SHEET C-1 | REV.

ROGER E. MAYFIELD, P.E. FL #48082
REM ASSOCIATES
FL CERTIFICATE OF AUTHORIZATION #27397
1270 ALINA AVE., #124-164
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
environmental contractors

STRUCTURAL NOTES

1. APPLICABLE BUILDING CODE: FLORIDA BUILDING CODE 2007.

2. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS.

3. THE CONTRACTOR SHALL USE NEW MATERIALS AND EMPLOY CONSTRUCTION METHODS THAT COMPLY WITH DRAWINGS AND SPECIFICATIONS. ANY DEVIATIONS MUST BE APPROVED BY THE PROJECT ENGINEER IN WRITING.

4. DESIGN LOADS:
A. SLAB ON GRADE: AASHTO HS20-44 W/ 25% IMPACT FACTOR
B. SEISMIC: ZONE 1
C. WIND: 125 MPH
D. ALLOWABLE SOIL BEARING: 2,000 PSF

5. THE FOLLOWING IS TO BE DONE WHERE NEW STRUCTURES OR SLABS ARE TO BE INSTALLED:

A. EXCAVATE TO THE BOTTOM OF THE STRUCTURE OR SLAB STRUCTURAL FILL. THE EXSPOSED SUBGRADE IS TO BE INSPECTED FOR ANY TRASH, ROOTS OR ANY OTHER DELETERIOUS MATERIAL. ANY SUCH MATERIAL IS TO BE REMOVED.
B. THE SUBGRADE IS TO BE COMPACTED TO 95% OF MAXIMUM PROCTOR DENSITY AND TESTED BY AN INDEPENDENT SOILS ENGINEER FOR COMPACTION. THE CONTRACTOR IS TO BE RESPONSIBLE FOR OBTAINING AND PAYMENT OF THESE SERVICES. ANY AREAS NEEDING EXCAVATION BELOW THE SUBGRADE FOR REMOVAL OF DELETERIOUS MATERIAL ARE TO BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER.

6. CODES AND STANDARDS: COMPLY WITH THE FOLLOWING DOCUMENTS,
- ACI 301 – STRUCTURAL CONCRETE FOR BUILDINGS.
- ACI 318 – BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
- ACI 347 – RECOMMENDED PRACTICE FOR CONCRETE FORMWORK.

7. MINIMUM CONCRETE STRENGTH AT 28 DAYS = 4,000 PSI. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI-318.

8. DESIGN MIX: AT LEAST 31 DAYS PRIOR TO START OF PLACING CONCRETE, SUBMIT DESIGN MIX FOR CONCRETE TO THE PROJECT ENGINEER, INDICATING THAT THE CONCRETE INGREDIENTS AND PROPORTIONS WILL RESULT IN A CONCRETE MIX MEETING REQUIREMENTS SPECIFIED.

9. REINFORCING STEEL SHALL BE NEW BILLET BARS, INTERMEDIATE GRADE AS PER ASTM A615 GRADE 60. WELDED WIRE FABRIC SHALL BE AS PER ASTM A185.

10. MINIMUM CLEAR COVER OVER REINFORCING BARS SHALL BE AS FOLLOWS:

A. CONCRETE AGAINST EARTH, UNFORMED: 3 INCHES.
B. CONCRETE AGAINST FORMWORK: 2 INCHES.

11. THE CONTRACTOR SHALL TEST THE WATER-TIGHTNESS OF STRUCTURES CONSTRUCTED UNDER THIS CONTRACT. TESTING SHALL BE PERFORMED AFTER THE CONCRETE IS AT LEAST SEVEN (7) DAYS OLD. TESTING FOR STRUCTURES DESIGNED TO CONTAIN LIQUID SHALL BE PERFORMED PRIOR TO PLACING ANY BACKFILL AROUND THE STRUCTURE. ALL STRUCTURES SHALL BE TESTED FOR LEAKAGE BY FILLING THEM TO THEIR NORMAL OPERATING LEVEL AND OBSERVING THE WATER LEVEL AT THE END OF A 24 HOUR PERIOD. THE DROP IN WATER LEVEL AFTER ADJUSTMENT FOR EVAPORATION AND RAINFALL SHALL NOT EXCEED 1/10 OF 1 PERCENT OF NORMAL VOLUME OF LIQUID CONTAINED IN WATER HOLDING STRUCTURE, AND DAMP SPOTS OR SEEPAGE ARE NOT PRESENT ON WALLS OR OTHER AREAS EXPOSED TO VIEW.

12. CURE FLOOR SURFACES IN ACCORDANCE WITH ACI 330R. ABSORPTIVE MAT: SATURATE BURLAP-POLYETHYLENE WITH WATER AND PLACE BURLAP-SIDE DOWN OVER FLOOR SLAB AREAS, LAPPING ENDS AND SIDES; MAINTAIN IN PLACE FOR 7 DAYS. CHECK AND ADD WATER DAILY AS NEEDED TO KEEP BURLAP SATURATED.

13. CONCRETE TESTING: THE CONTRACTOR SHALL EMPLOY AT HIS OWN EXPENSE A QUALIFIED INDEPENDENT TESTING LABORATORY, APPROVED BY THE ENGINEER, TO PERFORM THE INSPECTION AND TESTING SERVICES SPECIFIED IN ACI 301, "TESTING". PERFORM THE FOLLOWING REQUIRED TESTS:
i. SAMPLING FRESH CONCRETE: ASTM C172, EXCEPT MODIFIED FOR SLUMP TO COMPLY WITH ASTM C94.
ii. SLUMP: ASTM C143; ONE TEST FOR EACH CONCRETE LOAD AT POINT OF DISCHARGE; AND ONE FOR EACH SET OF STRENGTH TEST SPECIMENS.
iii. AIR CONTENT: ASTM C231, PRESSURE METHOD FOR NORMAL WEIGHT CONCRETE; ONE FOR EVERY OTHER CONCRETE LOAD AT POINT OF DISCHARGE, OR WHEN THE INDICATION OF CHANGES REQUIRES.
iv. STRENGTH TEST SPECIMENS: ASTM C31; ONE SET OF FOUR STANDARD CYLINDERS FOR EACH COMPRESSIVE STRENGTH TEST. CAST AND STORE CYLINDERS FOR LABORATORY CURED TEST SPECIMENS AS SPECIFIED IN ASTM C31.
v. STRENGTH TESTS: ASTM C39 FOR COMPRESSION STRENGTH TESTS. MAKE COMPRESSIVE STRENGTH TESTS REPRESENTING ALL CONCRETE AND ONE SET FOR EACH 100 CU YDS., OR FRACTION THEREOF (MINIMUM OF 5 TESTS REQUIRED). REPORT TEST RESULTS IN WRITING TO THE PROJECT ENGINEER.
vi. CERTIFIED LABORATORY REPORT SHALL STATE WHETHER THE REPORTED TESTS COMPLY OR DO NOT COMPLY WITH THE SPECIFICATION

REV. NO.	BY	
REVA		
REVB		
REVC		AS BUILT CONDITIONS 6/24/09

DESIGN REM	SCALE
DRAWN BY	DATE 11/3/08
CHK'D. BY REM	ENGR. APPR. REM

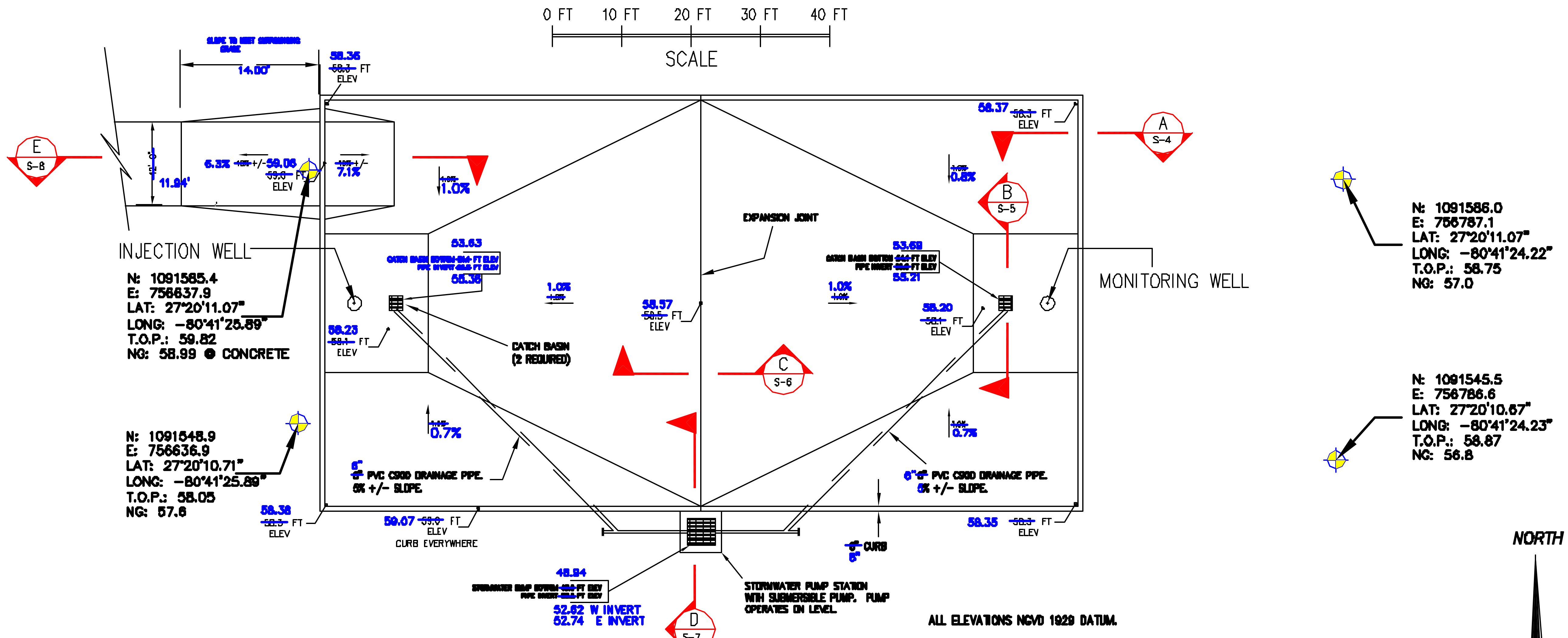
DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
STRUCTURAL NOTES

AREA | JOB NO.

D | DWG. NO. S-1 | REV. REV

ROGER E. MAYFIELD, P.E. FL #46092
REM ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION # 27397
1270 ALOMA AVE., #21-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
civil/architectural engineering



WELL SLAB STRUCTURAL PLAN

SCALE: AS NOTED

AS-BUILT LEGEND:

- ~~10.00~~ = DESIGN PLAN
- 10.00 = AS-BUILT
- INJ. W. = INJECTION WELL
- MW. = MONITOR WELL
- ⊕ = MONITOR WELL
- N: = NORTHING
- E: = EASTING
- LAT: = LATITUDE
- LONG: = LONGITUDE
- T.O.P.: = TOP OF PIPE
- NG: = NATURAL GROUND

NOTE: ALL ELEVATIONS SHOWN ARE IN NATIONAL GEODETIC VERTICAL DATUM (NGVD) 1929.

CERTIFICATION

I HEREBY CERTIFY THAT THE ATTACHED SKETCH OF SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT IT MEETS THE MINIMUM TECHNICAL STANDARDS SET FORTH BY THE FLORIDA BOARD OF LAND SURVEYORS IN CHAPTER 61G17-6, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO CHAPTER 472.027 FLORIDA STATUTES.

DATE OF LAST FIELD WORK: 03-05-09
FOR THE FIRM:
WANTMAN GROUP, INC.

____________________ DATE__________

DEREK G. ZEMAN, P.S.M.
PROFESSIONAL SURVEYOR AND MAPPER
STATE OF FLORIDA LICENSE NO. 6555

SURVEYOR'S NOTES

1. THIS IS A RECORD/AS-BUILT SURVEY AS DEFINED IN CHAPTER 61G17-6.005, FLORIDA ADMINISTRATIVE CODE. THE PURPOSE OF THIS SURVEY IS TO SHOW EXISTING ELEVATIONS AT THE INJECTION WELL PAD AT SPECIFIED LOCATIONS.
2. VERTICAL VALUES ARE BASED ON NATIONAL GEODETIC SURVEY POINT "C-357", A DISK AND A FIRST ORDER CLASS II VERTICAL POINT, HAVING A PUBLISHED ELEVATION OF 57.15' NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND AN ELEVATION OF 58.43' CONVERTED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29) USING A CONVERSION VALUE OF 1.28'.
3. HORIZONTAL VALUES SHOWN HEREON ARE REFERENCED TO THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 1983, (2007 ADJUSTMENT).
4. UNLESS IT BEARS THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER EMPLOYED BY WANTMAN GROUP, INC., THIS REPORT, SKETCH, PLAT OR MAP IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT VALID. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
5. WANTMAN GROUP, INCORPORATED, CERTIFICATE OF AUTHORIZATION NO. 7055, IS ISSUED BY THE FLORIDA DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION.
6. THIS SURVEY DOES NOT REFLECT NOR DETERMINE OWNERSHIP.

Wantman Group, Inc.
Engineering ◆ Planning ◆ Surveying ◆ Environmental
2035 VISTA PARKWAY, SUITE 100 WEST PALM BEACH, FL 33411 (866) 909-2220 phone (561) 687-1110 fax
CERT No. 5091 - LB No. 7055
JACKSONVILLE – ORLANDO – PORT ST. LUCIE – TAMPA
www.wantmangroup.com

DRAWING PATH:	
DRAWING NAME: S-2 S-3.DWG	
DRAWN BY: CS	JOB NUMBER: 306802.00
CHECKED BY: DGZ	FIELD DATE: 02-23-09
SHEET Model OF 2	

ROGER E. MAYFIELD, P.E. FL #46092
REM ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION # 27397
4270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
ENVIRONMENTAL CONSULTING

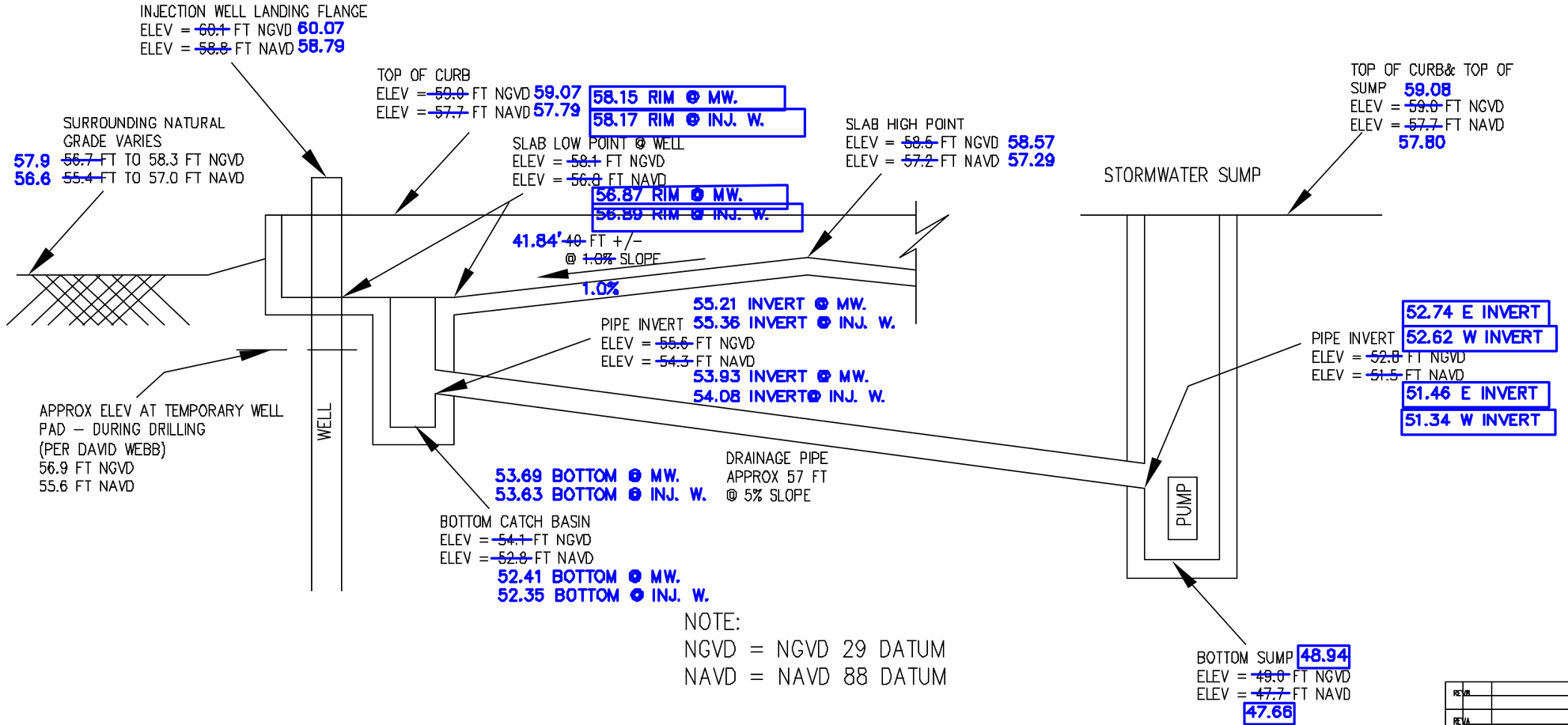
AS BUILT CONDITIONS
6/24/2009

DESIGN	REM	SCALE	
DRAWN BY		DATE	11/8/08
CHK'D. BY	REM	ENGR. APPR.	REM

WASTE MANAGEMENT

DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LEACHATE INJECTION WELL PROJECT
IW SLAB - STRUCTURAL PLAN

AREA		JOB NO.	
D	DWG. NO. S-2	REV.	



NOTE:
NGVD = NGVD 29 DATUM
NAVD = NAVD 88 DATUM

WELL SLAB ELEVATION SCHEMATIC

NOT TO SCALE

AS-BUILT LEGEND:

~~48.88~~ = DESIGN PLAN
10.00 = AS-BUILT
INJ. W. = INJECTION WELL
MW. = MONITOR WELL
= MONITOR WELL
N: = NORTHING
E: = EASTING
LAT: = LATITUDE
LONG: = LONGITUDE
T.O.P.: = TOP OF PIPE
NG: = NATURAL GROUND

Wantman Group, Inc.
Engineering ◆ Planning ◆ Surveying ◆ Environmental
2630 VISTA PARKWAY, SUITE 101 WEST PALM BEACH, FL 33411 (561)
305-2230 phone (561) 687-1110 fax
CERT No. 6081 - LB No. 7055
JACKSONVILLE - ORLANDO - PORT ST. LUCIE - TAMPA
www.wantmangroup.com

DRAWING PATH:	
DRAWING NAME: S-2 S-3.DWG	
DRAWN BY: GS	JOB NUMBER: 326002.00
CHECKED BY: DCZ	FIELD DATE: 02-23-09
SHEET Model OF 2	

ROGER E. MAYFIELD, P.E. FL #46092
REN ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION # 27307
4270 ALOMA AVE., #124-34K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES

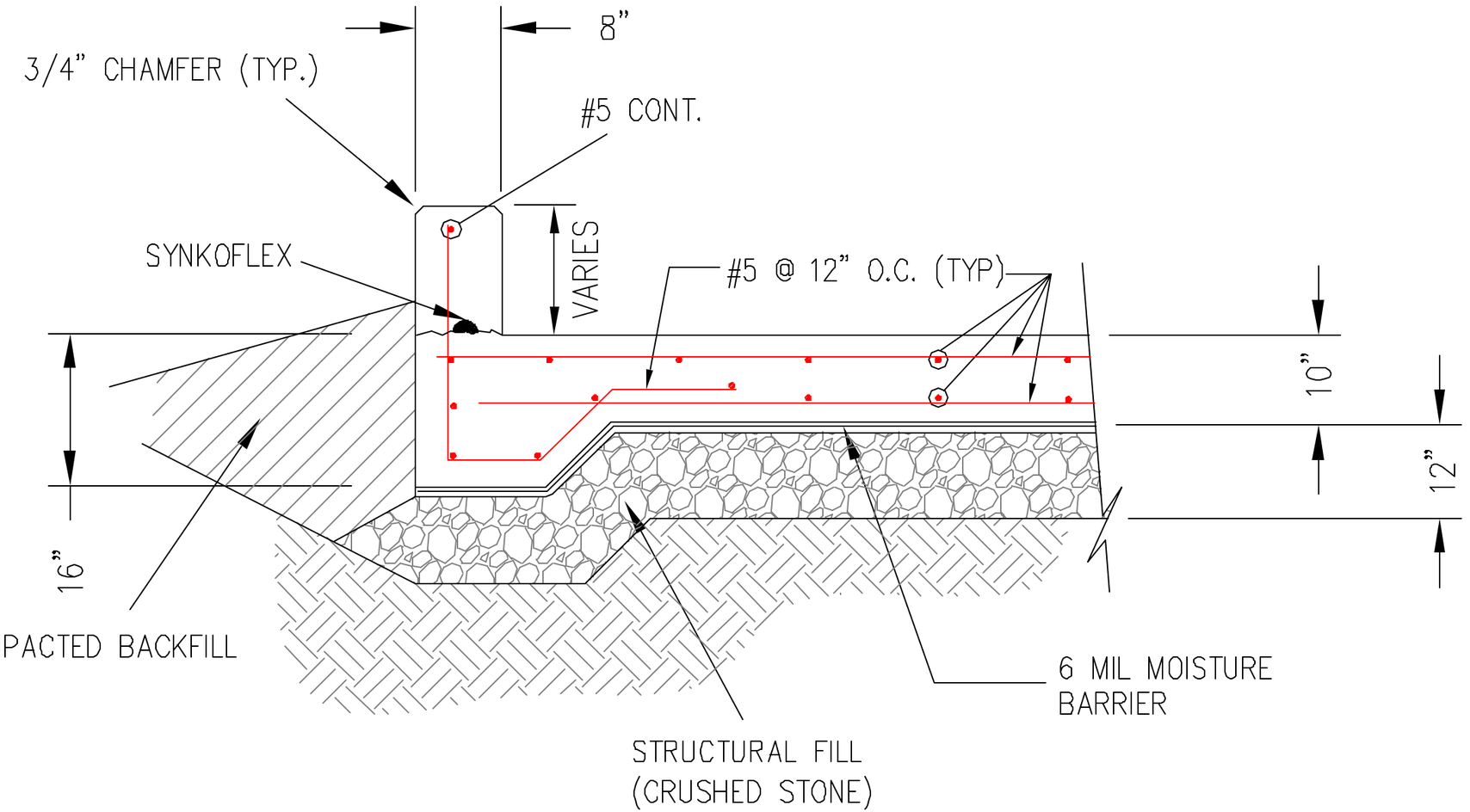
REV. NO.	BY	
REVA		
REVB		
		AS BUILT CONDITIONS 6/24/2009

DESIGN REN	SCALE
DRAWN BY	DATE 11/8/05
CHK'D. BY REN	ENGR. APPR. REN

DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
IW SLAB ELEVATION SCHEMATIC

AREA | JOB NO.

D | DWG. NO. S-3 | REV.



SECTION A

AS NOTED

REV. NO.	BY	
REVA		
REVB		
REVC		AS BUILT CONDITIONS 6/24/09

DESIGN REM	SCALE
DRAWN BY	DATE 11/8/08
CHK'D. BY REM	ENGR. APPR. REM

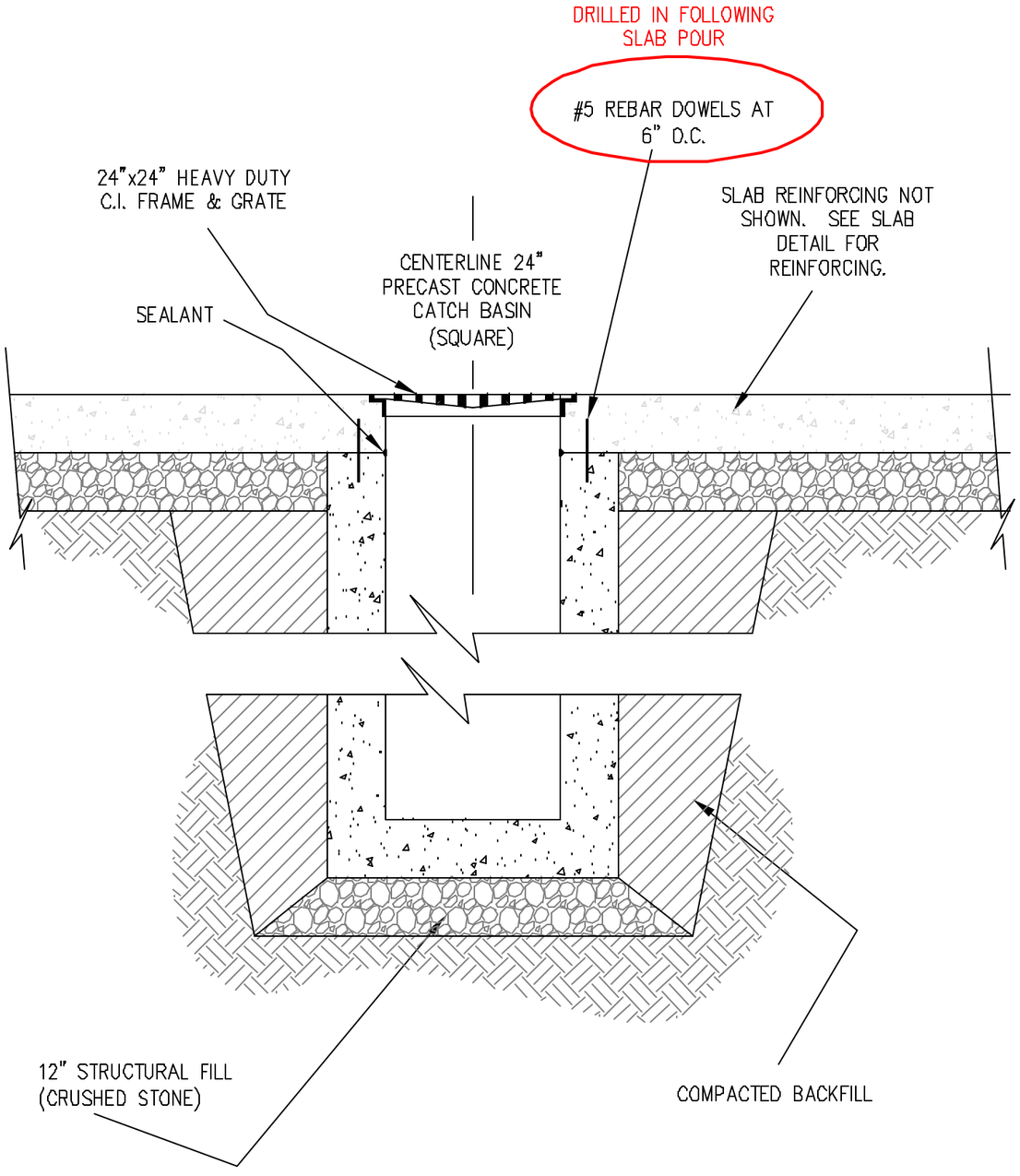
DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
SECTION A

AREA | JOB NO.

D | DWG. NO. S-4 | REV. REV

ROGER E. MAYFIELD, P.E. FL #46092
REM ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION # 27307
4270 ALOMA AVE., #124-34K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
ENVIRONMENTAL CONSULTING



SECTION B

AS NOTED

ROGER E. MAYFIELD, P.E. FL #46092
REN ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION # 27307
4270 ALOMA AVE., #24-34K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
MECHANICAL CONTRACTORS

REV. NO.	BY	
REVB		
REVA		
		AS BUILT CONDITIONS 6/24/09

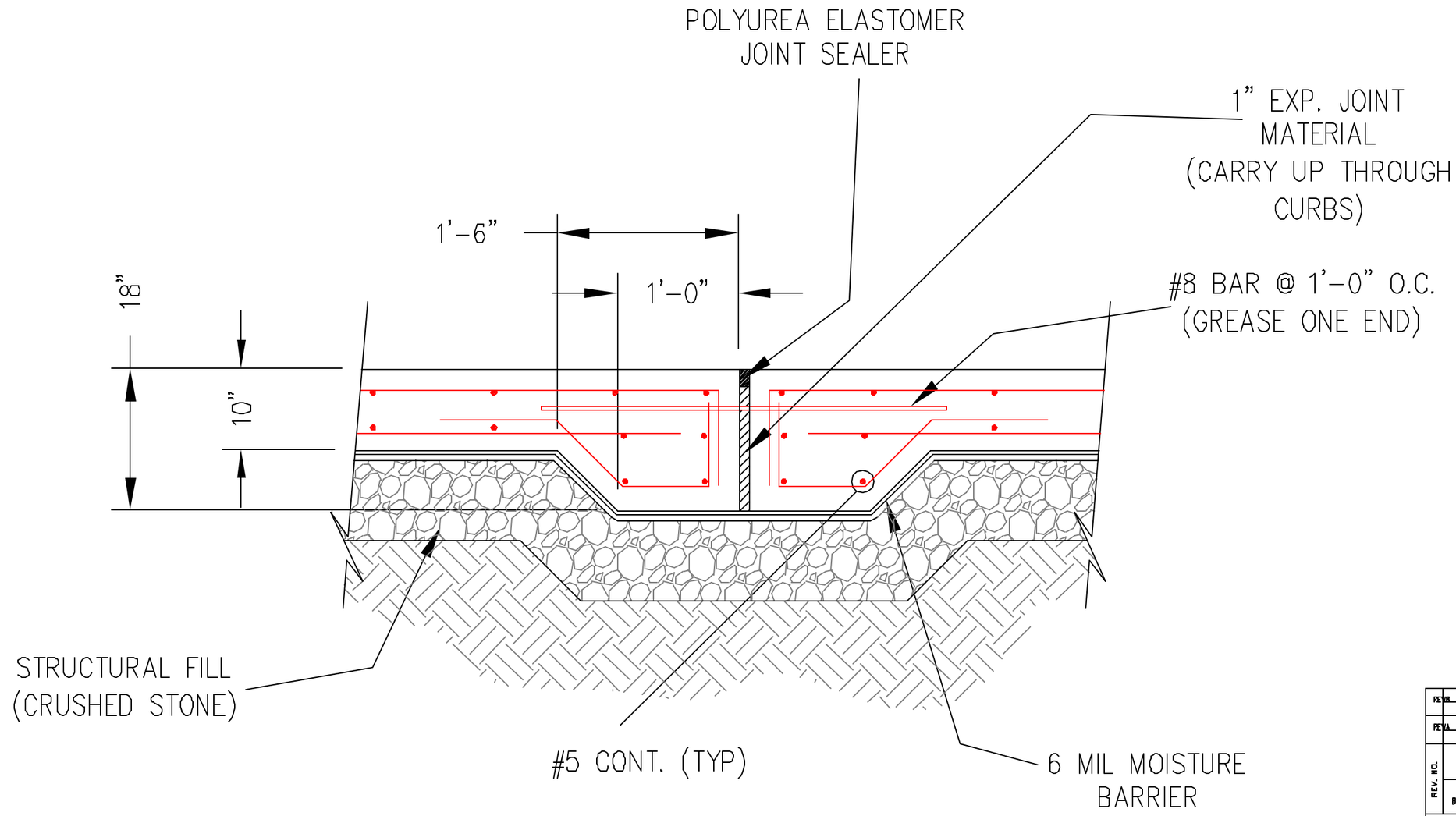
DESIGN REN	SCALE
DRAWN BY	DATE 11/8/08
CHK'D. BY REN	ENGR. APPR. REN

WM WASTE MANAGEMENT

DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
SECTION B

AREA | JOB NO.

D | DWG. NO. S-5 | REV. REV



SECTION C

AS NOTED

REV. NO. BY	AS BUILT CONDITIONS 6/24/09
DESIGN REM	SCALE
DRAWN BY	DATE 11/8/08
CHK'D. BY REM	ENGR. APPR. REM

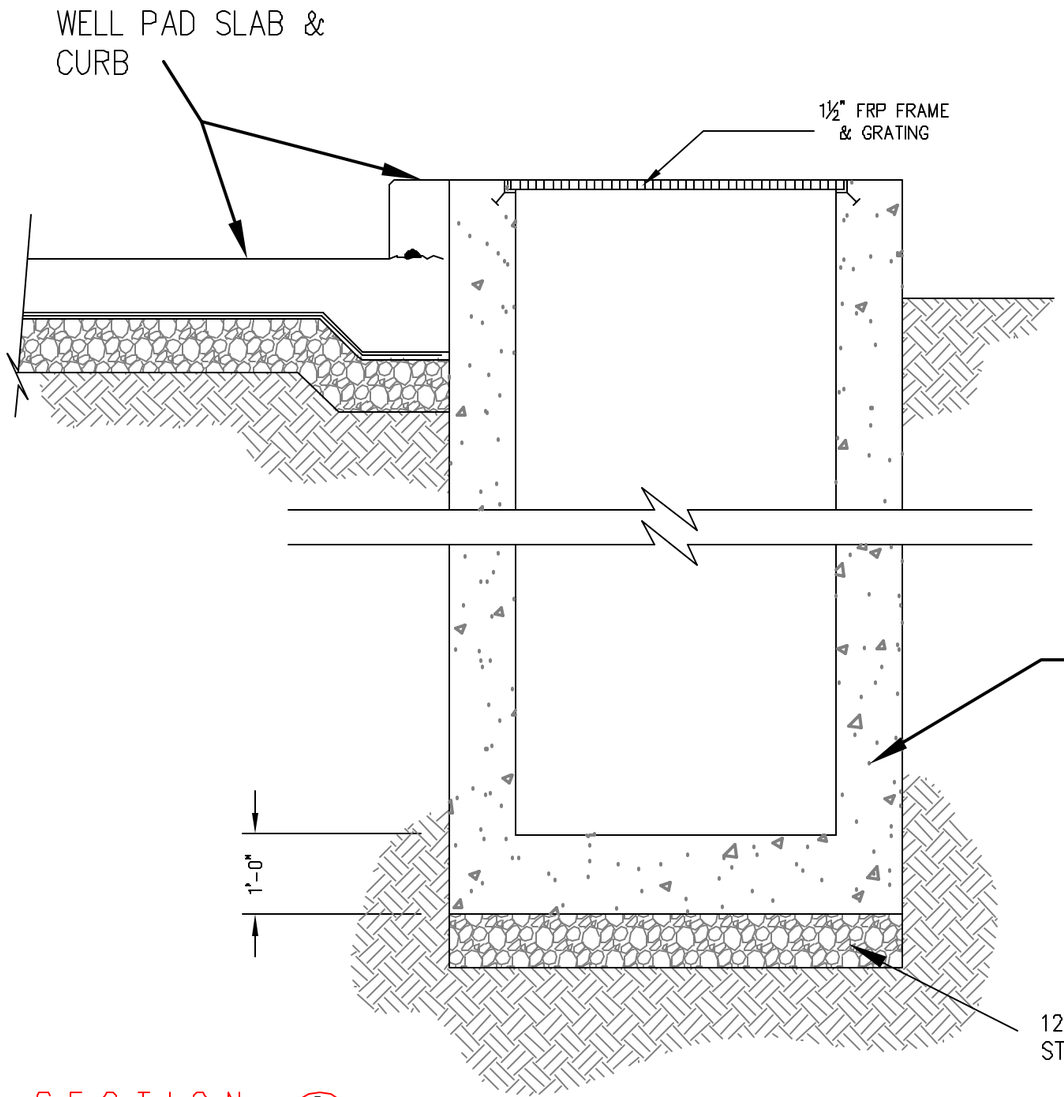
DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
SECTION C

AREA | JOB NO.

D | DWG. NO. S-6 | REV. REV

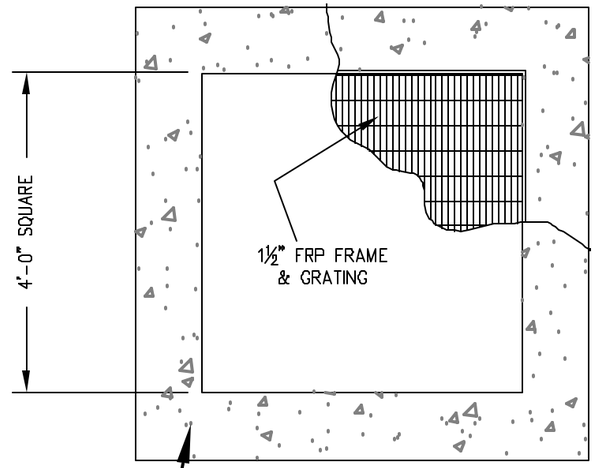
ROGER E. MAYFIELD, P.E.
FL #48082
4270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES



SECTION D
AS NOTED

STORMWATER SUMP



SUMP PLAN

REV. NO. / BY	AS BUILT CONDITIONS 6/24/09
DESIGN REM	SCALE
DRAWN BY	DATE 11/8/08
CHK'D. BY REM	ENGR. APPR. REM

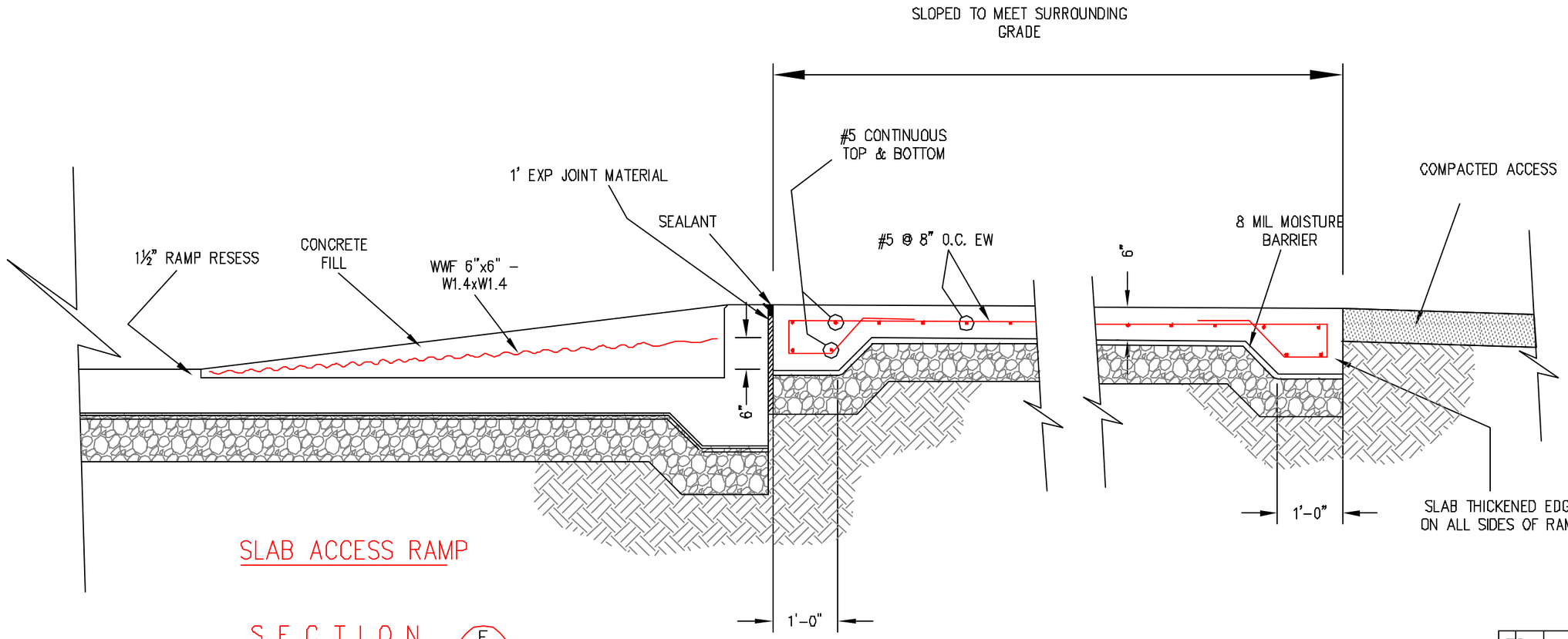
DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
SECTION D

AREA | JOB NO.

D | DWG. NO. S-7 | REV. REV

ROGER E. MAYFIELD, P.E.
FL #48082
4270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
ENVIRONMENTAL CONSULTING



SLAB ACCESS RAMP

SECTION E

AS NOTED

REV. NO.	BY	
REVR		
REVA		
		AS BUILT CONDITIONS 6/24/09

DESIGN REM	SCALE
DRAWN BY	DATE 11/8/08
CHK'D. BY REM	ENGR. APPR. REM

DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
SECTION E

AREA | JOB NO.

D | DWG. NO. S-8 | REV. REV

ROGER E. MAYFIELD, P.E.
FL #48082
4270 ALOMA AVE., #24-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES

STRUCTURAL NOTES

THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS.

EXCAVATE TO THE BOTTOM OF THE SLAB STRUCTURAL FILL. THE SUBGRADE IS TO BE COMPACTED TO 95% OF MAXIMUM PROCTOR DENSITY.

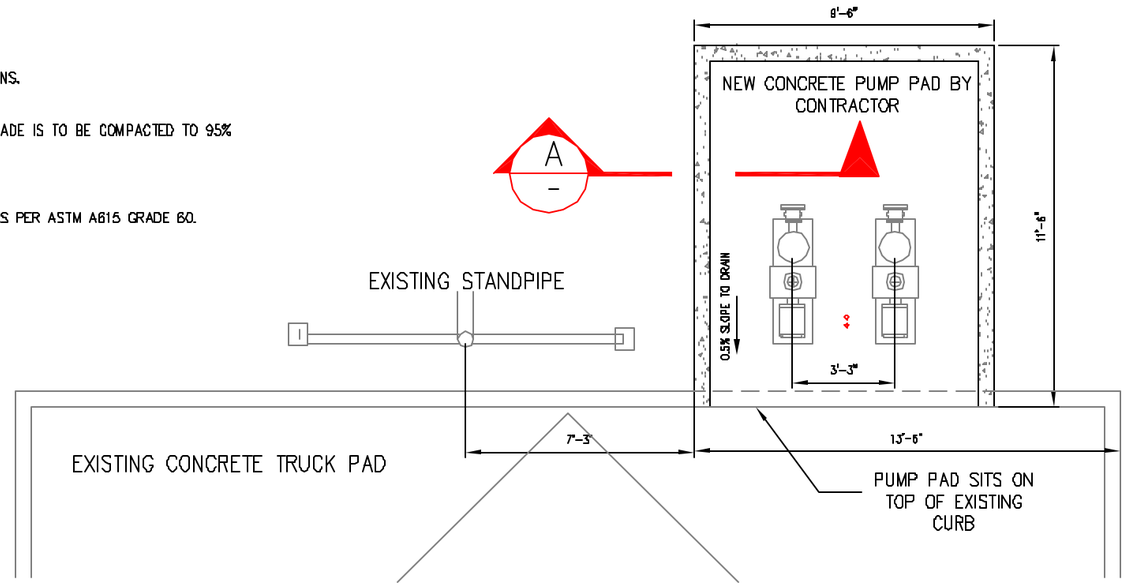
MINIMUM CONCRETE STRENGTH AT 28 DAYS = 4,000 PSI.

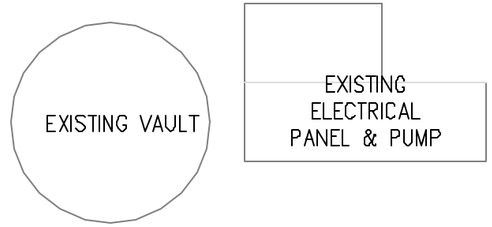
REINFORCING STEEL SHALL BE NEW BILLET BARS, INTERMEDIATE GRADE AS PER ASTM A615 GRADE 60. WELDED WIRE FABRIC SHALL BE AS PER ASTM A185.

MINIMUM CLEAR COVER OVER REINFORCING BARS SHALL BE AS FOLLOWS:

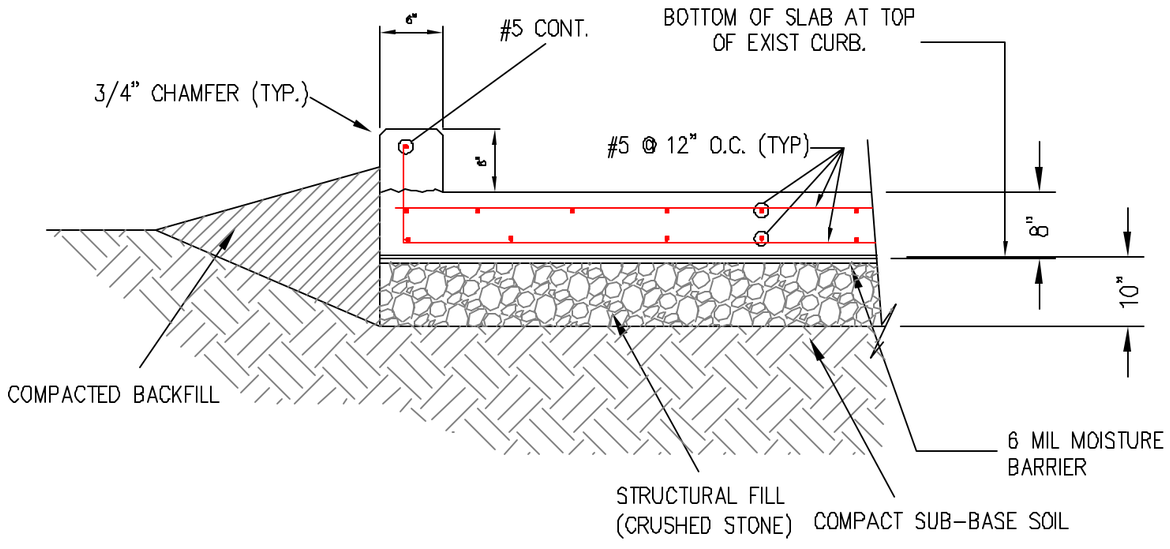
CONCRETE AGAINST EARTH, UNFORMED: 3 INCHES.
CONCRETE AGAINST FORMWORK: 2 INCHES.

WET-CURE CONCRETE WITH POLYETHYLENE-LINED BURLAP.

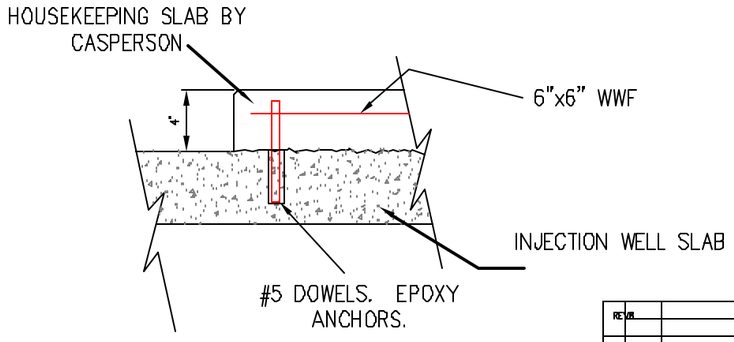




PLAN
AS NOTED



SECTION A
AS NOTED



HOUSEKEEPING PAD DETAIL
AS NOTED

REV. NO.	BY	
REVB		
REVA		
		AS BUILT CONDITIONS 6/24/09

DESIGN	REM	SCALE	
DRAWN BY		DATE	9/23/08
CHK'D. BY	REM	ENGR. APPR.	REM

OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
STRUCTURAL PLAN – LEACHATE PUMP STATION

AREA	JOB NO.
D	DWG. NO. S-9

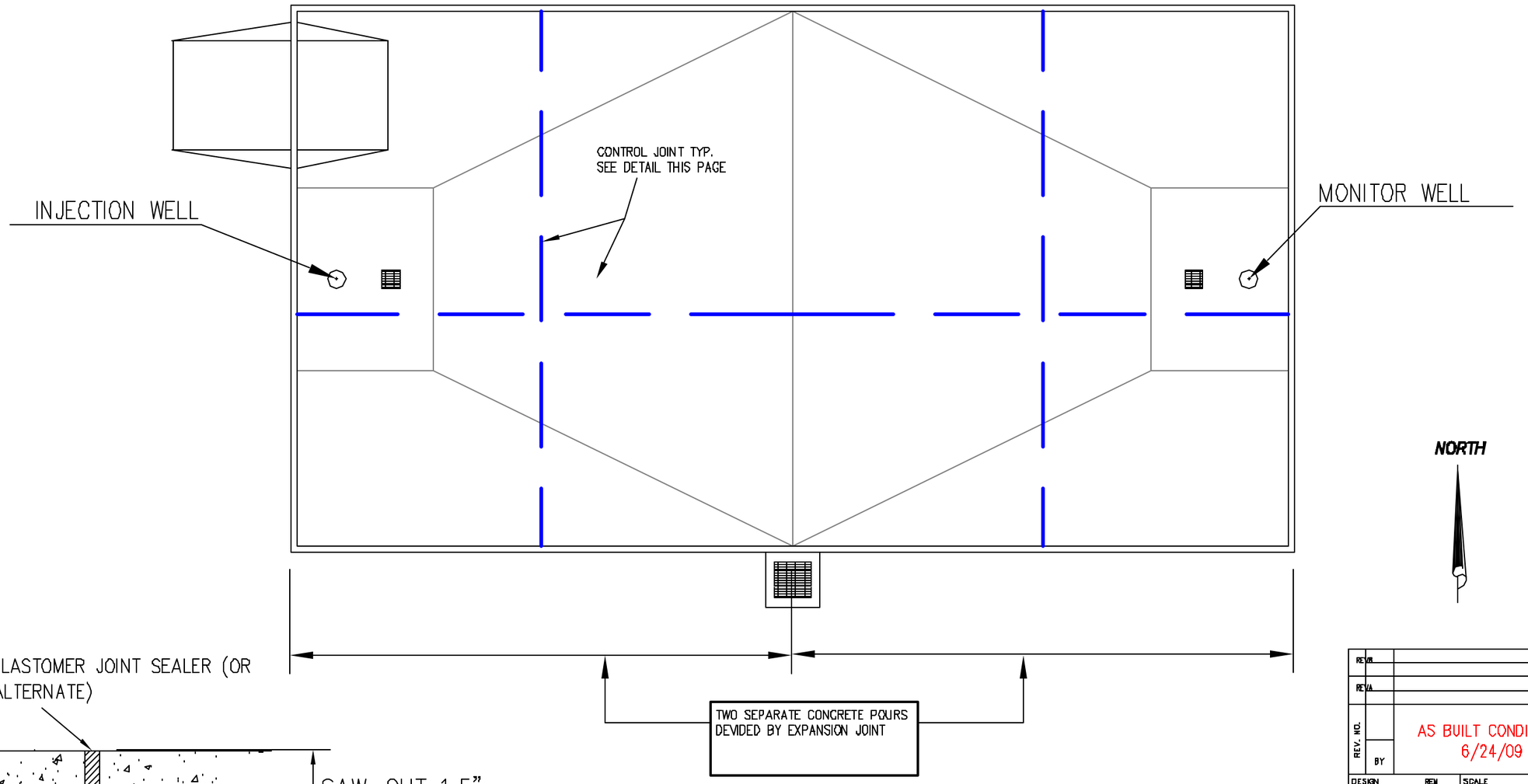
REV. REV

ROGER E. MAYFIELD, P.E.
FL #16082
4270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
ENVIRONMENTAL CONSULTING

0 FT 10 FT 20 FT 30 FT 40 FT

SCALE



DETAIL A

AS NOTED

REV. NO.	BY	
REVB		
REVA		
		AS BUILT CONDITIONS 6/24/09

DESIGN	REM	SCALE	
DRAWN BY		DATE	11/8/08
CHK'D. BY	REM	ENGR. APPR.	REM

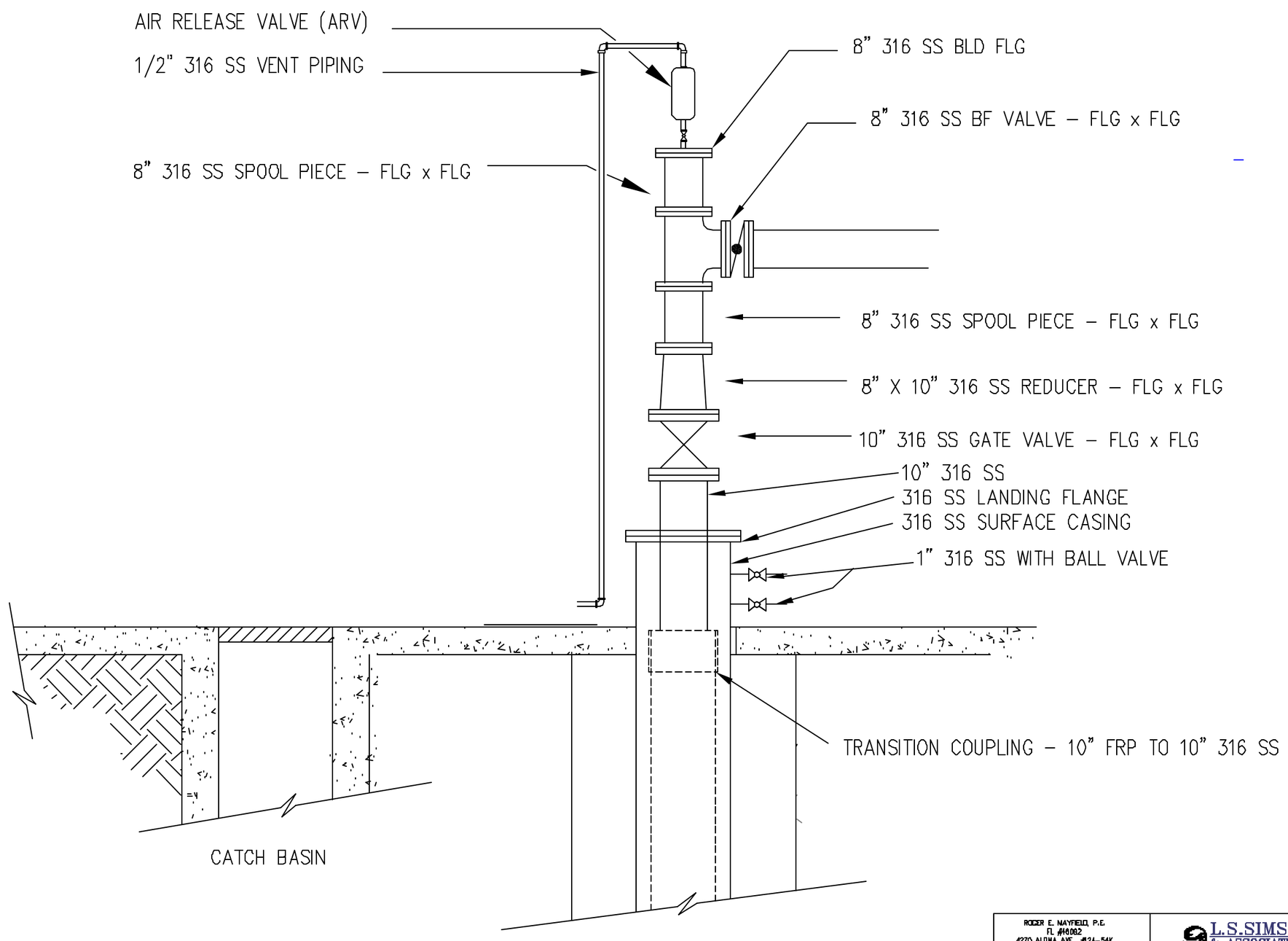
DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
IW SLAB - CONTROL JOINT PLAN

AREA | JOB NO.

D | DWG. NO. S-10 | REV. REV

ROGER E. MAYFIELD, P.E. FL #46092
REM ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION # 27397
1270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES



REV. NO.	BY	
REVA		
REVB		
		AS BUILT CONDITIONS 6/24/09

DESIGN REM	SCALE
DRAWN BY	DATE 11/8/08
CHK'D. BY REM	ENGR. APPR. REM

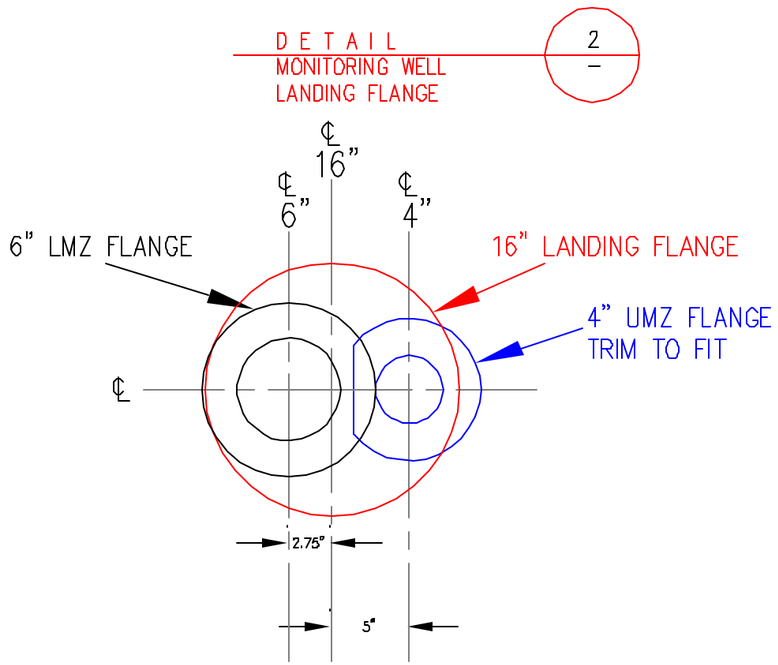
DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LEACHATE INJECTION WELL PROJECT
WELLHEAD PIPING DETAIL

AREA | JOB NO.

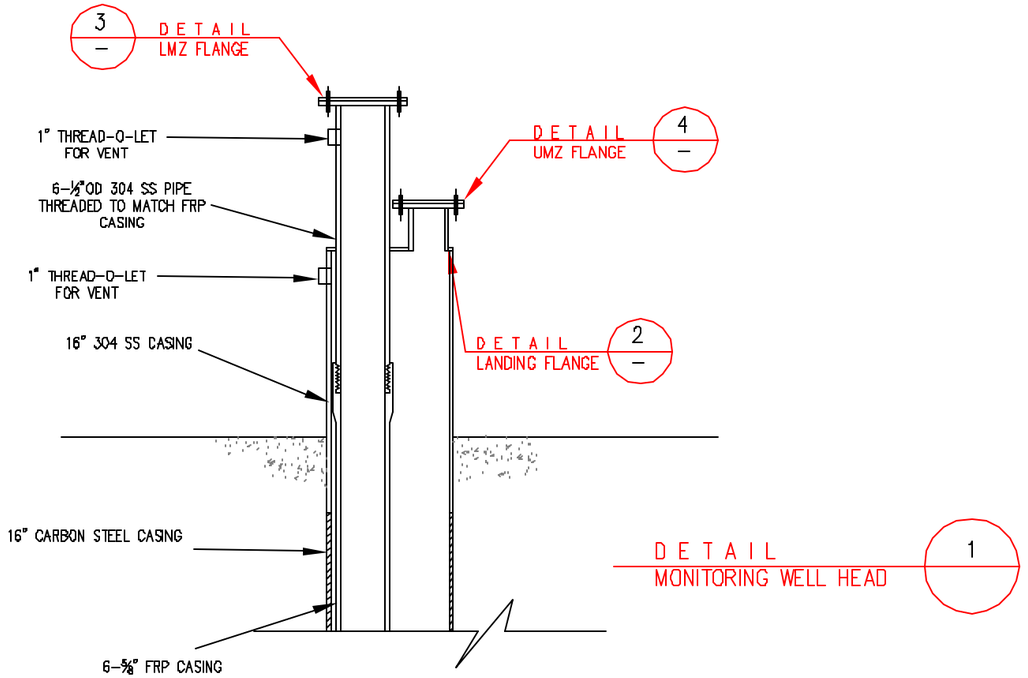
D | DWG. NO. P-1 | REV.

ROGER E. MAYFIELD, P.E.
FL #49082
4270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

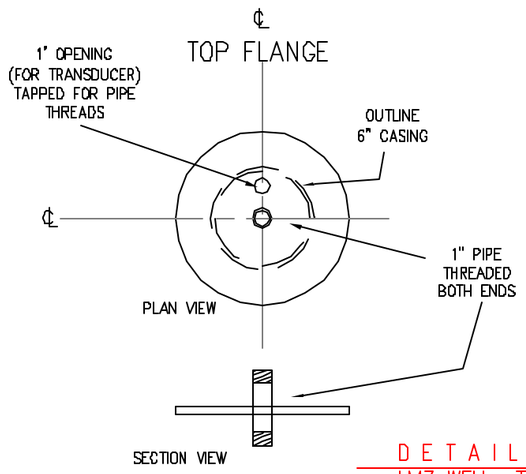
L.S.SIMS & ASSOCIATES
ENVIRONMENTAL CONSULTING



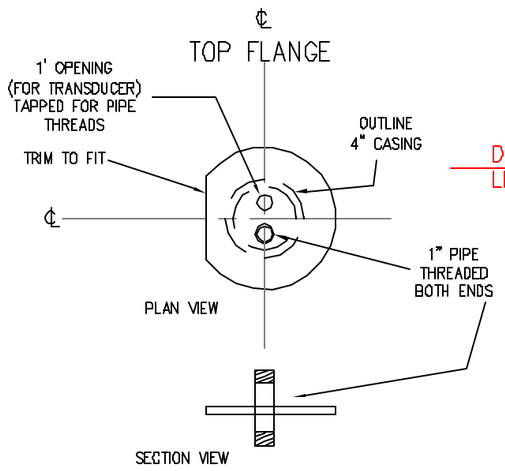
DETAIL MONITORING WELL LANDING FLANGE 2 / –



DETAIL MONITORING WELL HEAD 1 / –



DETAIL LMZ WELL TOP FLANGE 3 / –



DETAIL LMZ WELL TOP FLANGE 4 / –

REV. NO.	AS BUILT CONDITIONS 6/24/09
BY	
DESIGN REM	SCALE
DRAWN BY	DATE 11/8/08
CHK'D. BY REM	ENGR. APPR. REM

DRAWING TITLE
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
MW WELLHEAD PIPING DETAIL

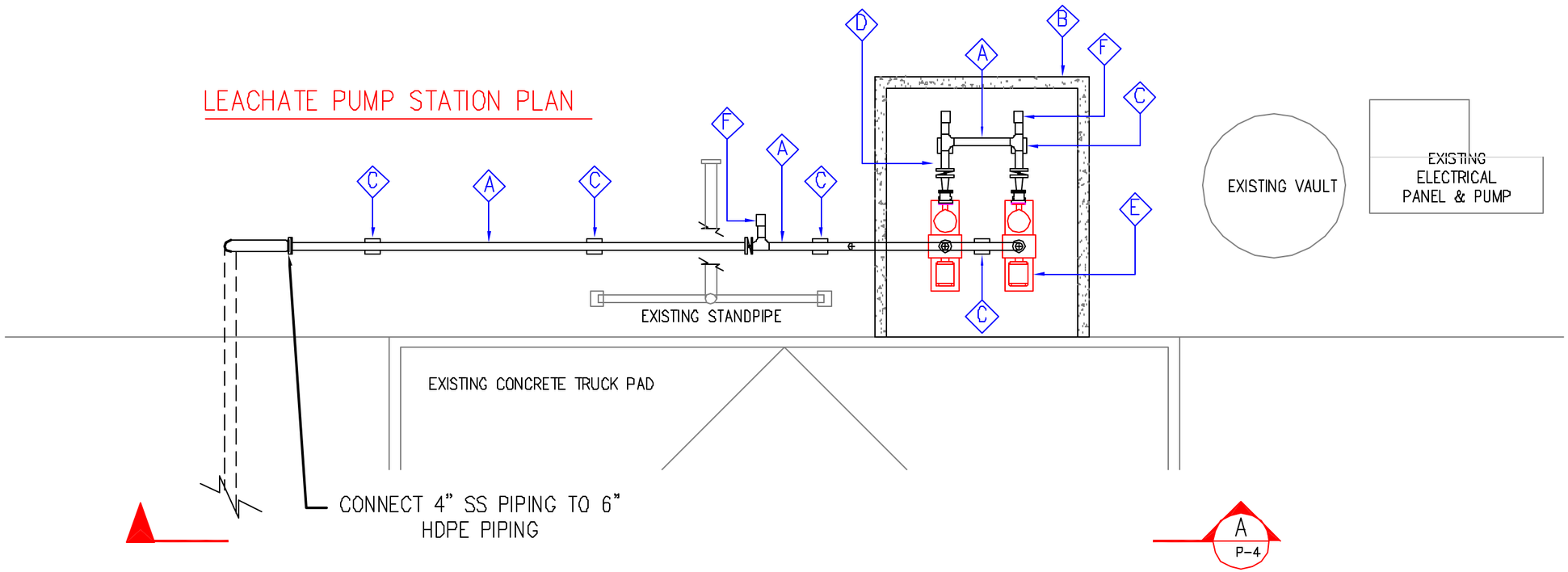
AREA | JOB NO.

D | DWG. NO. P-2 | REV. REV

ROGER E. MAYFIELD, P.E.
FL #49062
4270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
ENVIRONMENTAL CONSULTING

LEACHATE PUMP STATION PLAN



SCOPE OF WORK THIS SHEET

- (A) SHOP FABRICATED 4" SS PIPING.
- (B) CONCRETE PUMP SLAB WITH CURB. SEE SHT S-9.
- (C) SHOP FABRICATED PIPE SUPPORTS.
- (D) SEE SHT S-9 FOR CONCRETE BASE DETAIL.
- (E) 15 HP LEACHATE PUMPS INSTALLED ON 4" CONCRETE HOUSELEEPING PADS. GROUT PUMP BASES.
- (F) 4" CAM-LOCK CONNECTIONS.

0 FT 5 FT 10 FT

SCALE

NORTH

REV. NO.	BY	
REVA		
REVB		
REVC		AS BUILT CONDITIONS 6/24/09

DESIGN	REM	SCALE	
DRAWN BY		DATE	9/25/08
CHK'D. BY	REM	ENGR. APPR.	REM

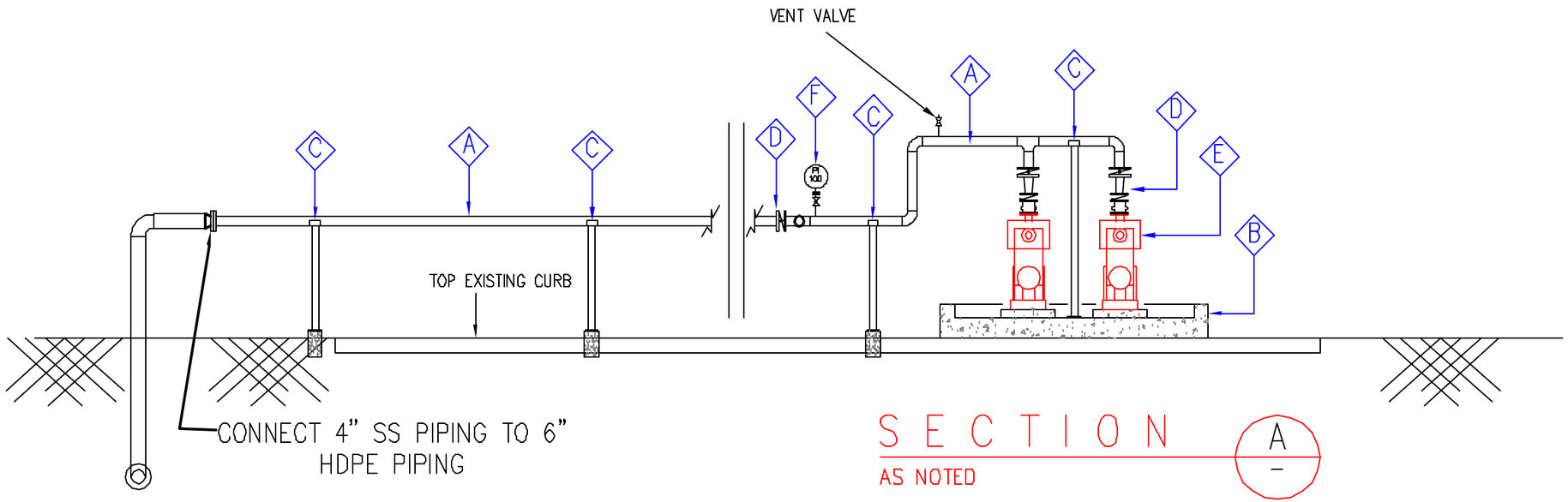
OKEECHOBEE LANDFILL INC.
LEACHATE INJECTION WELL PROJECT
LEACHATE PUMP STATION - PLAN

AREA | JOB NO.

D | DWG. NO. P-3 | REV. REV

ROGER E. MAYFIELD, P.E.
FL #48062
4270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES



SECTION A – AS NOTED

SCOPE OF WORK THIS SHEET

A. SHOP FABRICATED 4" SS PIPING.

B. CONCRETE PUMP SLAB WITH CURB. SEE SHT S-9.

C. SHOP FABRICATED PIPE SUPPORTS. SEE SHT S-9 FOR CONCRETE BASE DETAIL.

D. ALL VALVES TO BE INSTALLED BY CONTRACTOR.

E. 15 HP LEACHATE PUMPS TO BE INSTALLED BY CONTRACTOR ON 4" CONCRETE HOUSEKEEPING PADS (6"x6" WWF). GROUT PUMP BASES.

F. PRESSURE GAUGE.

ROGER E. MAYFIELD, P.E.
FL #48082
4270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
civil/structural/coastal engineering

REV. NO.	BY	
REVA		
REVB		
REVC		AS BUILT CONDITIONS 6/24/09

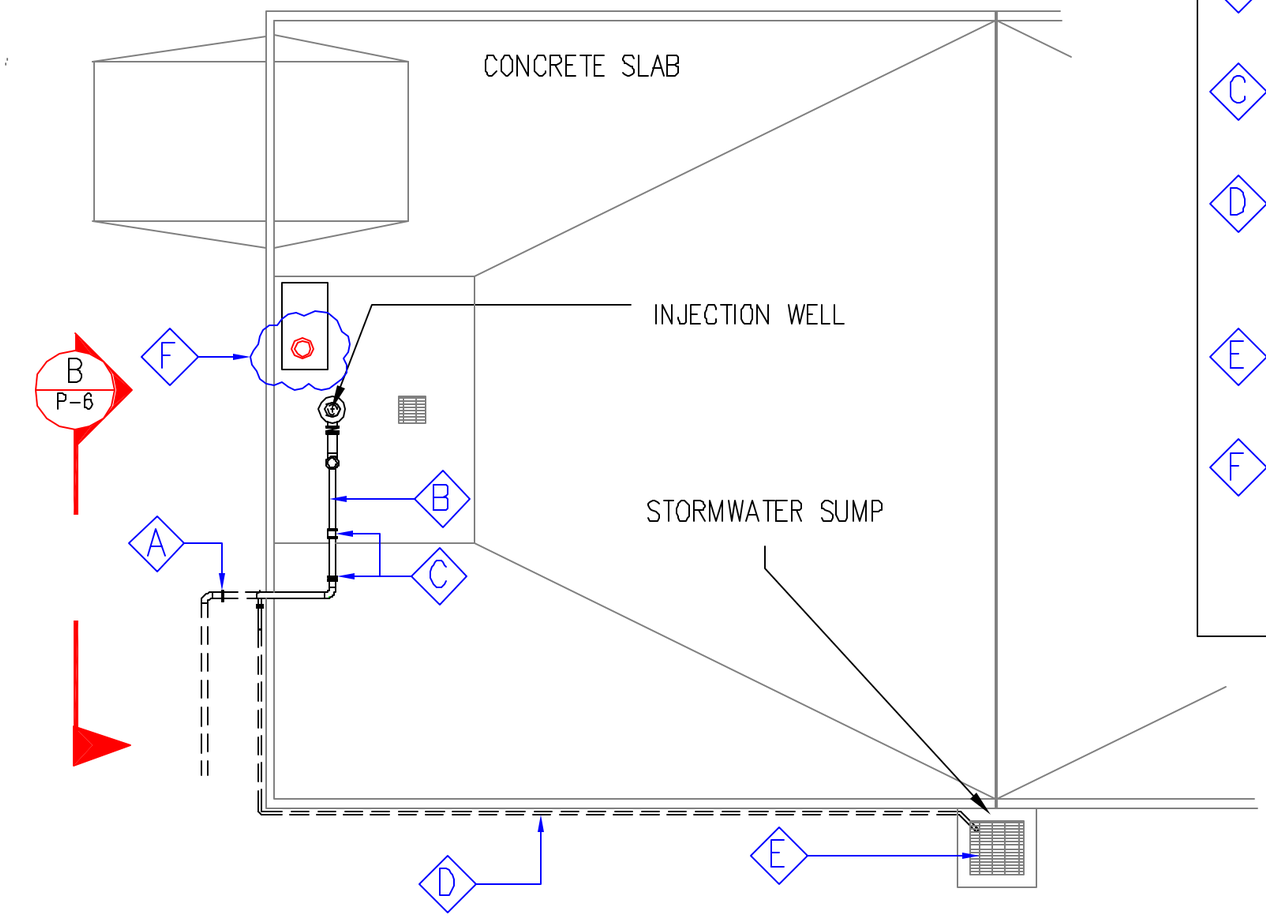
DESIGN	REM	SCALE	
DRAWN BY		DATE	9/25/08
CHK'D. BY	REM	ENGR. APPR.	REM

WASTE MANAGEMENT

OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
LEACHATE PUMP STATION – SECTION

AREA | JOB NO.

D | DWG. NO. P-4 | REV. REV



SCOPE OF WORK THIS SHEET

A. CONNECT 6" SS PIPING TO 6" HDPE PIPING, FLG-TO-FLG.

B. SHOP FABRICATED 6" SS PIPING.

C. ALL VALVES & IN-LINE FLOW METER TO BE INSTALLED BY CONTRACTOR.

D. 4" HDPE STORMWATER PIPING TO BE PROVIDED AND INSTALLED BY CONTRACTOR. MINIMUM COVER 3-FT.

E. STORMWATER PUMP TO BE NSTALLED BY CONTRACTOR. SEE P-7 FOR DETAILS.

F. ANNULUS VESSLE TO BE INSTALLED BY CONTRACTOR. SEE P-7 FOR DETAILS.

0 FT 10 FT 20 FT

SCALE

NORTH

REV. NO.	BY	
REVR		
REVA		
		AS BUILT CONDITIONS 6/24/09

DESIGN	REM	SCALE	
DRAWN BY		DATE	8/25/09
CHK'D. BY	REM	ENGR. APPR.	REM

WASTE MANAGEMENT

OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
INJECTION WELL PLAN

AREA	JOB NO.
D	DWG. NO. P-5

REV. REV

ROGER E. MAYFIELD, P.E.
FL #18062
4270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
ENVIRONMENTAL CONSULTING

SCOPE OF WORK THIS SHEET

A. CONTRACTOR TO INSTALL VALVES. PRESSURE GAUGE AND OTHER DEVICES TO BE INSTALLED BY OTHERS.

B. SHOP FABRICATED 6" SS PIPING.

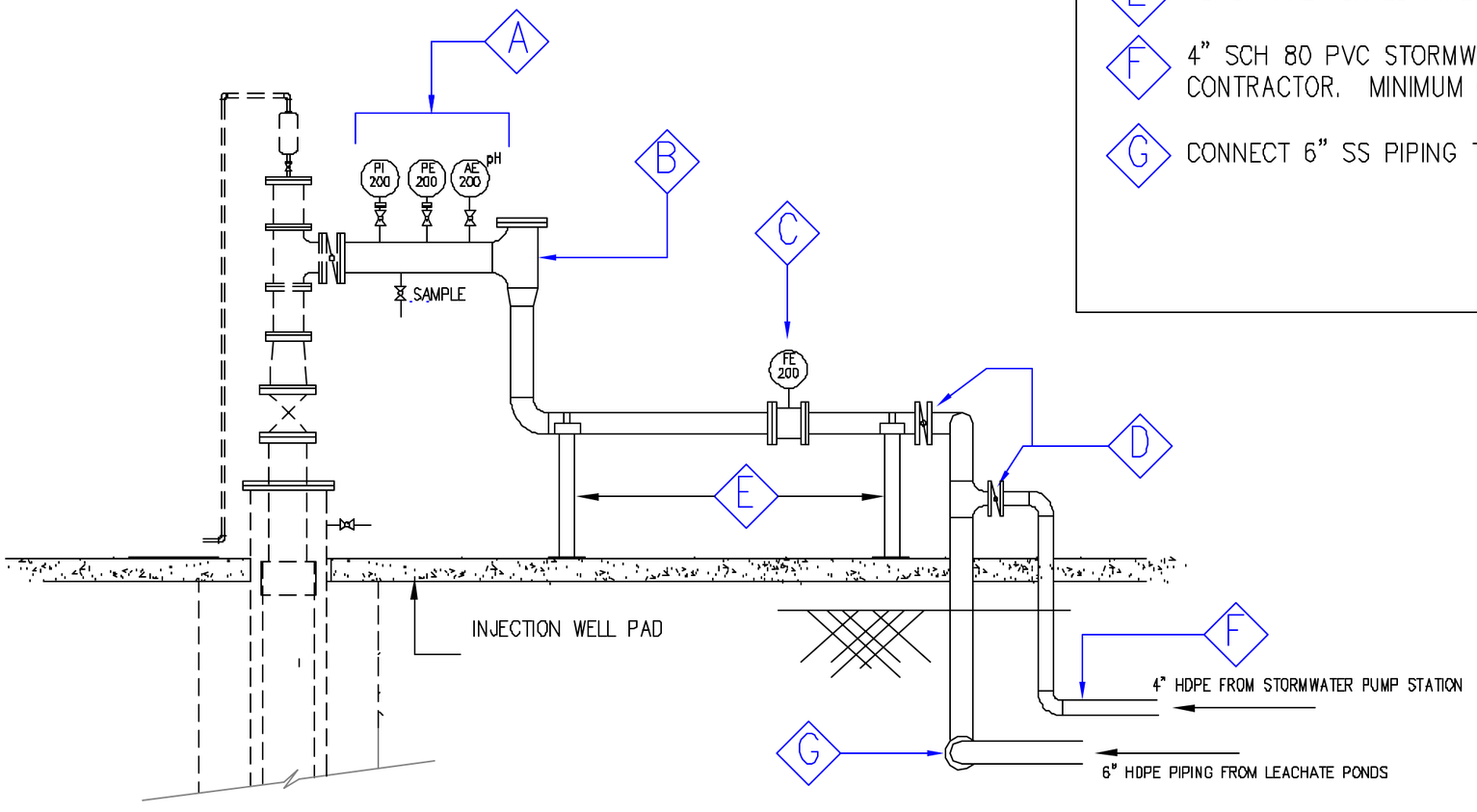
C. IN-LINE FLOW METER. TO BE INSTALLED BY CONTRACTOR.

D. ALL VALVES TO BE INSTALLED BY CONTRACTOR.

E. SHOP FABRICATED PIPE SUPPORTS.

F. 4" SCH 80 PVC STORMWATER PIPING TO BE PROVIDED AND INSTALLED BY CONTRACTOR. MINIMUM COVER 3-FT.

G. CONNECT 6" SS PIPING TO 6" HDPE PIPING, FLG-TO-FLG.



NORTH

REV. NO.	BY	
REVA		
REVB		
		AS BUILT CONDITIONS 6/24/09

DESIGN	REM	SCALE	
DRAWN BY		DATE	8/25/09
CHK'D. BY	REM	ENGR. APPR.	REM

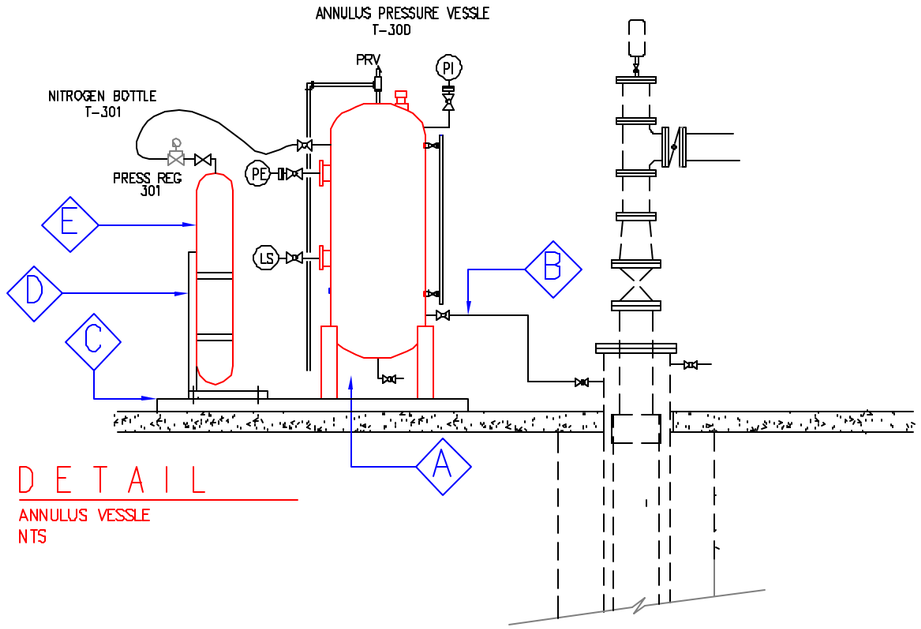
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
INJECTION WELL PLAN

AREA | JOB NO.

D | DWG. NO. P-6 | REV. REV

ROGER E. MAYFIELD, P.E.
FL #48062
4270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES



D E T A I L

ANNULUS VESSLE
NTS

SCOPE OF WORK

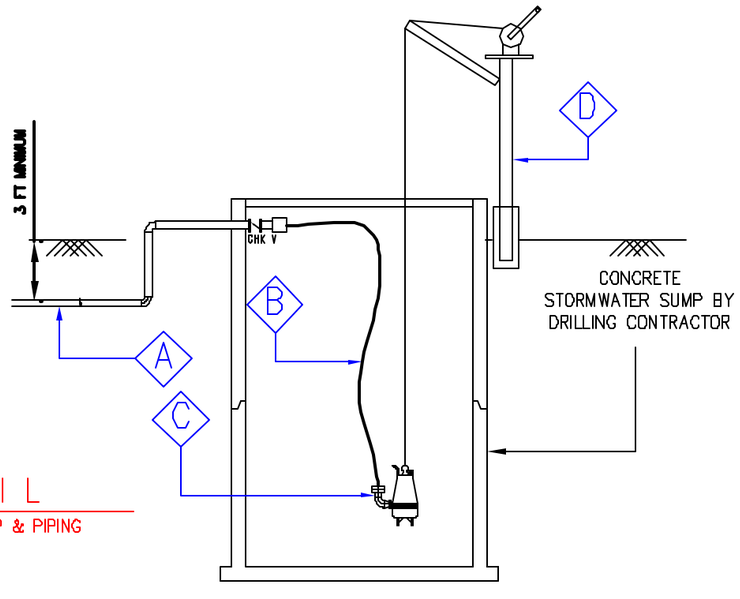
A. ANNULUS VESSEL. CONTRACTOR TO INSTALL ON CONCRETE HOUSEKEEPING PAD WITH DRILLED/EPOXY ANCHOR BOLTS.

B. CONTRACTOR TO INSTALL 1" SS PIPING & VALVES.

C. 4" CONCRETE HOUSEKEEPING PAD. SEE DRAWING S-9 FOR DETAIL.

D. NITROGEN BOTTLE HOLDING STAND. CONTRACTOR TO INSTALL ON CONCRETE HOUSEKEEPING PAD WITH DRILLED/EPOXY ANCHOR BOLTS.

E. NITROGEN BOTTLE.



D E T A I L

STORMWATER PUMP & PIPING
NTS

SCOPE OF WORK

A. CONTRACTOR TO INSTALL 4" HDPE PIPING. BURIED PIPING SHALL HAVE 3 FT MINIMUM COVER.

B. 4" FLEX HOSE.

C. SUBMERSIBLE PUMP.

D. HOIST FOR PUMP RETRIEVAL.

REV. NO.	BY	
REVB		
REVA		
REVR		

AS BUILT CONDITIONS
6/24/2009

DESIGN	REM	SCALE	
DRAWN BY		DATE	9/25/08
CHK'D. BY	REM	ENGR. APPR.	REM

WASTE MANAGEMENT

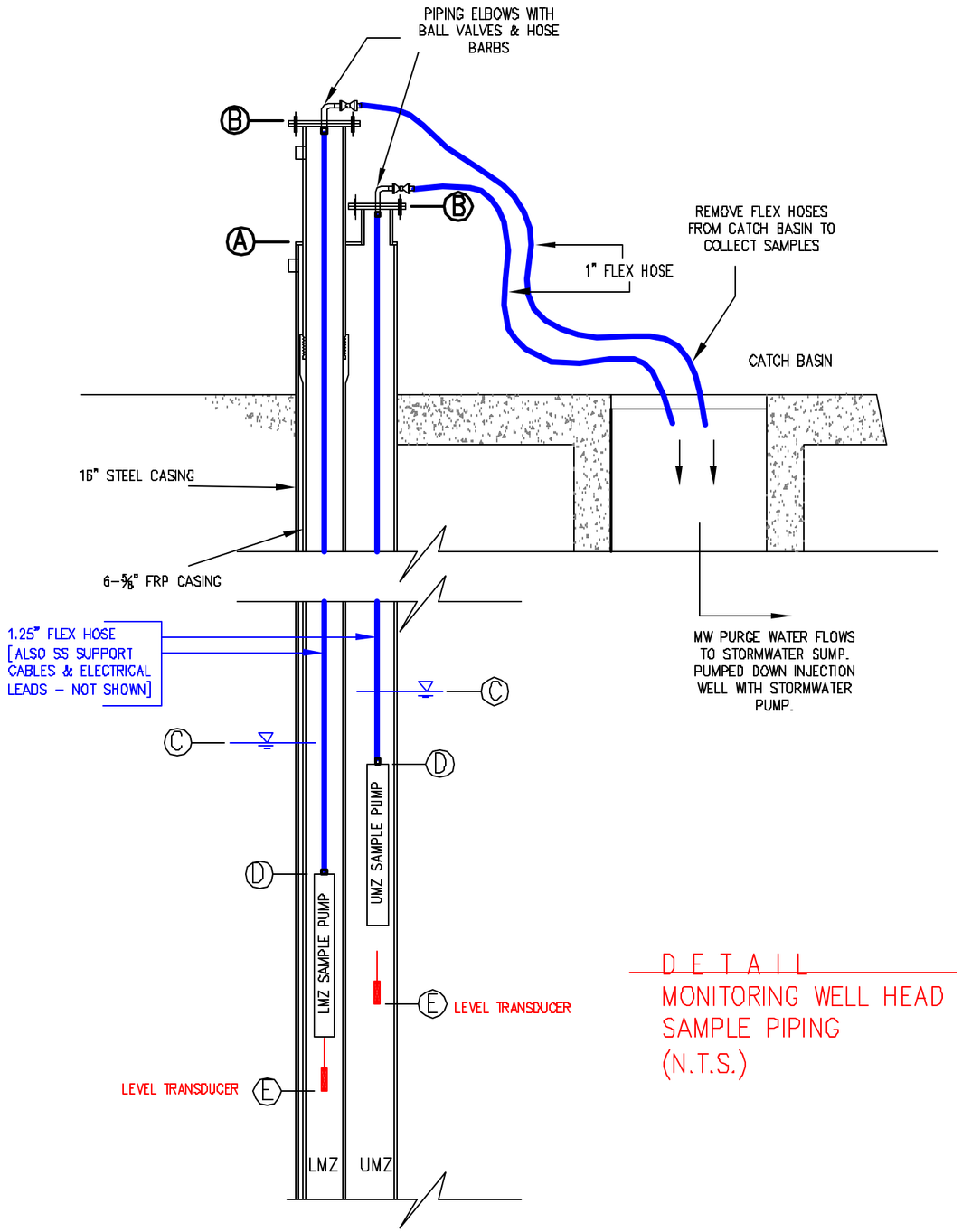
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
ANNULUS VESSEL & STORMWATER PUMP

AREA	JOB NO.

	DWG. NO.	REV.
D	P-7	

ROGER E. MAYFIELD, P.E.
FL #41082
4270 ALOMA AVE., #124-54K
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
ENVIRONMENTAL CONSULTING



D E T A I L

MONITORING WELL HEAD SAMPLE PIPING (N.T.S.)

Ⓐ LANDING FLANGE
ELEV NGVD FT 60.2
ELEV NAVD FT 58.9

LOWER MONITORING ZONE (LMZ)	UPPER MONITORING ZONE (UMZ)
Ⓑ WELL FLANGE ELEV NGVD FT 61.7 ELEV NAVD FT 60.4	Ⓑ WELL FLANGE ELEV NGVD FT 60.6 ELEV NAVD FT 59.4
Ⓒ WATER TABLE FOLLOWING RECOVERY PERIOD 6/19/09 DEPTH BELOW FLANGE FT 54 ELEV NGVD FT 7.7 ELEV NAVD FT 6.4	Ⓒ WATER TABLE FOLLOWING RECOVERY PERIOD 6/19/09 DEPTH BELOW FLANGE FT 37 ELEV NGVD FT 23.6 ELEV NAVD FT 22.4
Ⓓ TOP OF SUBMERSIBLE PUMP DEPTH BELOW FLANGE FT 76.0 ELEV NGVD FT -14.4 ELEV NAVD FT -15.6	Ⓓ TOP OF SUBMERSIBLE PUMP DEPTH BELOW FLANGE FT 46.4 ELEV NGVD FT 14.2 ELEV NAVD FT 12.9
Ⓔ BOTTOM OF LEVEL TRANSDUCER DEPTH BELOW FLANGE FT 85.3 ELEV NGVD FT -23.6 ELEV NAVD FT -24.9	Ⓔ BOTTOM OF LEVEL TRANSDUCER DEPTH BELOW FLANGE FT 65.0 ELEV NGVD FT -4.4 ELEV NAVD FT -5.6
READABLE RANGE MINIMUM ELEV ELEV NGVD FT -23.6 ELEV NAVD FT -24.9 MAXIMUM ELEVATION ELEV NGVD FT 36.4 ELEV NAVD FT 35.1	READABLE RANGE MINIMUM ELEV ELEV NGVD FT -4.4 ELEV NAVD FT -5.6 MAXIMUM ELEVATION ELEV NGVD FT 55.6 ELEV NAVD FT 54.4

LOCATIONS OF COMPONENTS AS OF INITIAL INSTALLATION 6/22/09

SAMPLE PUMP TEST 6/21/2009
BUCKET VOLUME (GAL) = 5.25
TIME TO FILL - SEC LMZ 13.7 UMZ 11.4
FLOW - GPM LMZ 23.0 UMZ 27.6

REV. NO.	BY	
REVA		AS BUILT CONDITIONS 6/24/2009

DESIGN	REM	SCALE	
DRAWN BY		DATE	12/17/08
CHK'D. BY	REM	ENGR. APPR.	REM

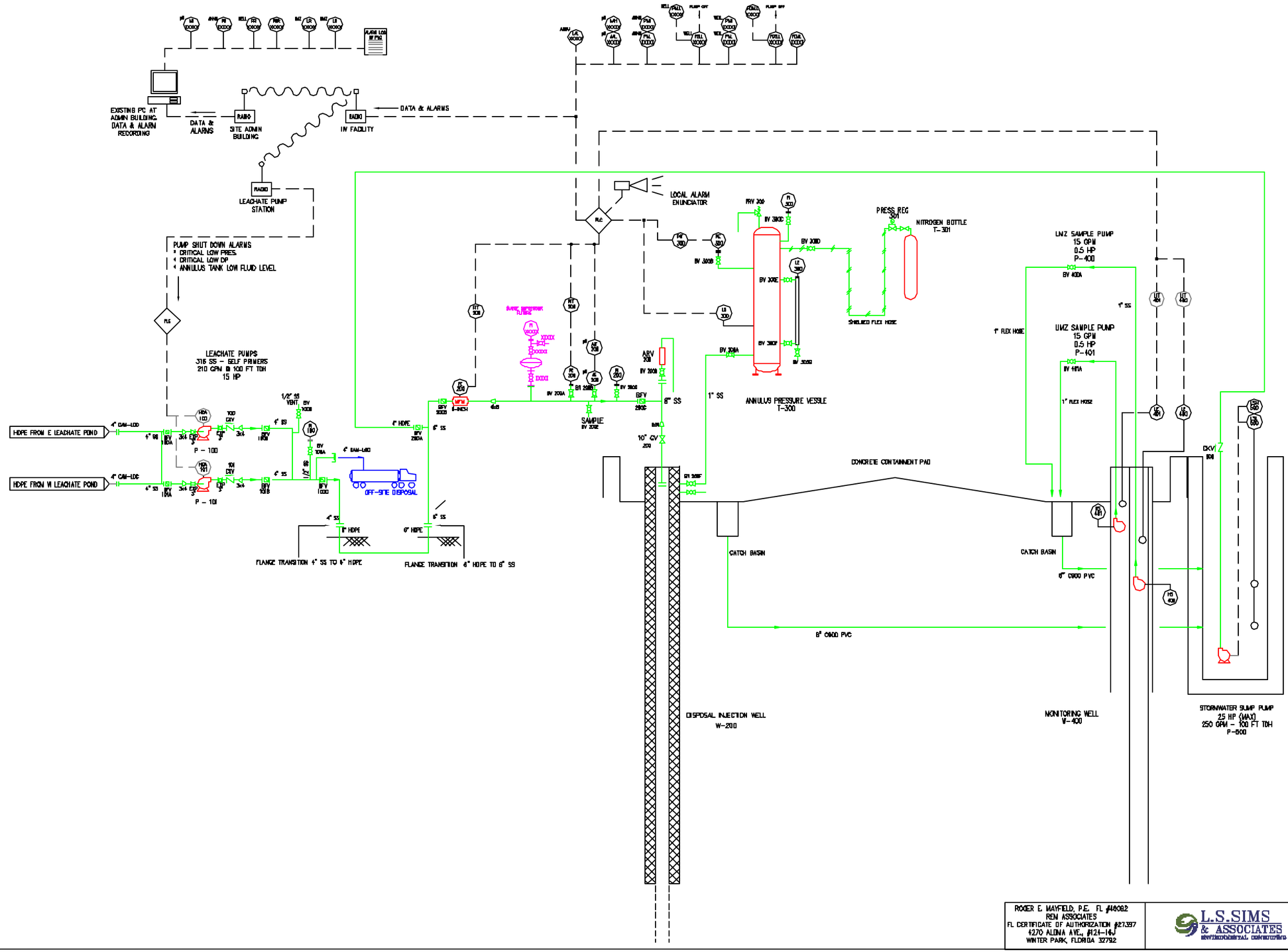
OKEECHOBEE LANDFILL INC.
LECHATE INJECTION WELL PROJECT
DUAL ZONE MONITORING WELL - INSTALLATION DETAILS

AREA | JOB NO.

D | DWG. NO. P-8 | REV.

ROGER E. MAYFIELD, P.E.
FL #41082
4270 ALONA AVE., #124-161
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES



AS BUILT CONDITIONS
6/24/09

REV. BY

ISSUE CODE			
A	PRELIMINARY	B	DESIGN
C	BIDS	D	CONSTRUCTION
E	APPROVAL		

DESIGN	REM	SCALE	NA
DRAWN BY	REM	DATE	10/25/08
CHK'D. BY		ENGR. APPR.	APPR

DRAWING TITLE
WMI LEACHATE DISPOSAL
INJECTION WELL P&ID

AREA: AREA
JOB NO.: JOBNO

D | DWG. NO.: SHEET 1 OF 1 | REV.: REV

ROGER E. MAYFIELD, P.E. FL #48082
REM ASSOCIATES
FL CERTIFICATE OF AUTHORIZATION #27397
4270 ALOMA AVE., #124-164
WINTER PARK, FLORIDA 32792

L.S.SIMS & ASSOCIATES
ENVIRONMENTAL CONSULTING

O&M Manual Update

Annulus Liquid Level

Annulus tank low level is input to the PLC. The PLC generates the following alarm condition:

- Annulus tank level too low

The above alarm is reported to the operators via the HMI. Alarm condition continues until acknowledged by the operator. This is a critical alarm and initiates shut-down of the leachate pumping system.

1.11.3 Disposal Well System Data Reporting & Recording

The following parameters are continually reported to the HMI via the PLC. These readings are displayed on the HMI screen.

- Leachate flow
- Well head pressure
- Annulus pressure
- DP (calculated by PLC)
- Leachate pH

The HMI software records the above values to a database which will be used to generate Monthly Operating Reports.

1.11.4 Monitoring Well Data Reporting & Recording

The following parameters are continually reported to the HMI via the PLC. These readings are displayed on the HMI screen.

- Deep monitoring well water level
- Shallow monitoring well water level

The HMI software records the above values to a database which will be used to generate Monthly Operating Reports.

2.0 OPERATION AND CONTROL

2.1 System Startup

2.1.1 Annulus Monitoring System

Following is the start-up procedure for the well annulus monitoring and pressurization system. It is assumed that the well annulus is full of water (treated with corrosion inhibitor) and is at atmospheric pressure. It is also assumed that all equipment has been checked for proper rotation and alignment, electrical & control connections have been verified and initial servicing and lubrication has been competed. If the annulus is under pressure or conditions are otherwise, startup steps should be modified accordingly.

a) Open valves connecting annulus tank to well.
b) Open valves for sight glass.
c) Fill annulus tank with water to the 75% full level. Add proper amount of corrosion inhibitor. Verify water level with sight glass.
d) Open valves for pressure devices (pressure gauges; pressure transducers)
e) Open valves connecting air compressor to annulus tank.
f) Adjust air compressor pressure regulator to bring pressure in annulus tank to the specified level.
g) Verify that annulus tank pressure and water level are stable.
h) Verify functionality of pressure transducer. Pressure reported via the HMI should be the same as pressure read on the pressure gauge.

2.1.2 Leachate Pumps & Injection Well

Following is the start-up procedure for the Leachate injection pumps and injection well. It is assumed that all equipment has been checked for proper rotation and alignment, electrical & control connections have been verified and initial servicing and lubrication has been competed. If conditions are otherwise, startup steps should be modified accordingly.

a) Verify that pressure and pH device valves are open:
b) Verify that sample valves are closed.
c) Verify that air relief isolation valve is open.

Financial Responsibility

WASTE MANAGEMENT

1001 Fannin, Suite 4000
Houston, Texas 77002
Phone: (713) 512-6282
Fax: (866) 239-7964
Email: dmeals@wm.com

Memorandum

DT: June 24, 2011 UPS Priority

TO: Jim Christiansen (321) 704-4162
Waste Management, Inc.
10800 NE 128th Street
Okeechobee, FL 34972

FR: Donna Meals
Director, Financial Assurance

RE: Okeechobee Landfill - Bond # 1019108
Okeechobee Landfill – Trust # E15629OKEECH

Enclosed are the above referenced certified copies of the bond and trust you recently requested. Please keep a copy for your file and forward the original to the Obligee/Beneficiary.

If you have any questions, please feel free to contact me at 713-512-6282.

Enclosure

/ls

CERTIFIED COPY
By: Dawson West
Dawson West, Attorney-in-Fact
June 23, 2011

STATE OF FLORIDA

UNDERGROUND INJECTION CONTROL
PERFORMANCE BOND

Date bond executed: August 28, 2006

Effective date: August 15, 2006

Principal: Okeechobee Landfill, Inc., 10800 NE 128th Avenue, Okeechobee, FL 34972
[Legal Name and Business Address of Owner or Operator]

Type of Organization: _____ Individual
_____ Joint Venture
_____ Partnership
__X__ Corporation

State of Incorporation: Florida

Surety(ies): Lexon Insurance Company, 10002 Shelbyville Road, Louisville, KY 40223
[Name(s) and Business Address(es)]

DEP/EPA ID Number: 0040842-010-SC

Facility Name & Address: Okeechobee Landfill, Inc.
10800 NE 128th Avenue, Okeechobee, FL 34972

Plugging and Abandonment Amount: $250,000.00
Post-Closure Monitoring Amount: $ -0-

Total penal sum of bond: $ 250,000.00

Surety's bond number: 1019108

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto are firmly bound to the Florida Department of Environmental Protection (hereinafter called FDEP), in the above penal sum for the payment, of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the Underground Injection Control (UIC) rules, Chapter 62-528, Florida Administrative Code, to have a permit or comply with requirements to operate under rule in order to own or operate each injection well and associated monitor well(s) identified above, and

Whereas said Principal is required to provide financial assurance for plugging and abandonment and/or post-closure monitoring as a condition of the permit or provisions to operate under rule, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of this obligation are such that if the Principal shall faithfully perform plugging and abandonment and/or post-closure monitoring, whenever required to do so, of each injection well and associated monitor well(s) for which this bond guarantees plugging and abandonment and/or post-closure monitoring, in accordance with the plugging and abandonment and/or post-closure monitoring plan and other requirements of the permit or provisions for operating under rule as may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended,

Or, if the Principal shall provide alternate financial assurance and obtain the FDEP Secretary's written approval of such assurance, within 90 days after the date of notice of cancellation is received by both the Principal and the FDEP Secretary from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by the FDEP Secretary that the Principal has been found in violation of the plugging and abandonment and/or post-closure monitoring requirements of Rule 62-528, Florida Administrative Code, for an injection well or associated monitor well(s) which this bond guarantees performance of plugging and abandonment and/or post-closure monitoring, the Surety(ies) shall either perform plugging and abandonment and/or post-closure monitoring in accordance with the plugging and abandonment and/or post-closure monitoring plan and other permit requirements of provisions for operating under rule and other requirements or place the amount for plugging and abandonment and/or post-closure monitoring into a standby trust fund as directed by the FDEP Secretary.

Upon notification by the FDEP Secretary that the Principal has failed to provide alternate financial assurance and obtain written approval of such assurance from the FDEP Secretary during the 90 days following receipt by both the Principal and the FDEP Secretary of a notice of cancellation of the bond, the Surety(ies) shall place the full amount guaranteed for the injection and monitor well(s) into the standby trust as directed by the FDEP Secretary.

The Surety(ies) hereby waive(s) notification of amendments to plugging and abandonment and/or post-closure monitoring plans, permits, applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice by certified mail to the permittee and to the FDEP Secretary, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the FDEP Secretary, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the FDEP Secretary.

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new plugging and abandonment and/or post-closure monitoring amount provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the FDEP Secretary.

In witness Whereof, The Principal and Surety(ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies).

Principal Okeechobee Landfill, Inc.

[Signature(s)]

Donna L. Meals, Director, Financial Assurance

[Name(s)]

[Title(s)]

[Corporate Seal]

Corporate Surety(ies)

Lexon Insurance Company, 10002 Shelbyville Road, Louisville, KY 40223
[Name and Address]

State of Incorporation: Texas

Liability limit: $250,000.00

[Signature(s)]

Julie Radican
[Name(s)]

Attorney-in-Fact
[Title(s)]

[Corporate Seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: $625.00

POWER OF ATTORNEY

LX - 020363

Lexon Insurance Company

KNOW ALL MEN BY THESE PRESENTS, that **LEXON INSURANCE COMPANY**, a Texas Corporation, with its principal office in Louisville, Kentucky, does hereby constitute and appoint:

John B. Manus, Mary E. Joseph, Tammy Masterson, Brook T. Smith, **********

Kathy Hobbs, Raymond M. Hundley, Jason D. Cromwell, James H. Martin, Sandra F. Harper, Myrtie Henry, Julie Radican, Virginia E. Woolridge **********

its true and lawful Attorney(s)-In-Fact to make, execute, seal and deliver for, and on its behalf as surety, any and all bonds, undertakings or other writings obligatory in nature of a bond.

This authority is made under and by the authority of a resolution which was passed by the Board of Directors of **LEXON INSURANCE COMPANY** on the 1st day of July, 2003 as follows:

Resolved, that the President of the Company is hereby authorized to appoint and empower any representative of the Company or other person or persons as Attorney-In-Fact to execute on behalf of the Company any bonds, undertakings, policies, contracts of indemnity or other writings obligatory in nature of a bond not to exceed $2,500,000.00, Two-million five hundred thousand dollars, which the Company might execute through its duly elected officers, and affix the seal of the Company thereto. Any said execution of such documents by an Attorney-In-Fact shall be as binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company. Any Attorney-In-Fact, so appointed, may be removed for good cause and the authority so granted may be revoked as specified in the Power of Attorney.

Resolved, that the signature of the President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Vice President, and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certificate so executed and sealed shall, with respect to any bond of undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS THEREOF, **LEXON INSURANCE COMPANY** has caused this instrument to be signed by its President, and its Corporate Seal to be affixed this 2nd day of July, 2003.

LEXON INSURANCE COMPANY
A TEXAS INSURANCE COMPANY

LEXON INSURANCE COMPANY

BY _____
David E. Campbell
President

ACKNOWLEDGEMENT

On this 2nd day of July, 2003, before me, personally came David E. Campbell to me known, who being duly sworn, did depose and say that he is the President of **LEXON INSURANCE COMPANY**, the corporation described in and which executed the above instrument; that he executed said instrument on behalf of the corporation by authority of his office under the By-laws of said corporation.

"OFFICIAL SEAL"
LYDIA J. DEJONG
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 1/12/2007

_____
Lydia J. DeJong
Notary Public

CERTIFICATE

I, the undersigned, Secretary of **LEXON INSURANCE COMPANY**, A Texas Insurance Company, DO HEREBY CERTIFY that the original Power of Attorney of which the foregoing is a true and correct copy, is in full force and effect and has not been revoked and the resolutions as set forth are now in force.

Signed and Sealed at Lombard, Illinois this 28th Day of August, 2006.

LEXON INSURANCE COMPANY
A TEXAS INSURANCE COMPANY

_____
Donald D. Buchanan
Secretary

Bond No. 1019108

RIDER

To be attached to and form a part of Performance Bond Bond, No. 1019108

dated the 15th day of August , 2006 issued by

LEXON Insurance Company, 10002 Shelbyville Road, Louisville, KY 40223 as Surety, on behalf of

Okeechobee Landfill, Inc., 10800 NE 128th Avenue, Okeechobee, FL 34972 , as Principal,

in the penal sum of Two Hundred Fifty Thousand and 00/100

Dollars ($ 250,000.00), and in favor of Florida Department of Environmental Protection, Underground Injection ~~2600 Blair Stone Rd, Twin Towers, Office Bldg., Mail Station 3530, Tallahassee, FL 323~~

In consideration of the premium charged for the attached bond, it is hereby agreed that the attached bond be amended as follows:

The bond penalty is increased as follows:

Current Bond Amount: $257,500.00
Total New Bond Amount: $260,139.38

Provided, However, that the attached bond shall be subject to all its agreements, limitations and conditions except as herein expressly modified, and further that the liability of the Surety under the attached bond and the attached bond as amended by this rider shall not be cumulative.

This rider shall become effective as of the 15th day of August , 2009

Signed, sealed and dated this 1st day of July , 2009

Okeechobee Landfill, Inc.

WITNESS:

Veronica Williams PRINCIPAL

By Donna L Meals

Donna L. Meals, Authorized Representative

WITNESS:

Jill Kemp

LEXON Insurance Company

By Sandra F. Harper

Sandra F. Harper , Attorney-in-Fact

POWER OF ATTORNEY

LX - 58629

Lexon Insurance Company

KNOW ALL MEN BY THESE PRESENTS, that **LEXON INSURANCE COMPANY**, a Texas Corporation, with its principal office in Louisville, Kentucky, does hereby constitute and appoint: Brook T. Smith, Kathy Hobbs, Raymond M. Hundley, Jason D. Cromwell, James H. Martin, *****

Sandra F. Harper, Myrtie F. Henry, Julie Radican, Virginia E. Woolridge, Deborah Neichter, Jill Kemp, Jackie C. Koestel, Sheryon Quinn **

its true and lawful Attorney(s)-In-Fact to make, execute, seal and deliver for, and on its behalf as surety, any and all bonds, undertakings or other writings obligatory in nature of a bond.

This authority is made under and by the authority of a resolution which was passed by the Board of Directors of **LEXON INSURANCE COMPANY** on the 1st day of July, 2003 as follows:

Resolved, that the President of the Company is hereby authorized to appoint and empower any representative of the Company or other person or persons as Attorney-In-Fact to execute on behalf of the Company any bonds, undertakings, policies, contracts of indemnity or other writings obligatory in nature of a bond not to exceed $2,500,000.00, Two-million five hundred thousand dollars, which the Company might execute through its duly elected officers, and affix the seal of the Company thereto. Any said execution of such documents by an Attorney-In-Fact shall be as binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company. Any Attorney-In-Fact, so appointed, may be removed for good cause and the authority so granted may be revoked as specified in the Power of Attorney.

Resolved, that the signature of the President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Vice President, and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certificate so executed and sealed shall, with respect to any bond of undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS THEREOF, **LEXON INSURANCE COMPANY** has caused this instrument to be signed by its President, and its Corporate Seal to be affixed this 2nd day of July, 2003.

LEXON INSURANCE COMPANY — A TEXAS INSURANCE COMPANY

LEXON INSURANCE COMPANY

BY _____

David E. Campbell
President

ACKNOWLEDGEMENT

On this 2nd day of July, 2003, before me, personally came David E. Campbell to me known, who being duly sworn, did depose and say that he is the President of **LEXON INSURANCE COMPANY**, the corporation described in and which executed the above instrument; that he executed said instrument on behalf of the corporation by authority of his office under the By-laws of said corporation.

"OFFICIAL SEAL"
MAUREEN K. AYE
Notary Public, State of Illinois
My Commission Expires 09/21/09

_____

Maureen K. Aye
Notary Public

CERTIFICATE

I, the undersigned, Secretary of **LEXON INSURANCE COMPANY**, A Texas Insurance Company, DO HEREBY CERTIFY that the original Power of Attorney of which the foregoing is a true and correct copy, is in full force and effect and has not been revoked and the resolutions as set forth are now in force.

Signed and Sealed at Lombard, Illinois this 1st Day of July, 2009.

LEXON INSURANCE COMPANY — A TEXAS INSURANCE COMPANY

_____

Donald D. Buchanan
Secretary

"WARNING: Any person who knowingly and with intent to defraud any insurance company or other person, files an application for insurance or statement of claim containing any materially false information, or conceals for the purpose of misleading, information concerning any fact material thereto, commits a fraudulent insurance act, which is a crime and subjects such person to criminal and civil penalties."

Bond No. 1019108

RIDER

To be attached to and form a part of Performance Bond Bond, No. 1019108

dated the 15th day of August , 2006 issued by

LEXON Insurance Company, 10002 Shelbyville Road, Louisville, KY 40223 as Surety, on behalf of

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in the penal sum of Two Hundred Fifty Thousand and 00/100

Dollars ($ 250,000.00), and in favor of Florida Department of Environmental Protection, Underground Injection 2600 Blair Stone Rd, Twin Towers, Office Bldg., Mail Station 3530, Tallahassee, FL 323

In consideration of the premium charged for the attached bond, it is hereby agreed that the attached bond be amended as follows:

The bond penalty is increased as follows:

Current Bond Amount: $250,000.00
Total New Bond Amount: $257,500.00

Provided, However, that the attached bond shall be subject to all its agreements, limitations and conditions except as herein expressly modified, and further that the liability of the Surety under the attached bond and the attached bond as amended by this rider shall not be cumulative.

This rider shall become effective as of the 15th day of August , 2008

Signed, sealed and dated this 10th day of July , 2008

WITNESS:

PRINCIPAL

Okeechobee Landfill, Inc.

By Donna L. Meals

Donna L. Meals, Authorized Representative

WITNESS:

LEXON Insurance Company

By Sandra F. Harper

Sandra F. Harper , Attorney-in-Fact

POWER OF ATTORNEY

LX - 40103

Lexon Insurance Company

KNOW ALL MEN BY THESE PRESENTS, that **LEXON INSURANCE COMPANY**, a Texas Corporation, with its principal office in Louisville, Kentucky, does hereby constitute and appoint: John B. Manus, Mary E. Joseph, Brook T. Smith, Kathy Hobbs, Raymond M. Hundley **

Jason D. Cromwell, James H. Martin, Sandra F. Harper, Myrtie F. Henry, Julie Radican, Virginia E. Woolridge, Deborah Neichter **********

its true and lawful Attorney(s)-In-Fact to make, execute, seal and deliver for, and on its behalf as surety, any and all bonds, undertakings or other writings obligatory in nature of a bond.

This authority is made under and by the authority of a resolution which was passed by the Board of Directors of **LEXON INSURANCE COMPANY** on the 1st day of July, 2003 as follows:

Resolved, that the President of the Company is hereby authorized to appoint and empower any representative of the Company or other person or persons as Attorney-In-Fact to execute on behalf of the Company any bonds, undertakings, policies, contracts of indemnity or other writings obligatory in nature of a bond not to exceed $2,500,000.00, Two-million five hundred thousand dollars, which the Company might execute through its duly elected officers, and affix the seal of the Company thereto. Any said execution of such documents by an Attorney-In-Fact shall be as binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company. Any Attorney-In-Fact, so appointed, may be removed for good cause and the authority so granted may be revoked as specified in the Power of Attorney.

Resolved, that the signature of the President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Vice President, and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certificate so executed and sealed shall, with respect to any bond of undertaking to which it is attached, continue to be valid and binding on the Company.

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LEXON INSURANCE COMPANY — A TEXAS INSURANCE COMPANY

LEXON INSURANCE COMPANY

BY _____
David E. Campbell
President

ACKNOWLEDGEMENT

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"OFFICIAL SEAL"
MAUREEN K. AYE
Notary Public, State of Illinois
My Commission Expires 09/21/09

_____
Maureen K. Aye
Notary Public

CERTIFICATE

I, the undersigned, Secretary of **LEXON INSURANCE COMPANY**, A Texas Insurance Company, DO HEREBY CERTIFY that the original Power of Attorney of which the foregoing is a true and correct copy, is in full force and effect and has not been revoked and the resolutions as set forth are now in force.

Signed and Sealed at Lombard, Illinois this 10th Day of July, 2008.

LEXON INSURANCE COMPANY — A TEXAS INSURANCE COMPANY

_____
Donald D. Buchanan
Secretary

"WARNING: Any person who knowingly and with intent to defraud any insurance company or other person, files an application for insurance or statement of claim containing any materially false information, or conceals for the purpose of misleading, information concerning any fact material thereto, commits a fraudulent insurance act, which is a crime and subjects such person to criminal and civil penalties."

Certified Copy

SUSIE BECVAR
ASSISTANT VICE PRESIDENT & TRUST OFFICER Susie Becvar 6/23/2011

UNDERGROUND INJECTION CONTROL STANDBY TRUST FUND AGREEMENT
TO DEMONSTRATE FINANCIAL ASSURANCE

TRUST AGREEMENT, the "Agreement," entered into as of August 28, 2006 by and between Okeechobee Landfill, Inc., a Florida Corporation, the "Grantor," and JPMorgan Chase Bank "incorporated in the State of New York" a national bank," the "Trustee."

WHEREAS, the Florida Department of Environmental Protection, "FDEP," an agency of the State of Florida, has established certain regulations applicable to the Grantor, requiring that an owner or operator of injection and associated monitor well(s) shall provide assurance that funds will be available when needed for plugging and abandonment and/or post-closure monitoring of the injection and associated monitor well(s),

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the permittee who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

(c) The term "FDEP" means the Florida Department of Environmental Protection, an Agency of the State of Florida or any successor thereof.

(d) The term "facility" means any underground injection well and associated monitor well(s) or any other activity that is subject to regulation under the Underground Injection Control Program, Chapter 62-528, Florida Administrative Code.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on attached Schedule A.

Section 3. Standby Trust. This Trust shall remain dormant until funded with the proceeds from the Surety bond as listed on Schedule B. The Trustee shall have no duties or responsibilities beyond safekeeping this Document. Upon funding this Trust shall become active and be administered pursuant to the terms of this instrument.

Section 4. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the FDEP. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the FDEP.

Section 5. Payment for Plugging and Abandonment. The Trustee shall make payments from the Fund as the FDEP Secretary shall direct, in writing, to provide for the payment of the costs of plugging and abandonment and/or post-closure monitoring of the injection well(s) covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the FDEP Secretary from the Fund for plugging and abandonment and/or post-closure monitoring expenditures in such amounts as the FDEP Secretary shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the FDEP Secretary specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee and shall consist solely of proceeds from the Surety Bond.

Section 7. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. ∋80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 8. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. ə80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 9. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the Name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities ln a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States

Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 10. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 11. Annual Valuation. The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the Secretary of the FDEP a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the FDEP Secretary shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 12. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 13. Trustee Compensation. The Trustee is authorized to charge against the principal of the Trust its published Trust fee schedule in effect at the time services are rendered.

Section 14. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act

in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instruction. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, FDEP Secretary, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 10.

Section 15. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the FDEP Secretary to the Trustee shall be in writing, signed by the FDEP Secretary, or the designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the FDEP hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the FDEP, except as provided for herein.

Section 16. Amendment of Agreement. This agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the FDEP Secretary, or by the Trustee and the FDEP Secretary if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee and the FDEP Secretary, or by the Trustee and the FDEP Secretary if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the FDEP Secretary issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of Florida.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written.

Donna L. Meals

Director, Financial Assurance

Attest:

[*Title*] Vice President and Secretary

[*Seal*]

[*Signature of Trustee*]

MAY NG
VICE PRESIDENT
TRUST OFFICER

Attest:

[*Title*] Trust Officer

[*Seal*]

SCHEDULE A

This Agreement demonstrates financial assurance for the following cost estimate(s) for the following facility(ies):

Identification Number of Facility	Name of Facility	Address of Facility	Cost Estimates for Which Financial Assurance Being Demonstrated by This Agreement	
0040842-010-SC	Okeechobee Landfill, Inc.	10800 NE 128th Ave., Okeechobee, FL 34972	Plugging and Abandonment	$250,000
			Post-Closure Monitoring	$0.00
			TOTAL	$250,000

The cost estimates listed here were last adjusted on August 15, 2006.

SCHEDULE B

The Fund is established initially as consisting of the following property:

$250,000.00 (Two Hundred Fifty Thousand and oo/100 dollars) , as evidenced by Surety Bond Number 1019108 issued by Lexon Insurance Company, effective August 15,2006.

ALL WEBBS
ENTERPRISES, INC.

November 30, 2010

Tony Bishop
Waste Management
Okeechobee Landfill
10800 NE 128th Ave.
Okeechobee, FL 34972

Re: Injection Well & Monitor Well

Dear Mr. Bishop,

Please be advised that the price that All Webb's Enterprises, Inc. previously provided you for the plugging and abandonment of the monitor well and/or injection well remains unchanged.

If you have any questions or comments, please do not hesitate to contact our office.

Sincerely,

Tami L. Wells

Tami L. Wells
Contract Administrator

Cc: David W. Webb, President
J.E McGrath, P.G., L.S. Simms and Associates

309 COMMERCE WAY, JUPITER, FLORIDA 33458 PHONE (561) 746-2079 FAX (561) 746-4199 allwebbs@allwebbs.com

Deed Documents

FILE NUM 2011005205
OR BK 00701 PG 0860
SHARON ROBERTSON, CLERK OF CIRCUIT COURT
OKEECHOBEE COUNTY, FLORIDA
RECORDED 05/25/2011 01:40:43 PM
RECORDING FEES $35.50
RECORDED BY R Parrish
Pgs 0860 - 863; (4pgs)

Return to:

Charles Orcutt
Okeechobee Landfill, Inc.
10800 NE 128 Avenue
Okeechobee, FL 34972

Parcel ID Number: 1-13-36-36-0A00-00001-0000

NOTICE

LOCATION OF DEEP INJECTION WELL SITE

AT

OKEECHOBEE LANDFILL, INC.

10800 NE 128 AVENUE
OKEECHOBEE, FL 34972

OKEECHOBEE LANDFILL, INC.
A WASTE MANAGEMENT COMPANY

10800 NE 128th Ave.
Okeechobee, FL 34972
(863) 357-0111
(863) 357-0772 Fax

The attached Survey is recorded in the Okeechobee County Public Records at the request of the Florida Department of Environmental Regulation, in order to notify all interested parties of the location of the Deep Injection Well site located in the North ½ of Section 13, Township 36 South, Range 36 East, at Okeechobee Landfill, Inc., 10800 NE 128 Avenue, Okeechobee, Florida 34972.

OKEECHOBEE LANDFILL, INC.

By: _____
TONY BISHOP, District Manager

STATE OF FLORIDA
COUNTY OF OKEECHOBEE

The foregoing instrument was acknowledged before me this 24th day of May, 2011 by TONY BISHOP, District Manager of Okeechobee Landfill, Inc., who is personally known to me and who did not take an oath.

_____
Notary Public, State of Florida

My Commission: 5/18/12

PAMELA K CASPERSON
Notary Public - State of Florida
My Commission Expires May 18, 2012
Commission # DD 778158
Bonded Through National Notary Assn.

WGI
Wantman Group, Inc.
Engineering ❖ Planning ❖ Surveying ❖ Environmental
2035 VISTA PARKWAY, SUITE 100, WEST PALM BEACH, FL 33411
(866) 909-2220 phone (561) 687-1110 fax
CERTIFICATE OF AUTHORIZATION No. LB 7055
ORLANDO – PORT ST. LUCIE – TAMPA
www.wantmangroup.com

SPECIFIC PURPOSE SURVEY

FOR THE BENEFIT OF:

Okeechobee Landfill, Inc.

SURVEYOR'S NOTES:

1. The survey date is 05/09/11 and documented in Field Book 290, Pages 47–49.
2. This is a Special Purpose Survey, as defined in Chapter 5J-17.050(10)(a)-(k) of the Florida Administrative Code. The purpose of this survey is to provide the location of a deep injection well and a duel zone groundwater monitoring well with elevations for recording purposes.
3. This survey map and report or the copies thereof are not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper.
4. Additions or deletions to survey maps or reports by other than the signing party or parties is prohibited without written consent of the signing party or parties.
5. Copyright © 2011 by Wantman Group, Inc.
6. The bearings shown upon this survey are based on Grid North as established by the National Ocean Service ("NOS") through its program office National Geodetic Survey ("NGS") and the North line of the South one-half (S 1/2) of Section 13, Township 36 South, Range 36 East, Okeechobee County, Florida, said North line bears South 88°21'48" East and all other bearings recited hereon are relative thereto.
7. Elevations shown hereon are referenced to the National Geodetic Vertical Datum of 1929 (NGVD 29), as established by benchmark National Geodetic Survey Point "C-357" having a published elevation of 57.15 feet North American Vertical Datum 1988 (NAVD 88) and an elevation of 58.43 feet (NGVD 29) using a conversion value of +1.28 feet.
8. The coordinate system utilized hereon is relative to the Florida State Plane Coordinate System, East Zone, North American Datum of 1983, 2007 adjustment as established using Real-Time Kinematic Global Positioning System ("RTK GPS") survey methods using the private Lengemann of Florida L-Net Network of fixed base stations. Utilizing L-Net's single baseline solution using a LOCAL BASE and multi baseline solution using Virtual Reference Stations were utilized throughout this project. The corrected positions computed by these networks were verified through a redundancy of measurements on located survey control as well as consistent horizontal checks to established control points to verify their accuracies. All distances shown hereon are in US Survey Feet and decimals thereof.
9. Underground improvements, if any, were not located except as shown.
10. Interior improvements, if any, were not located except as shown.

LEGEND:

Elev.	= Elevation
ORB	= Official Records Book
Pg.	= Page
OCR	= Okeechobee County Records
N	= Northing
E	= Easting
Lat	= Latitude
Long	= Longitude
UE	= Utility Easement

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE UNDER MY RESPONSIBLE DIRECTION AND SUPERVISION, AND IS A CORRECT REPRESENTATION OF THE LAND SURVEYED.

DATE OF LAST FIELD WORK: 05/09/11

For The Firm
Wantman Group, Inc.

BY: Derek G. Zeman

DATE: 5/16/11

DEREK G. ZEMAN,
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA LICENSE NO. 5655

DATE:	REVISION:	BY:

OFFICE	MRG	DATE 05/09/11	JOB 30610602.00
CHECKED	DGZ	SHEET 1 OF 2	DWG 60200_Inj Well ASB

K:\WASTE MANAGEMENT\REPMAN RD 1 MANCH\Admin\Survey\60200_Inj Well ASB.dwg

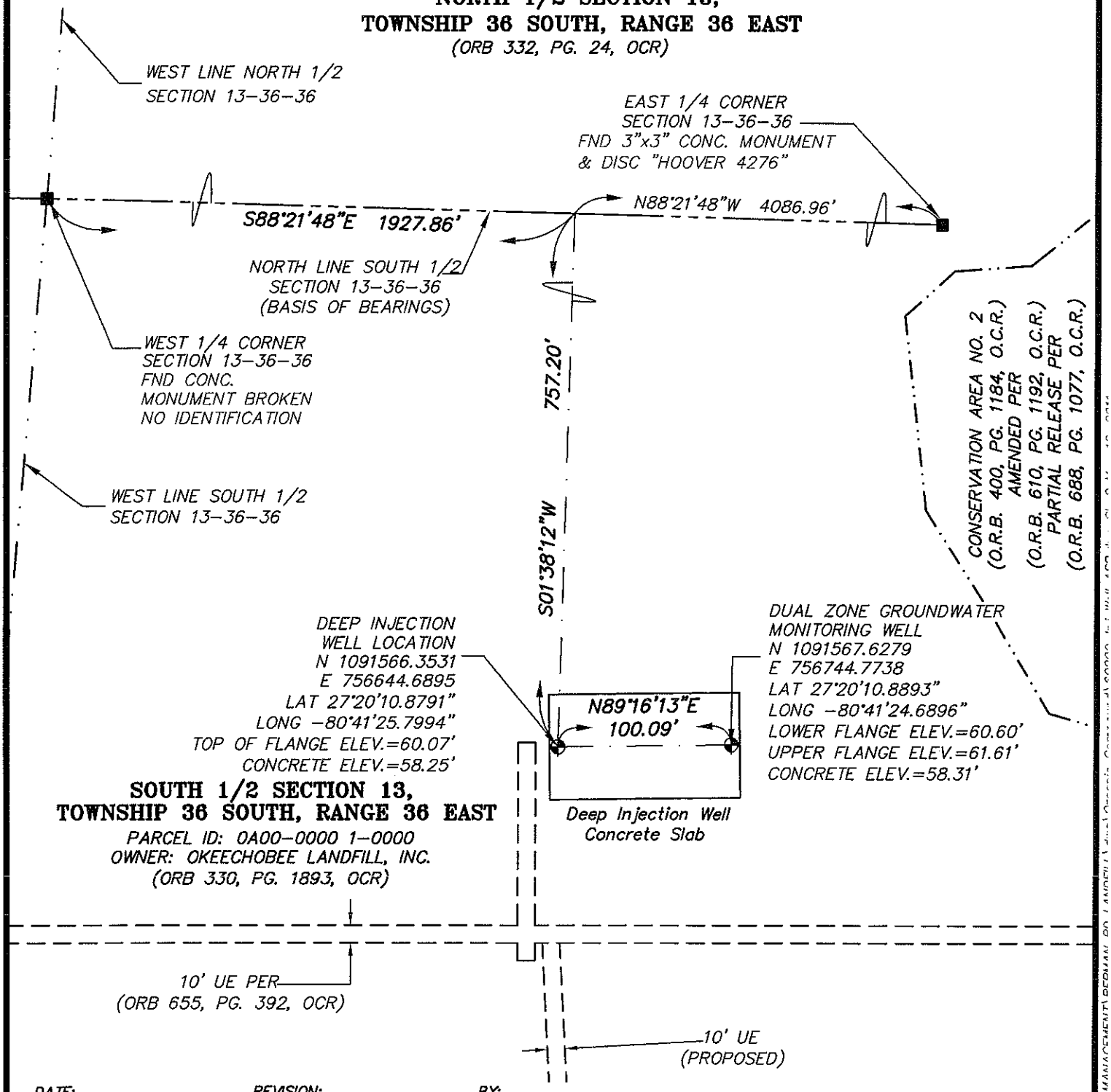
WGI
Wantman Group, Inc.
Engineering ❖ Planning ❖ Surveying ❖ Environmental
2035 VISTA PARKWAY, SUITE 100, WEST PALM BEACH, FL 33411
(866) 909-2220 phone (561) 687-1110 fax
CERTIFICATE OF AUTHORIZATION No. LB 7055
ORLANDO – PORT ST. LUCIE – TAMPA
www.wantmangroup.com

N

SCALE: 1" = 80'
(Intended Display Scale)

NORTH 1/2 SECTION 13, TOWNSHIP 36 SOUTH, RANGE 36 EAST

(ORB 332, PG. 24, OCR)



SOUTH 1/2 SECTION 13, TOWNSHIP 36 SOUTH, RANGE 36 EAST

PARCEL ID: 0A00-0000 1-0000
OWNER: OKEECHOBEE LANDFILL, INC.
(ORB 330, PG. 1893, OCR)

10' UE PER (ORB 655, PG. 392, OCR)

10' UE (PROPOSED)

DATE:	REVISION:	BY:				
			OFFICE	MRG	DATE 05/09/11	JOB 30610602.00
			CHECKED	DGZ	SHEET 2 OF 2	DWG 60200_Inj Well ASB

K:\WASTE MANAGEMENT\BEDMAN SR LANDFILL\Final Design\Permit\60200_Inj Well ASB.dwg

Appendix C
CASING MILL CERTIFICATES
OKEECHOBEE LANDFILL, INC.
OKEECHOBEE, FLORIDA

INJECTION WELL

	48”	Pit Pipe
250 feet	42”	Conductor Casing
674 feet	36”	Surface Casing
1994 feet	26”	Intermediate Casing
2737 feet	16”	Final Casing
2723 feet	10.72	FRP Liner

DUAL ZONE DEEP MONITOR WELL

	42”	Pit Pipe
251 feet	34”	Conductor Casing
684 feet	24”	Surface Casing
1789 feet	16”	Final Casing/ Shallow Monitor Zone
1960 feet	6-5/8”	FRP Deep Monitor Zone Tubing

NAYLOR PIPE COMPANY

1230 EAST NINETY-SECOND STREET • CHICAGO, ILLINOIS 60619-7997

TEL. (773) 721-9400 • FAX (773) 721-9494

TO WHOM IT MAY CONCERN:

RE: MCJUNKIN CORPORATION
P.O. BOX 37226
JACKSONVILLE, FLORIDA
YOUR ORDER NO. C0357735930DO
NAYLOR PIPE CO. ORDER B-42800

This is to certify that the 36" O.D. 3/8" Wall Naylor Spiral Buttweld Steel Pipe furnished on the above order was manufactured in strict accordance with ASTM A-139, Grade B.

NAYLOR PIPE COMPANY

Michael Griffin/rp/mcjunkin.3.19.08

Subscribed and sworn to before me a Notary Public
this 19th day of March, 2008.

Rosemary Pestich

NOTARY PUBLIC

OFFICIAL SEAL
ROSEMARY PESTICH
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES 05/02/11

BETA STEEL CORP
6500 S. BOUNDARY ROAD
PORTAGE, IN 46368

	PAGE: 1 of 1
	SHIPPER'S NO. 516533
DATE PRINTED 7/10/2006	PART NO.
TIME PRINTED 12:07:50	INVOICE NO. BETA 141090
P. O. DATE 05/18/06	MILL ORDER 1027323
P. O. NO. 53911	PICKUP NO. 134558
BULLETIN(S): 59327	

FROM
BETA STEEL CORP
6500 S. BOUNDARY ROAD
PORTAGE, IN 46368

SOLD TO
Naylor Pipe Company
1230 East 92nd Street
CHICAGO, IL 60619-7997

SHIP TO
Naylor Pipe Co. c/o Feralloy
6755 Waterway Dr.
PORTAGE, IN 46368

DATE/TIME SHIPPED	F.O.B. MILL	ROUTE/ CARRIER SLFP	CAR/ VEHICLE ID.
07/10/06 12:06	PORTAGE, INDIANA	S&L/FMP/PORT	TRACTOR: 9506 TRAILER: AB

TRANS. MODE CTR	TARE WEIGHT LBS.	EXCLUDED WEIGHT LBS.	B/L WEIGHT LBS.	FREIGHT TERMS COL
CUSTOMER TRUCK	0	0	72,250	COLLECT

PRODUCT DESCRIPTION: HOT ROLLED BAND PRIME COIL MILL EDGE CONV. TO A139 GR B N/A

MATERIAL SHIPPED AS: HOT ROLLED BAND

ORDER ORDERED DIMENSIONS
1027323 .3600 X 41.7000 X COIL MIN

B/P/L: LOAD MUST BE TARPED
MARK EACH PIECE OR COIL WITH MATERIAL ID, WEIGHT, WIDTH AND GAUGE
THREE BANDS THRU EYE OF COIL AND TWO CIRCUMFERENTIAL BANDS

MATERIAL ID	HEAT NO.	DIMENSIONS	PCS	ACTUAL
346256	C0710	.3600 X 41.7000	1	36,070
346257	C0710	.3600 X 41.7000	1	36,180
ORDER TOTAL			2	72,250

Made and Melted in the USA

HEAT: C0710	C	MN	P	S	SI	CU	NI
- FNLARL1	0.15	0.61	0.005	0.004	0.02	0.11	0.04
	CR	AL	MO	V	CB	N	B
- FNLARL1	0.04	0.027	0.014	0.001	0.002	0.009	0
	CA	SN	TI				
- FNLARL1	0.0024	0.01	0.001				

Robert M Chase
QA Representative

BETA STEEL CORP
6500 S. BOUNDARY ROAD
PORTAGE, IN 46368

	PAGE: 2 of 2
	SHIPPER'S NO. 516322
DATE PRINTED 7/3/2006	PART NO.
TIME PRINTED 11:06:25	INVOICE NO. BETA 140864
P. O. DATE 05/18/06	MILL ORDER 1027323
P. O. NO. 53911	PICKUP NO. 134343
BULLETIN(S): 59185, 59262	

FROM
BETA STEEL CORP
6500 S. BOUNDARY ROAD
PORTAGE, IN 46368

SOLD TO
Naylor Pipe Company
1230 East 92nd Street
CHICAGO, IL 60619-7997

SHIP TO
Naylor Pipe Co. c/o Feralloy
6755 Waterway Dr.
PORTAGE, IN 46368

DATE/TIME SHIPPED	F.O.B. MILL	ROUTE/ CARRIER SLFP	CAR/ VEHICLE ID.
07/03/06 11:05	PORTAGE, INDIANA	S&L/FMP/PORT	TRACTOR: 9506 TRAILER: AB

TRANS. MODE PP	TARE WEIGHT LBS.	EXCLUDED WEIGHT LBS.	B/L WEIGHT LBS.	FREIGHT TERMS PPD
PREPAID TRUCK	0	0	109,230	PREPAID

PRODUCT DESCRIPTION: HOT ROLLED BAND PRIME COIL MILL EDGE CONV. TO A139 GR B N/A

MATERIAL SHIPPED AS: HOT ROLLED BAND

ORDER	ORDERED DIMENSIONS
1027323	.3600 X 41.7000 X COIL MIN

M/P/L: LOAD MUST BE TARPED
MARK EACH PIECE OR COIL WITH MATERIAL ID, WEIGHT, WIDTH AND GAUGE
THREE BANDS THRU EYE OF COIL AND TWO CIRCUMFERENTIAL BANDS

MATERIAL ID	HEAT NO.	DIMENSIONS	PCS	ACTUAL
346260	J2178	.3600 X 41.7000	1	36,320
ORDER TOTAL			1	36,320

Made and Melted in the USA

HEAT: J2178	C	MN	P	S	SI	CU	NI
FNLARL1	0.14	0.75	0.008	0.006	0.02	0.16	0.07
	CR	AL	MO	V	CB	N	B
FNLARL1	0.05	0.026	0.021	0.001	0.002	0.008	0
	CA	SN	TI				
FNLARL1	0.0026	0.01	0.001				

Robert M Chase
QA Representative

Appendix C
CASING MILL CERTIFICATES

OKEECHOBEE LANDFILL, INC.
OKEECHOBEE, FLORIDA

"VOLZHSKY PIPE PLANT"
OJSC

404119, Volzhsky, Volgograd region, Russia

Fax: (78443) 25-69-02
E-mail: VTZ @ SPRINT-V.com.ru

MANUFACTURER:

VOLZHSKY PIPE PLANT OJSC
404119, VOLZHSKY
VOLGOGRAD REGION
RUSSIA

MILL TEST CERTIFICATE

SPEC 1238/72/POS 10417, TMK POS 08-0358
DESCRIPTION OF GOODS:
CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L PSL1 (43RD EDITION/YEAR 2004)X42.B/ASTM A106/A 106M (2006 EDITION)GR.B/C/ASTM A53/A 53M (2006 EDITION)GR.B/C/ASME SA 106(2004 EDITION)/ASME SA53 (2004 EDITION), BEVELLED ENDS.
16" x 0.500" (406.4 x 12.7 MM)

CERTIFICATE # 575 DATE OF ISSUE 26.06.2008

SIZE	HEAT No / HEAT TREATMENT LOT No	LOT No	QUANTITY, PIPES	LENGTH, FEET	NET WEIGHT TONS	CHEMICAL COMPOSITION, %											MILL CONTROL PROT. No	ORIENTATION	TENSILE TEST			HARDNESS TEST	IMPACT TEST							HEAT TREATMENT	NDT	HYDROSTATIC TEST		NOTE
						C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cr x 100	Ni x 100	Cu x 100	Mo x 100	Ti x 100	Nb x 100			TEST SPECIMEN	GL. 'C' YS PSI	GL. 'C' UTS PSI	EL. %		ORIENTATION	NOTCH	SIZE	TEST TEMP °C	IMPACT VALUE	FRACTURE %		DURATION (SECONDS)	PRESSURE KG/CM2 (MPa)	
						* 1	28 max	10 min	29 min 106 max	30 max	30 max	40 max	40 max	40 max	15 max	4 max		* 2	* 3	* 4	min 42000	min 70000	min 30.0	max 22.00	* 3	* 5	* 6	* 7				min 6	min 157.10 (15.40)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
GR.B/X42 16" x0.500"406.4 x12.7MM API 5L,PSL1 GR.B/C ASTM A106 / A106M / ASTM A53/A53M ASME SA-106 ASME SA-53	282411 / 11	3-1072	69	2747.88	103.920	H 18	23	43	7	3	8	10	18	3	0	0	3464	L	K										Q&T	N & EMI (12)	G	G	CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L (2004) ASTM A106(2006) ASTM A53(2006) ASME SA-106(2004) ASME SA-53(2004) LENGTH: MIN 80%-38-41 FT MAX 20%-36-38 FT MINIMUM HYDROSTATIC PRESSURE P= 2230 PSI HARDNESS TEST MAX.22 HRC IS IN ACCORDANCE WITH NACE MR0175.
						P 18	23	43	7	4	7	10	18	3	0	0	3464																
																	4612	L			53041	72002	42.9	1.0									

DESCRIPTION OF TESTS	VISUAL AND DIMENSIONS	BEVELING INSPECTION	END'S PROTECTORS	NONDESTRUCTIVE INSPECTION	COATING			FLATTENING TEST	MARKING: STENCILING	STEEL MAKING PROCESS - ELECTRIC FURNACE
	G	G	G	G	G			G	G	

NOTES: G: GOOD
*1: N: HEAT ANALYSIS, P: PRODUCT ANALYSIS. C: CONTROL ANALYSIS, R: RECHECK ANALYSIS
*2: L: LOT TEST, H: HEAT CONTROL TEST, A: ADDITION TEST, R: RECHECK TEST
*3: L: LONGITUDINAL, T: TRANSVERSE
*4: STRIP G: 1/2 in, H: 3/4 in, N: 1 in, K: 1 1/2 in, S: 12 mm.
*5: V: 2mm V, U: 2mm U, B: 3mm U, C: 4mm U, E: 2mm U FASE NOTCH, F: 2mm V FASE NOTCH
*6: F: 10x10mm, 7: 10x7.5mm, 6: 10x6.7mm, 5: 10x5mm, 3: 10x3.3mm, 2: 10x2.5mm
*7: E - EACH VALUE, A - AVERAGE VALUE
*8: HEAT TREATMENT, Q&T: QUENCHED & TEMPERED
*9: M: WET FLUORESCENT MAGNETIC PARTICLE TEST, EMI: ELECTROMAGNETIC TEST, UT: ULTRASONIC TEST
UTB: PIPE BODY UT FOR LAMINATION, UTE: PIPE ENDS UT FOR LAMINATION
UTS: PIPE WALL THICKNESS UT
*10: 5 - NOTCH 5%, 12 - NOTCH 12.5%

TOTAL: QUANTITY OF PIPES 69 PCS NET WEIGHT 103.920 T LENGTH 2747.88 ft

WE CONFIRM THAT PIPES HAS NO CONTAMINATION BY MERCURY AND NO REPAIR BY WELDING HAS BEEN CARRIED OUT. MTC COMPLY WITH THE STANDARD EN 10204.3.1B.

Волжская трубная ОТК для сертификатов ЗАВОД

MANAGER - INSPECTION
VOLZHSKY PIPE PLANT
DATE 26.06.08

VOLZHSKY TRUBNY

"VOLZHSKY PIPE PLANT"
OJSC

404119, Volzhsky, Volgograd region, Russia

Fax: (78443) 25-69-02
E-mail: VTZ @ SPRINT-V.com.ru

MANUFACTURER:

VOLZHSKY PIPE PLANT OJSC
404119, VOLZHSKY
VOLGOGRAD REGION
RUSSIA

MILL TEST CERTIFICATE

SPEC 1238/72/POS 10417, TMK POS 08-0358
DESCRIPTION OF GOODS:
CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L PSL1 (43RD EDITION/ YEAR 2004)X42,B/ASTM A106/A 106M (2006 EDITION)GR.B/C/ASTM A53/A 53M (2006 EDITION)GR.B/C/ASME SA 106(2006 EDITION)/ASME SA53 (2004 EDITION), BEVELLED ENDS.
16" x 0,500" (406,4 x 12,7 MM)

CERTIFICATE # 976 DATE OF ISSUE 26.06.2008

SIZE	HEAT No / HEAT TREATMENT LOT No	LOT No	QUANTITY, PIPES	LENGTH, FEET	NET WEIGHT TONS	CHEMICAL COMPOSITION, % C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cr x 100	Ni x 100	Cu x 100	Mo x 100	Ti x 100	Nb x 100	MILL CONTROL PROT. No	ORIENTATION	TENSILE TEST: TEST SPECIMEN	YS PSI	UTS PSI	EL. %	HARDNESS TEST HRC
						* 28 max	19 min	29 min 106 max	30 max	30 max	40 max	40 max	40 max	15 max	4 max			* 2	* 3	* 4	min 42000	min 70000	min 30.0	max 22.00
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
GR.B/X42 16" x0.500"406.4 x12.7MM API 5L, PSL1 GR.B/C ASTM A106 / A106M / ASTM A53/A53M ASME SA-106 ASME SA-53	282412	1-1073	84	3370.79	127.262	H 19 P 19 P 19	25 27 27	44 44 44	7 6 6	7 7 7	7 7 7	10 10 10	18 18 18	1 1 1	0 0 0	0 0 0	3465 3465 4616	L	K		52544	74015	46.1	1.0

IMPACT TEST: ORIENTATION	NO-TCH	SIZE	TEST TEMP °C	IMPACT VALUE	FRACTURE %	HEAT TREATMENT	NDT	HYDROSTATIC TEST: DURATION (SECONDS)	PRESSURE KG/CM2 (MPa)	NOTE
* 3	* 5	* 6	* 7			* 8	* 9 * (10)	min 5	min 157.10 (15.40)	
27	28	29	30	31	32	33	34	35	36	37	38
						Q&T	K & EMI (12)	G	G	CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L (2004) ASTM A106(2006) ASTM A53(2006) ASME SA-106(2004) ASME SA-53(2004) LENGTH: MIN 80%-38-41 FT MAX 20%-36-38 FT MINIMUM HYDROSTATIC PRESSURE P= 2230 PSI HARDNESS TEST MAX.22 HRC IS IN ACCORDANCE WITH NACE MR0175.

DESCRIPTION OF TESTS	VISUAL AND DIMENSIONS	BEVELING INSPECTION	END'S PROTECTORS	NONDESTRUCTIVE INSPECTION	COATING					FLATTENING TEST	MARKING: STENCILING	STEEL MAKING PROCESS - ELECTRIC FURNACE
	G	G	G	G	G					G	G	

NOTES: G: GOOD
*1: H: HEAT ANALYSIS, P: PRODUCT ANALYSIS, C: CONTROL ANALYSIS, R: RECHECK ANALYSIS
*2: L: LOT TEST, H: HEAT CONTROL TEST, A: ADDITION TEST, R: RECHECK TEST
*3: L: LONGITUDINAL, T: TRANSVERSE
*4: STRIP G: 1/2 in, H: 3/4 in, N: 1 in, K: 1 1/2 in, S: 12 mm.
*5: V: 2mm V, U: 2mm U, B: 3mm U, C: 4mm U, E: 2mm U FASE NOTCH, F: 2mm V FASE NOTCH
*6: P: 10x10mm, 7: 10x7.5mm, 6: 10x6.7mm, 5: 10x5mm, 3: 10x3.3mm, 2: 10x2.5mm
*7: E - EACH VALUE, A - AVERAGE VALUE
*8: HEAT TREATMENT, Q&T: QUENCHED & TEMPERED
*9: M: WET FLUORESCENT MAGNETIC PARTICLE TEST, EMI: ELECTROMAGNETIC TEST, UT: ULTRASONIC TEST
UTS: PIPE BODY UT FOR LAMINATION, UTE: PIPE ENDS UT FOR LAMINATION
UTS: PIPE WALL THICKNESS UT
*10: 5 - NOTCH 5%, 12 - NOTCH 12.5%

TOTAL: QUANTITY OF PIPES 84 PCS NET WEIGHT 127.262 T LENGTH 3370.79 fc

WE CONFIRM THAT PIPES HAS NO CONTAMINATION BY MERCURY AND NO REPAIR BY WELDING HAS BEEN CARRIED OUT. MTC COMPLY WITH THE STANDARD EN 10204.3IB.

ВОЛЖСКИЙ ТРУБНЫЙ ОТК ЗАВОД

MANAGER - INSPECTION
VOLZHSKY PIPE PLANT
DATE: 27.06.08.

CHEMICAL COMPOSITION, %

I	I	V	I	B	INb+V+TI		ICu+Cr+Mo+Ni+V
I	I	x	I	x	I	x	I	x	I
II	I	100	I	100001	I	100	I	100	I
I	I		I		I		I		I
I	I	B	I		I	15	I	100	I
I	I	max	I		I	max	I	max	I
I	I		I		I		I		I
IM	I	0	I	4	I	0	I	44	I
IP	I	0	I	4	I	0	I	40	I
IP	I	0	I	4	I	0	I	41	I

WE CONFIRM THAT PIPES HAS NO CONTAMINATION BY MERCURY AND NO REPAIR BY WELDING HAS BEEN CARRIED OUT. MTC COMPLY WITH THE STANDARD EN 10204.31B.

MANAGER - INSPECTION
VOLZHSKY PIPE PLANT
DATE: 14.06.08.

"VOLZHSKY PIPE PLANT"
OJSC

404119, Volzhsky, Volgograd region, Russia

Fax (78443) 25-69-02
E-mail: VTZ @ SPRINT-V.com.ru

MANUFACTURER:

VOLZHSKY PIPE PLANT OJSC
404119, VOLZHSKY
VOLGOGRAD REGION
RUSSIA

MILL TEST CERTIFICATE

SPEC 1238/72/POS 10417, TMK POS 08-0358
DESCRIPTION OF GOODS:
CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L PSL1 (43RD EDITION/YEAR 2004)X42.B/ASTM A106/A 106M (2006 EDITION)GR.B/C/ASTM A53/A 53M (2006 EDITION)GR.B/C/ASME SA 106(2004 EDITION)/ASME SA53 (2004 EDITION), BEVELLED ENDS.
16" x 0.500" (406,4 x 12,7 MM)

CERTIFICATE # 977 DATE OF ISSUE 26.06.2008

SIZE	HEAT No / HEAT TREATMENT LOT No	LOT No	QUANTITY, PIPES	LENGTH, FEET	NET WEIGHT TONS	CHEMICAL COMPOSITION, % C x 100	Si x 100	Mn x 100	P x 1000	S x 1600	Cr x 100	Ni x 100	Cu x 100	Mo x 100	Ti x 100	Nb x 100	MILL CONTROL PROT. No	ORIENTATION	TENSILE TEST: TEST SPECIMEN	GL. 'C' YS PSI	GL. 'C' UTS PSI	EL. %	HARDNESS TEST HRC	IMPACT TEST: ORIENTATION	NOTCH	SIZE	TEST TEMP °C	IMPACT VALUE	FRACTURE %	HEAT TREATMENT	NDT	HYDROSTATIC TEST: DURATION (SECONDS)	PRESSURE KG/CM2 (MPa)	NOTE
						* 1	28 max	10 min	29 max 106 max	30 max	30 max	40 max	40 max	40 max	15 max	4 max			* 2	* 3	* 4	min 42000	min 70000	min 38.0	max 22.00	* 3	* 5	* 6		* 7			* 8	* 9 * (10)	min 5	min 157.10 (15.40)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
GR.B/X42 16" x0.500"406.4 x12.7MM API 5L,PSL1 GR.B/C ASTM A106 / A106M / ASTM A53/A53M ASME SA-106 ASME SA-53	282413 11	3-1074	29	1168.48	44.391	H 19 P 18	24 25	44 42	7 6	8 7	7 7	13 12	22 21	2 1	0 0	0 0	3966 3966	L	K												Q&T	N & EMI (32)	G	G	CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L (2004) ASTM A106(2006) ASTM A53(2006) ASME SA-106(2004) ASME SA-53(2004) LENGTH: MIN 80%-38-41 FT MAX 20%-36-38 FT MINIMUM HYDROSTATIC PRESSURE P= 2230 PSI HARDNESS TEST MAX.22 HRC IS IN ACCORDANCE WITH NACE MR0175.
																	4620	L			54890	73805	46.5	1.0										

DESCRIPTION OF TESTS	VISUAL AND DIMENSIONS	BEVELING INSPECTION	END'S PROTECTORS	NONDESTRUCTIVE INSPECTION	COATING					FLATTENING TEST	MARKING: STENCILING	STEEL MAKING PROCESS - ELECTRIC FURNACE
	G	G	G	G	G					G	G	

NOTES: G: GOOD
*1: M: HEAT ANALYSIS, P: PRODUCT ANALYSIS, C: CONTROL ANALYSIS, R: RECHECK ANALYSIS
*2: L: LOT TEST, H: HEAT CONTROL TEST, A: ADDITION TEST, R: RECHECK TEST
*3: L: LONGITUDINAL, T: TRANSVERSE
*4: STRIP G: 1/2 in, H: 3/4 in, N: 1 in, K: 1 1/2 in, S: 12 mm.
*5: V: 2mm V, U: 2mm U, B: 3mm U, C: 4mm U, K: 2mm U PASE NOTCH, F: 2mm V PASE NOTCH
*6: F: 10x10mm, 7: 10x7.5mm, 6: 10x6.7mm, 5: 10x5mm, 3: 10x3.3mm, 2: 10x2.5mm
*7: R - EACH VALUE, A - AVERAGE VALUE
*8: HEAT TREATMENT, Q&T: QUENCHED & TEMPERED
*9: M: WET FLUORESCENT MAGNETIC PARTICLE TEST. EMI: ELECTROMAGNETIC TEST.UT: ULTRASONIC TEST
UTB: PIPE BODY UT FOR LAMINATION, UTE: PIPE ENDS UT FOR LAMINATION
UTS: PIPE WALL THICKNESS UT
*10: S - NOTCH 5%, 12 - NOTCH 12.5%

TOTAL: QUANTITY OF PIPES 29 PCS NET WEIGHT 44.391 T LENGTH 1168.48 ft

WE CONFIRM THAT PIPES HAS NO CONTAMINATION BY MERCURY AND NO REPAIR BY WELDING HAS BEEN CARRIED OUT. MTC COMPLY WITH THE STANDARD EN 10204.3.1B.

ВОЛЖСКИЙ ТРУБНЫЙ ОТК ДЛЯ СЕРТИФИКАТОВ ЗАВОД

MANAGER - INSPECTION
VOLZHSKY PIPE PLANT
DATE 27.06.08.

CHEMICAL
COMPOSITION, %

PAGE 2 OF 2

I	I	V	I	B	I	Nb+V+Ti	I	Cu+Cr+Mo+Ni+V	I
I	I	x	I	x	I	x	I	x	I
III	100	II	60000	I	100	I	100	I
I	I	----	I	------	I	--------	I	------------	I
I	I	8	I		I	15	I	100	I
I	I	max	I		I	max	I	max	I
I-	I	----	I	------	I	--------	I	------------	I
IHI	0	I	4	I		0	I	36	I
IPI	0	I	4	I		0	I	36	I
IPI	0	I	4	I		0	I	36	I

WE CONFIRM THAT PIPES HAS NO CONTAMINATION BY MERCURY AND
NO REPAIR BY WELDING HAS BEEN CARRIED OUT. MTC COMPLY WITH THE STANDARD EN 10204.3IB.

ОТК
ЗАВОД

MANAGER - INSPECTION
VOLZHSKY PIPE PLANT
DATE 14.08.08.

NAYLOR PIPE COMPANY

1230 EAST NINETY-SECOND STREET • CHICAGO, ILLINOIS 60619-7997

TEL. (773) 721-9400 • FAX (773) 721-9494

TO WHOM IT MAY CONCERN:

RE: MCJUNKIN CORPORATION
P.O. BOX 37226
JACKSONVILLE, FLORIDA
YOUR ORDER NO. C0357744336DO
NAYLOR PIPE CO. ORDER B-42796

This is to certify that the 26" O.D. 3/8" Wall Naylor Spiral Buttweld Steel Pipe furnished on the above order was manufactured in strict accordance with ASTM A-139, Grade B.

NAYLOR PIPE COMPANY

Michael Griffin/rp/mcjunkin.4.9.08

Subscribed and sworn to before me a Notary Public
this 9th day of April, 2008.

Rosemary Pestich

NOTARY PUBLIC

OFFICIAL SEAL
ROSEMARY PESTICH
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:05/02/11

3/31/2008

Report: 109
Version: 1.8
12/16/2007

CERTIFIED REPORT OF CHEMICAL ANALYSIS AND MECHANICAL TESTS

ArcelorMittal

NAYLOR PIPE C/O NACME STEEL PROCESSING 429 WEST 127TH ST CHICAGO IL	Mittal Steel Riverdale 13500 South Perry Avenue Riverdale, IL 60827
NAYLOR PIPE C/O NACME C/O NACME STEEL PROCESSING 429 WEST 127TH ST CHICAGO IL	PO#: 54416/1 Invoice #: 0500011972 SO#: 374304 Carrier: MITTAL RIVERD Shipped: 3/22/2008

Coil	Thickness (in)	Width (in)	Weight (tons)	End Use	Reduction Ratio
763406	0.360	48.875	16.2	SPIRAL BUTTWE	83.37% (6:1)
763407	0.360	48.875	18.1	SPIRAL BUTTWE	83.37% (6:1)
763408	0.360	48.875	17.6	SPIRAL BUTTWE	83.37% (6:1)
763409	0.360	48.875	17.5	SPIRAL BUTTWE	83.37% (6:1)
763410	0.360	48.875	20.1	SPIRAL BUTTWE	83.37% (6:1)

Grade	Part Number	Comments
ASTM A139 GRD B MOD1	HB3604887-01	

We certify that this material meets the provisions of the 'Buy America' program. This material was melted and manufactured in the USA. All products are strand cast and free of mercury or radioactive elements. Elongation based on 2" gage length.

Coil	Yield	Tensile	% El	Dir	N-Value	N-Range	Hardness	Bend	Ft-lbs	°F	Size	Dir

Heat	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Cb	V	Al	N	Sn	B	Ti	Ca	Sb	O	H
A17856	.22	.77	.008	.005	.03	.05	.01	.03	.01	.000	.002	.028	.0047	.005	.0000	.0020	.0020	.0000		

We hereby certify the above is correct as contained in the records of the corporation

Peter Gaudreau

KIEH

METALLURGICAL SERVICES
(708) 544-8811 544-8820 FAX

Laboratory:
837 MANNHEIM RD.
BELLWOOD, IL 60104

Naylor Pipe Company
1230 E. 92nd St.
Chicago, IL 60619-7997

Attn : James Martin

Date received 04-Apr-2008
Report 03-Apr-2008
108 14100 c of pages
Account 1302
P.O. 2441

our 29th year est. 197

Test report /

Sample identity	Y.S. lbs/in^2	T.S. lbs/in^2	%E 2"
V81851 3/8"x48" Mittal /A17856	48,200	74,000	35.0
ASTM A252 gr3 min. requirements	45,000	66,000	20.00

This samples reported properties conform to the requirements of an ASTM A252 gr3 material.

CHRISTY J. PAPROPOULOS
PROFESSIONAL ENGINEER
REGISTRATION BOARD
STATE OF ILLINOIS

Mechanical:ASTM E8/A370 Y.S.0.2%offset []trans. *broke out of g.l. ¦1"g.l.

10/4/2006

Report: 108
Version 1.5
04/11/2006

CERTIFIED REPORT OF CHEMICAL ANALYSIS AND MECHANICAL TESTS

MITTAL
Riverdale

SOLD TO	MANUFACTURED BY
NAYLOR PIPE C/O NACME STEEL PROCESSING 429 WEST 127TH ST CHICAGO IL	Mittal Steel Riverdale 13500 South Perry Avenue Riverdale, IL 60827
SHIP TO	**ORDER INFORMATION**
NAYLOR PIPE C/O NACME C/O NACME STEEL PROCESSING 429 WEST 127TH ST CHICAGO IL	PO#: 53959 Invoice # SO#: 276121 Carrier: MITTAL RIVERD Shipped: 10/3/2006

ORDER INFORMATION

Coil	Thickness (in)	Width (in)	Weight (tons)	End Use	Reduction Ratio
716869	0.375	52.400	17.7	EXCESS	82.68% (6:1)

DESCRIPTION

Grade	Part Number	Comments
1021	HX3755240-01	

We certify that this material meets the provisions of the 'Buy America' program. This material was melted and manufactured in the USA. All products are strand cast and free of mercury or radioactive elements. Elongation based on 2" gage length.

DESTRUCTIVE TEST RESULTS

Coil	Yield	Tensile	% El	N-Value	N-Range	Hardness	Bend	Ft-lbs	°F	Size	Dir
716871	66.8 KSI	84.6 KSI	23.0 %								
	65.7 KSI	84.5 KSI	24.0 %								

CHEMICAL COMPOSITION

Heat	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Cb	V	Al	N	Sn	B	Ti	Ca
B15481	.21	.96	.008	.001	.20	.03	.01	.03	.00	.001	.004	.036	.0053	.002	.0000	.0030	.0020

We hereby certify the above is correct as contained in the records of the corporation

Glen McAdam

KIEH

METALLURGICAL SERVICES
(708) 544-8811 544-8820 FAX

Laboratory:
837 MANNHEIM RD.
BELLWOOD, IL 60104

Naylor Pipe Company
1230 E. 92nd St.
Chicago, IL 60619-7997

Attn : James Martin

Date 22-Mar-2007
received 21-Mar-2007
Report 107 12059 a of a pages
Account 1302
P.O. 2553

our 28th year est. 1979

Test report /

Sample identity	Y.S. lbs/in^2	T.S. lbs/in^2	%E 2"
V63002 3/8"x48" Mittal /B15481	54,200	81,600	32.0
ASTM A252 gr3 min. requirements	45,000	66,000	20.00

This samples reported properties conform to the requirements of an ASTM A252 gr3 material.

CHRISTOPHER J. PAPPALOS
PROFESSIONAL ENGINEER
REGISTRATION #36469
STATE OF ILLINOIS

Mechanical:ASTM E8/A370 Y.S.0.2%offset [ ]trans. *broke out of g.l. ¦1"g.l.

03-22-07P04:16 RCVD
03-22-07P04:10 CFMD

Изготовитель
Producer

ОАО "Харцызский трубный завод"
ул. Патона, 9, г.Харцызск
Донецкой обл. 86703 УКРАИНА

PJSC "Khartsyzsk Tube Works"
9, Paton str. Khartsyzsk
Donetsk Reg. 86703 The UKRAINE

1898

Грузополучатель, адрес Consignee, address
65026, Украина, г.Одесса, Таможенная пл. 1, Одесский морской торговый порт, США

Дата отгрузки
The date of load Shipment **15.12.2006**

Заказ-наряд № **2491**
Order №

Вагон № **66723800**
Waggon

Контракт № **633 от**
Contract № **19.05.2005**

Система управления сертифицирована по стандартам Management System is certified in accordance with the Standards ISO 9001:2000; ДСТУ ISO 9001:2001; API Spec Q1-Seventh Edition; ISO 14001:2004; OHSAS 18001:1999.
Продукция сертифицирована по стандарту Products is certified in accordance with the Standard API Spec 5L:2004 API Spec 2B:2001.

СЕРТИФИКАТ КАЧЕСТВА № 38831
CERTIFICATE OF QUALITY

Страница Page **1** Страниц Pages **2**

Согласно According DIN 50049 3.1B

Наименование товара Denomination of product	НД покрытия Standard for coating	НД труб Standard for pipes
Трубы стальные электросварные прямошовные, изготовленные методом дуговой сварки под слоем флюса Electric-welded longitudinal steel pipes, manufactured by the method of submerged arc welding under flux		API Spec 5L PSL 2 (43rd edition)

Марка стали Steel grade Класс прочности Strength factor	Номер трубы Pipe number	Номер плавки Heat number	Диаметр дюйм Diameter inch	Толщина дюйм Thickness Inch	Длина фут Length foot	Номер партии сварного соединения Weld joint lot number		Номер партии покр. Lot number of coating	Гидроисп. давл. Hydrostatic test pressure, psi	
						Продольного Longitudinal	Поперечн. Transverse		Стандартное Standart	Альтернативное Alternative
Gr.B/X42	667301	0276	36	0.375	38.2	6673			790	
Gr.B/X42	667101	0302	36	0.375	38.8	6671			790	
Gr.B/X42	667501	0278	36	0.375	38.3	6675			790	
Gr.B/X42	667126	0302	36	0.375	39.3	6671			790	
Gr.B/X42	667122	0302	36	0.375	39.2	6671			790	
Gr.B/X42	667109	0302	36	0.375	39.2	6671			790	
Gr.B/X42	667117	0302	36	0.375	39.3	6671			790	
Gr.B/X42	667202	0325	36	0.375	39.3	6672			790	

FSI P.O. 1040157700
Electric-welded steel pipes with one longitudinal weld, made by the method of arc welding under flux (SAW).
According to data available from the mill-supplier, steel plate used for pipe production was subjected to ultrasonic examination over the whole area - the results are satisfactory.
The preservative coating made by black bitumen lacquer is applied onto the whole external surface.
Welded joints are UT examined along the whole length, calibration of equipment was performed on reference standard, witch contains four machined notches N5 and one radially drilled hole-diameter 1.6 mm. Repaired and end sections of welded joints were tested by radiological examination with sensitivity not less than 2 % thickness of welded joint. Full circumference of end metal of all pipes was UT examined. NDT results are satisfactory.
Tensile tests of mechanical parameters of metal and welded joints were performed on flat full-size specimens as per ASTM A370 with width in tested part of a specimen 1,496 in., impact toughness test were performed on specimens cut out transversally to the rolling direction as per ASTM A370 by section size 0,394x0,394 in. at metal thickness 0,500 in. and 0,625 in., 0,394x0,295 at metal thickness 0,375 in. Tolerances on out-of- roundness and straightness of pipes are according to API 2B. Each pipe was subjected to hydrostatic testing, endurance time - 10 sec min.
Heat treatment of pipes and welded joints was not performed. All pipes are equipped with steel bevel protectors.
FSI P.O. 1040157700
Электросварные стальные трубы с одним продольным швом, изготовленные методом дуговой сварки под флюсом (SAW).
По результатам завода поставщика стальной лист, из которого изготовлены трубы, подвергался ультразвуковому контролю по всей площади – результаты удовлетворительны.
На всю наружную поверхность труб нанесено консервационное покрытие, выполненное битумным черным лаком.
Сварные соединения всех труб по всей длине проконтролированы ультразвуковым методом контроля, настройка оборудования осуществлялась на эталонном образце, имеющем четыре механически выполненных надреза N5 и одно радиально просверленное отверстие диаметром 1,6 мм. Ремонтные и концевые участки сварных соединений подвергались радиологическому методу контроля с чувствительностью не хуже 2% толщины сварного соединения. Полная окружность металла концов всех труб подвергалась ультразвуковому методу контроля. Результаты неразрушающих методов контроля – удовлетворительны.
Испытания механических свойств металла и сварных соединений на растяжение осуществлялись на плоских полномерных образцах по ASTM A370 с шириной в испытываемой части образца 1,496 in., испытания на ударный изгиб – на образцах, вырезанных в поперечном направлении прокатки по ASTM A370 размером в сечении0,394x0,394 in при толщине металла 0,500 in и 0,625 in, 0,394x0,295 in при толщине металла 0,375 in. Допуски по овальности и прямолинейности труб в соответствии с требованиями API 2B. Каждая труба подвергалась гидравлическому испытанию, время выдержки под давлением не менее 10 секунд. Термообработка труб и сварных соединений не производилась. Все трубы оборудованы металлическими протекторами для защиты фаски.

Погружено в вагон / Loaded in waggon

Количес. шт Quantity, pcs	Общая длина труб, фут Total length of pipes, foot	Теор. масса труб, фунт Theor. mass of pipes, lb	Теор. масса труб, кг Theor. mass of pipes, kg	Теорет. масса покрытия, кг Theor. mass of coating, kg	Теорет. масса труб с покрытием, кг Theor. mass of pipes with coating, kg
8	311.6	44498	20117	0	

Качество труб, указанных в настоящем документе, соответствует условиям Контракта и требованиям НД.
The quality of pipes included in this Certificate complies with the terms of the Contract and the requirements of Standard.

ПОКАЗАТЕЛИ КАЧЕСТВА — INDICES OF QUALITY

Механические свойства металла / Mechanical properties of base metal

Номер плавки Heat number	Времен. сопрот. вдоль Ultimate strength along, psi	Времен. сопрот. поперёк Ultimate strength across, psi	Предел текучести Yield strength psi	Относительное удлинение Relative elongation, % δ 2"	Энергия удара Impact energy, ft-lb KCV 32°F			Вязк. сост., % Shear area, %		ИПГ DWTT % °F
0276		78000	58000	35	75	69	66	80	80	80
0278		76000	54000	39	94	83	82	90	90	90
0302		76000	55000	38	63	59	68	80	80	80
0325		75000	55000	40	59	66	68	80	80	80

Механические свойства продольных сварн. соед. / Mechanical properties of Longitudinal Weld Joints

Номер партии Lot number	Временное сопротивление Ultimate strength, psi	Энергия удара Impact energy, ft-lb по Ц.Ш. KCV 32°F			Статический изгиб Guided-bend test	Твердость. Hardness HRC NACE MR0175		
						осн. металл the area of base metal	зона терм. возд. heat affected zone	металл сварн. соед. weld metal
6671	85000	44	49	52	sat	1 1	3 3	7 8
6672	84000	61	53	68	sat	2 1	3 4	8 10
6673	81000	78	79	80	sat	1 2	5 4	15 14
6675	82000	55	51	52	sat	1 2	3 3	12 11

Треб. контр. Requirement of Contract																		

Химический состав, % / Chemical composition, %

Номер плавки Heat number	CE x100 Pcm	C x100	Si x100	Mn x100	Al x1000	S x1000	P x1000	V x1000	Nb x1000	Ti x1000	Cu x100	Cr x100	Ni x100	Mo x100	N x1000	Ca x1000	B x10000
0276	33 34 16 16	15 16 23 22	21 21 111 107	105 107 46 46	45 48 5 5	5 5 10 9	11 11	5 5	23 24 19 17	18 17 14 15	1 1 1 1	2 2 2 2	1 1		5 5 5 7		2 2
0278	34 35 16 16	22 25 28 28	104 109 110 112	38 29 28 28	5 4 3 3	12 13 11 11	5 5	23 25 20 20	12 9 7 7	2 1 1 1	3 4 5 5	2 1			2 2		
0302	31 31 16 16	15 15 22 22	21 21 88 87	90 89 44 43	49 44 6 6	7 7 12 12	14 13	5 5	10 10 5 5	5 5 3 3	3 3 4 4	4 4 1 1	2 2		7 7		
0325	35 35 14 15	16 16 48 48	33 33 112 110	104 105 36 36	38 41 6 6	6 5 14 14	11 12	5 5	10 10 16 17	14 16 3 2	1 1 8 6	5 5 2 2	2 2		7 7		

Треб. контр. Requirement of Contract																	

Антикоррозионное покрытие / Anticorrosive Coating

Номер партии покрытия труб Lot number of coating pipes	Толщина наружного покрыт., мм не менее Thickness of outer coating no less, mm	Шифр материал. покрытия Code of coating materials	Материалы покрытия Coating Materials			Результаты испытания партий антикоррозионного покрытия труб, не менее Lots anticorrosive coating of pipes test results, no less		
			Основной слой Basic layer	Адгезионный слой Adhesive layer	Грунтовочный слой Primer layer	Диэлектр. сплошн.,кВ Dielectrical solidity, kV	Прочность при ударе, Дж Impact strength, J	Прочность связи, Н/см Peel strength, N/cm

REVIEWED
PERFILIEV.I
15.12.2006

INSPECTION COMPANY * Engineering Bureau Franke Int.

Подписи: Signatures:

Управління технічного контролю № 388/47

沧州市螺旋钢管有限责任公司
Cang zhou Spiral Steel Pipe Co., Ltd
钢 管 质 量 证 明 书
MILL TEST CERTIFICATE

埋弧焊管生产许可证
编号:TS2710837 2[illegible]

客 户 Customer: OZONE INDUSTRIES　　合同编号 Contract No.: OZ081808008　　证书编号 Certificate No.: OZ[illegible]5-07081286

品 名 Product name: Spiral steel pipe　　钢 级 Steel Grade: Gr.B PSLI　　到 站 Destination: MIAMI, USA

Pipes No.	炉号 Heat Numbers	规格(Size)			数量Quantity			化学成分 Chemical Composition (%)					焊接接头物理性能 physical properties of welding joints			管体物理性能 physical properties of pipes				无损检验 NDT		水压试验 Hydrostatic (10s) Mpa	尺寸及外观 size & appearance
		直径	厚度	长度	支数	总长度	总重量	C	Mn	Si	P	S	σb Mpa	正弯 face-bend 180°	反弯 back-bend 180°	σs Mpa	σb Mpa	δ (%)	冷弯 cold-bent 180°	UT	RT		
		O.D. in	W.T. in	lenth ft	Pieces (Pcs)	lenth (ft)	Weight (MT)																
1	81-09198	16	0.375	39	51	1989	56.508	0.07	0.96	0.20	0.025	0.012	440	pass	pass	295	440	34	pass	pass	pass	6.9	pass
2	81-07529	24	0.375	39	34	1326	56.950	0.08	0.97	0.19	0.019	0.018	455	pass	pass	325	455	26	pass	pass	pass	4.6	pass
3	81-09195	24	0.375	39	6	234	10.050	0.08	0.97	0.20	0.021	0.015	445	pass	pass	315	445	34	pass	pass	pass	4.6	pass
4	82-07242	24	0.375	39	4	156	6.700	0.06	1.17	0.20	0.018	0.019	470	pass	pass	325	470	35	pass	pass	pass	4.6	pass
5	82-07364	24	0.375	39	8	312	13.400	0.08	1.20	0.30	0.019	0.020	430	pass	pass	340	430	33	pass	pass	pass	4.6	pass
6	83-04971	24	0.375	39	3	117	5.025	0.09	1.03	0.21	0.020	0.018	450	pass	pass	310	450	27	pass	pass	pass	4.6	pass
7	81-04971	24	0.375	39	2	78	3.350	0.09	0.98	0.20	0.020	0.018	440	pass	pass	300	440	23	pass	pass	pass	4.6	pass
8	81-09198	34	0.375	39	1	39	2.384	0.07	0.96	0.20	0.025	0.012	440	pass	pass	295	440	34	pass	pass	pass	3.2	pass
9	81-07520	34	0.375	39	19	741	45.296	0.09	0.96	0.21	0.020	0.020	485	pass	pass	350	485	30	pass	pass	pass	3.2	pass
Total					128	4992	199.663																

兹证明本表所列产品,均依材料规格制造及试验,并符合规格之要求。

The Spiral steel pipes are tested according to API 5L Gr.B and ASTM A139 Gr.B. This is to certify that in accordance with the relevant specifications and contracts.

The Spiral steel pipes manufactured were tested and qualified by our Quality Control Department.

检验员 INSPECTOR: 尹佳花

许可证号: LICENCE: 5L-0640

日 期 Date: SEP-19-2008

INTERPIPE
NMPP

OJSC "INTERPIPE NOVOMOSKOVSK PIPE PRODUCTION PLANT"
115 SUCHKOV STR.
NOVOMOSKOVSK UKRAINE

TÜV CERT ISO 9001:2000

INSPECTION CERTIFICATE
EN 10204 / 3.1

A01 Sheet 1 Sheets 5

A02 DATE 07.04.08 a01
CERT. NO 2354/08 a03
DEL NOTE a09

CUSTOMER A05

LICENCE № 6L - 0304

INTERPIPE NMPP REF number SALES	works	Freight carN	Q-ty of packs	Gross, lb weight	Net weight
CUSTOMER ORDER № 08-1180		68311653	15	75632	75247

PRODUCT DESCRIPTION: Electric welded steel pipes acc to ASTM A53-06/API 5L PSL 2 43-th EDITION 2004 Grade B/X42 B01-04

C02A10

L=LONGITUDINAL T=TRANSVERSE B=BODY W=WELD KV=CHARPY V=NOTCH HV=HARDNESS VICKERS (10 KG LOAD) DT=DROP WEIGHT TEAR TEST

ITEM N	N OF PIECES B10	PRODUCT DIMENSIONS B11–13	HEAT N B08	LOT N C00	TENSILE TEST Dimensions of specimen width: 1.5;1.5in thickness: 0.358;0.362in length:7.874in type of test piece: W-F,B-B					IMPACT TEST Dimensions of specimen width: 0.295in thickness: 0.394in					STEEL MAKING PROCESS BASIC OXYGENE STEEL C70 C70
					C01, C02, C10	Yeld strength Re Psi C11	Tensile strength Rm Psi C12	Elongation A% C13	Hydro pressure Psi D02	Place and orientation C01 C02	Specimen type C40 C30	Test temperature, °F percussive viscosity, Ft-lb Impact1 +32°	Impact2 +32°	Impact3 +32°	Average +32°	OTHER TESTS
1	30	16inODx0.375in 40.0-42.0ft 1204.6ft	3063964	32509	W T B T	59.000;45.000	78.000;78.000 75.000;77.000	36.0;36.0	1670 10secs	BT	KV	35;39	33;35	32;38	33;27	FLATTENING TEST SATISFACTOR WELD LINE 100% US-TESTED UT SISE 16x 0.375in N10 RESIDUAL MAGNETISM 10.0-20.0 GAUSS THE MINIMUM TEMPERATURE FOR HEAT TREATMENT OF THE WELD SEAM 1634°F Hardness Rockwell < 22 HRC Weld repair isn't permitted

C71-C94 ANALYSIS % LD-LADLE CH-CHECK		C	Si	Mn	P	S	N	Cr	Cu	Al	Ni	Mo	Ti	V	NB	Ca	O	Zr	CEV normal 0.43
Heat N	3063964 LD	0.19	0.28	0.53	0.008	0.004	0.007	0.02	0.07	-	0.04	0.004	-	0.007	-	-	-	-	-
	3063964 CH	0.21	0.31	0.59	0.010	0.006	-	<0.05	0.045	0.042	0.034	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.33

THESE RESULTS ARE CERTIFIED BY INTERPIPE NMPP AND COMPLY WITH THE REQUIREMENTS OF THE PRODUCT DESCRIPTION.

D01 TECHNICAL CONTROL DEPARTMENT: STAMP OF CERTIFICATION

SIGNATURE

19999

Бланк серии ЖК №

ZD1/232

沧州市螺旋钢管有限责任公司
Cang zhou Spiral Steel Pipe Co., Ltd
钢 管 质 量 证 明 书
MILL TEST CERTIFICATE

埋弧焊管生产许可证
编号:TS2710837 2[illegible]

客 户 Customer: OZONE INDUSTRIES　　合同编号 Contract No.: OZ081808008　　证书编号 Certificate No.: OZ[illegible]5-07081286

品 名 Product name: Spiral steel pipe　　钢 级 Steel Grade: Gr.B PSLI　　到 站 Destination: MIAMI, USA

Pipes No.	炉号 Heat Numbers	规格(Size)			数量Quantity			化学成分 Chemical Composition (%)					焊接接头物理性能 physical properties of welding joints			管体物理性能 physical properties of pipes				无损检验 NDT		水压试验 Hydrostatic (10s) Mpa	尺寸及外观 size & appearance
		直径	厚度	长度	支数	总长度	总重量	C	Mn	Si	P	S	σb Mpa	正弯 face-bend 180°	反弯 back-bend 180°	σs Mpa	σb Mpa	δ (%)	冷弯 cold-bent 180°	UT	RT		
		O.D. in	W.T. in	lenth ft	Pieces (Pcs)	lenth (ft)	Weight (MT)																
1	81-09198	16	0.375	39	51	1989	56.508	0.07	0.96	0.20	0.025	0.012	440	pass	pass	295	440	34	pass	pass	pass	6.9	pass
2	81-07529	24	0.375	39	34	1326	56.950	0.08	0.97	0.19	0.019	0.018	455	pass	pass	325	455	26	pass	pass	pass	4.6	pass
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5	82-07364	24	0.375	39	8	312	13.400	0.08	1.20	0.30	0.019	0.020	430	pass	pass	340	430	33	pass	pass	pass	4.6	pass
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7	81-04971	24	0.375	39	2	78	3.350	0.09	0.98	0.20	0.020	0.018	440	pass	pass	300	440	23	pass	pass	pass	4.6	pass
8	81-09198	34	0.375	39	1	39	2.384	0.07	0.96	0.20	0.025	0.012	440	pass	pass	295	440	34	pass	pass	pass	3.2	pass
9	81-07520	34	0.375	39	19	741	45.296	0.09	0.96	0.21	0.020	0.020	485	pass	pass	350	485	30	pass	pass	pass	3.2	pass
Total					128	4992	199.663																

兹证明本表所列产品,均依材料规格制造及试验,并符合规格之要求。

The Spiral steel pipes are tested according to API 5L Gr.B and ASTM A139 Gr.B. This is to certify that in accordance with the relevant specifications and contracts.

The Spiral steel pipes manufactured were tested and qualified by our Quality Control Department.

检验员 INSPECTOR: 尹佳花

许可证号: LICENCE: 5L-0640

日 期 Date: SEP-19-2008

INTERPIPE
NMPP

OJSC "INTERPIPE NOVOMOSKOVSK PIPE PRODUCTION PLANT"
115 SUCHKOV STR.
NOVOMOSKOVSK UKRAINE

TÜV CERT ISO 9001:2000

INSPECTION CERTIFICATE
EN 10204 / 3.1

A01 Sheet 1 Sheets 5

A02 DATE 07.04.08 a01
CERT. NO 2354/08 a03
DEL NOTE a09

CUSTOMER A05

LICENCE № 6L - 0304

INTERPIPE NMPP REF number SALES	works	Freight carN	Q-ty of packs	Gross, lb weight	Net weight
CUSTOMER ORDER № 08-1180		68311653	15	75632	75247

PRODUCT DESCRIPTION: Electric welded steel pipes acc to ASTM A53-06/API 5L PSL 2 43-th EDITION 2004 Grade B/X42 B01-04

C02A10

L=LONGITUDINAL T=TRANSVERSE B=BODY W=WELD KV=CHARPY V=NOTCH HV=HARDNESS VICKERS (10 KG LOAD) DT=DROP WEIGHT TEAR TEST

ITEM N	N OF PIECES B10	PRODUCT DIMENSIONS B11–13	HEAT N B08	LOT N C00	TENSILE TEST Dimensions of specimen width: 1.5;1.5in thickness: 0.358;0.362in length:7.874in type of test piece: W-F,B-B					IMPACT TEST Dimensions of specimen width: 0.295in thickness: 0.394in					STEEL MAKING PROCESS BASIC OXYGENE STEEL C70 C70
					C01, C02, C10	Yeld strength Re Psi C11	Tensile strength Rm Psi C12	Elongation A% C13	Hydro pressure Psi D02	Place and orientation C01 C02	Specimen type C40 C30	Test temperature, °F percussive viscosity, Ft-lb Impact1 +32°	Impact2 +32°	Impact3 +32°	Average +32°	OTHER TESTS
1	30	16inODx0.375in 40.0-42.0ft 1204.6ft	3063964	32509	W T B T	59.000;45.000	78.000;78.000 75.000;77.000	36.0;36.0	1670 10secs	BT	KV	35;39	33;35	32;38	33;27	FLATTENING TEST SATISFACTOR WELD LINE 100% US-TESTED UT SISE 16x 0.375in N10 RESIDUAL MAGNETISM 10.0-20.0 GAUSS THE MINIMUM TEMPERATURE FOR HEAT TREATMENT OF THE WELD SEAM 1634°F Hardness Rockwell < 22 HRC Weld repair isn't permitted

C71-C94 ANALYSIS % LD-LADLE CH-CHECK		C	Si	Mn	P	S	N	Cr	Cu	Al	Ni	Mo	Ti	V	NB	Ca	O	Zr	CEV normal 0.43
Heat N	3063964 LD	0.19	0.28	0.53	0.008	0.004	0.007	0.02	0.07	-	0.04	0.004	-	0.007	-	-	-	-	-
	3063964 CH	0.21	0.31	0.59	0.010	0.006	-	<0.05	0.045	0.042	0.034	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.33

THESE RESULTS ARE CERTIFIED BY INTERPIPE NMPP AND COMPLY WITH THE REQUIREMENTS OF THE PRODUCT DESCRIPTION.

D01 TECHNICAL CONTROL DEPARTMENT: STAMP OF CERTIFICATION

SIGNATURE

19999

Бланк серии ЖК №

ZD1/232

Operational Testing Data – Summary Tables & Graphs

Appendix E

SUMMARY OF INJECTATE LAB DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

MONTH	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY
Sample Date	23-Oct-09	4-Nov-09	23-Dec-09	13-Jan-10	3-Feb-10	10-Mar-10	14-Apr-10	5-May-10
Chloride (mg/L)	4,600	5,100	2,300	3,500	4,900	3,700	3,200	1,900
Calcium (mg/L)	220	190		250	230	210	270	350
Bicarbonate (mg/L) as CaCO3	3,600	3,900		15,000	990	3,500	2.50	2,000
Iron (mg/L)	0.73	1.30		1.60	2.20	2.00	0.93	2.10
Magnesium (mg/L)	93	92		95	97	80	85	73
Ammonia as N (mg/L)	590	1,500	570	1,000	1,300	980	800	410
Total kjeldahl nitrogen as N (mg/L)	42	1,000	640	1,700	1,300	1,100	430	490
Nitrate as N (mg/L)	0.05	0.42	0.04	0.05	0.05	0.23	0.10	0.10
gross alpha (pCi/L)	17.00	15.00		21.00	23.00	4.00	-2.00	8.00
radium 226 (pCi/L)	6.43	8.70		1.56	2.90	1.80	3.00	1.60
radium 228 (pCi/L)	2.88	2.66		1.15	1.25	3.70	1.85	0.85
pH (standard units)	7.66	7.15	6.90	7.32	7.41	7.36	7.19	7.13
Phosphorous, total as P (mg/L)	1.3	12.0	4.7	6.0	17.0	7.9	3.5	4.2
Potassium (mg/L)	970	1,300		910	1,200	1,000	880	550
Total dissolved solids (mg/L)	6,100		5,400	10,000	10,000	10,000	8,300	5,900
Sodium (mg/L)	1,800	2,600		1,600	2,100	1,900	1,600	990
Specific Conductance (umohs/cm)	24,551	37,961	18,100	25,654	24,692	35,711	36,989	32,119
Sulfate (mg/L)	210	230	690	540	360	310	520	770
Temperature ◦C	26.9	31.3	19.5	12.9	20.7	18.4	25.0	25.0
Total suspended solids (mg/L)				46	14	50	15	85

mg/L - Milligrams Per Liter

°C - Degrees Celsius

umhos/cm - Micro mhos (siemens) Per Centimeter

Monthly Analyses

NA = Not analyzed

Below laboratry detection limit. Rpt'd value is half MDL.

Analyte detected between laboratory detection limit and the laboratory reporting limit.

Appendix E

SUMMARY OF INJECTATE LAB DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

MONTH	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY
Sample Date	9-Jun-10	7-Jul-10	4-Aug-10	1-Sep-10	6-Oct-10	3-Nov-10	1-Dec-10	13-Jan-11
Chloride (mg/L)	2,900	3,300	4,500	4,300	3,900	4,800	5,200	5,300
Calcium (mg/L)	330	310	350	210	290	230	170	160
Bicarbonate (mg/L) as CaCO3	430	2.50	2.50	2.50	2.50	6,100	2.50	2.50
Iron (mg/L)	1.00	1.30	0.40	0.63	1.10	1.40	1.20	1.00
Magnesium (mg/L)	96	100	130	92	130	110	94	110
Ammonia as N (mg/L)	660	860	1,100	1,000	1,000	1,100	1,300	1,300
Total kjeldahl nitrogen as N (mg/L)	730	45	930	1,000	1,000	1,400	1,200	1,700
Nitrate as N (mg/L)	0.10	0.25	0.25	0.50	0.10	0.01	0.50	0.25
gross alpha (pCi/L)	8.75	16.50	18.50	6.50	-4.00	40.00	35.50	31.50
radium 226 (pCi/L)	0.76	1.90	4.80	5.10	2.70	4.10	4.40	1.20
radium 228 (pCi/L)	1.77	1.25	0.75	3.30	0.65	1.55	1.4	-0.30
pH (standard units)	7.18	7.25	7.35	7.39	7.40	7.73	7.37	7.40
Phosphorous, total as P (mg/L)	4.8	0.4	110.0	9.9	6.0	2.4	13.0	10.0
Potassium (mg/L)	870	1,000	1,200	350	1,600	1,300	1,500	1,400
Total dissolved solids (mg/L)	3,000	5,700	11,000	6,000	6,800	9,600	6,200	11,000
Sodium (mg/L)	1,500	1,800	2,200	610	2,600	2,500	2,700	2,500
Specific Conductance (umohs/cm)	13,864	16,752	19,751	21,172	20,857	22,000	25,145	25,412
Sulfate (mg/L)	550	250	190	200	270	190	37	72
Temperature ◦C	25.0	25.0	30.0	28.4	25.0	25.0	22.1	22.1
Total suspended solids (mg/L)	39	45	54	54	47	81	66	48

mg/L - Milligrams Per Liter

°C - Degrees Celsius

umhos/cm - Micro mhos (siemens) Per Centimeter

Monthly Analyses

NA = Not analyzed

Below laboratry detection limit. Rpt'd value is half MDL.

Analyte detected between laboratory detection limit and the laboratory reporting limit.

Appendix E

SUMMARY OF INJECTATE LAB DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

MONTH	FEBRUARY	MARCH	APRIL	MAY				
Sample Date	2-Feb-11	9-Mar-11	6-Apr-11	4-May-11				
Chloride (mg/L)	5,100	5,400	5,300	5,200				
Calcium (mg/L)	200	140	200	210				
Bicarbonate (mg/L) as CaCO3	2.50	2.50	2.50	2.50				
Iron (mg/L)	1.60	1.10	0.81	0.47				
Magnesium (mg/L)	120	78	120	130				
Ammonia as N (mg/L)	1,500	1,400	1,300	1,500				
Total kjeldahl nitrogen as N (mg/L)	1,800	1,600	1,700	1,600				
Nitrate as N (mg/L)	0.25	0.25	0.25	0.25				
gross alpha (pCi/L)	21.50	12.50	10.50	13.50				
radium 226 (pCi/L)	2.65	0.35	3.00	-0.05				
radium 228 (pCi/L)	2.15	1.80	3.7	0.9				
pH (standard units)	7.22	7.15	7.20	7.35				
Phosphorous, total as P (mg/L)	11.0	12.0	11.0	12.0				
Potassium (mg/L)	1,500	1,900	1,600	1,500				
Total dissolved solids (mg/L)	5,000	4,200	5,700	6,500				
Sodium (mg/L)	2,700	3,500	2,700	2,900				
Specific Conductance (umohs/cm)	26,077	27,601	28,558	25,944				
Sulfate (mg/L)	86	25	89	91				
Temperature ◦C	21.0	24.0	23.2	25.8				
Total suspended solids (mg/L)	34	33	46	46				

mg/L - Milligrams Per Liter

°C - Degrees Celsius

umhos/cm - Micro mhos (siemens) Per Centimeter

Monthly Analyses

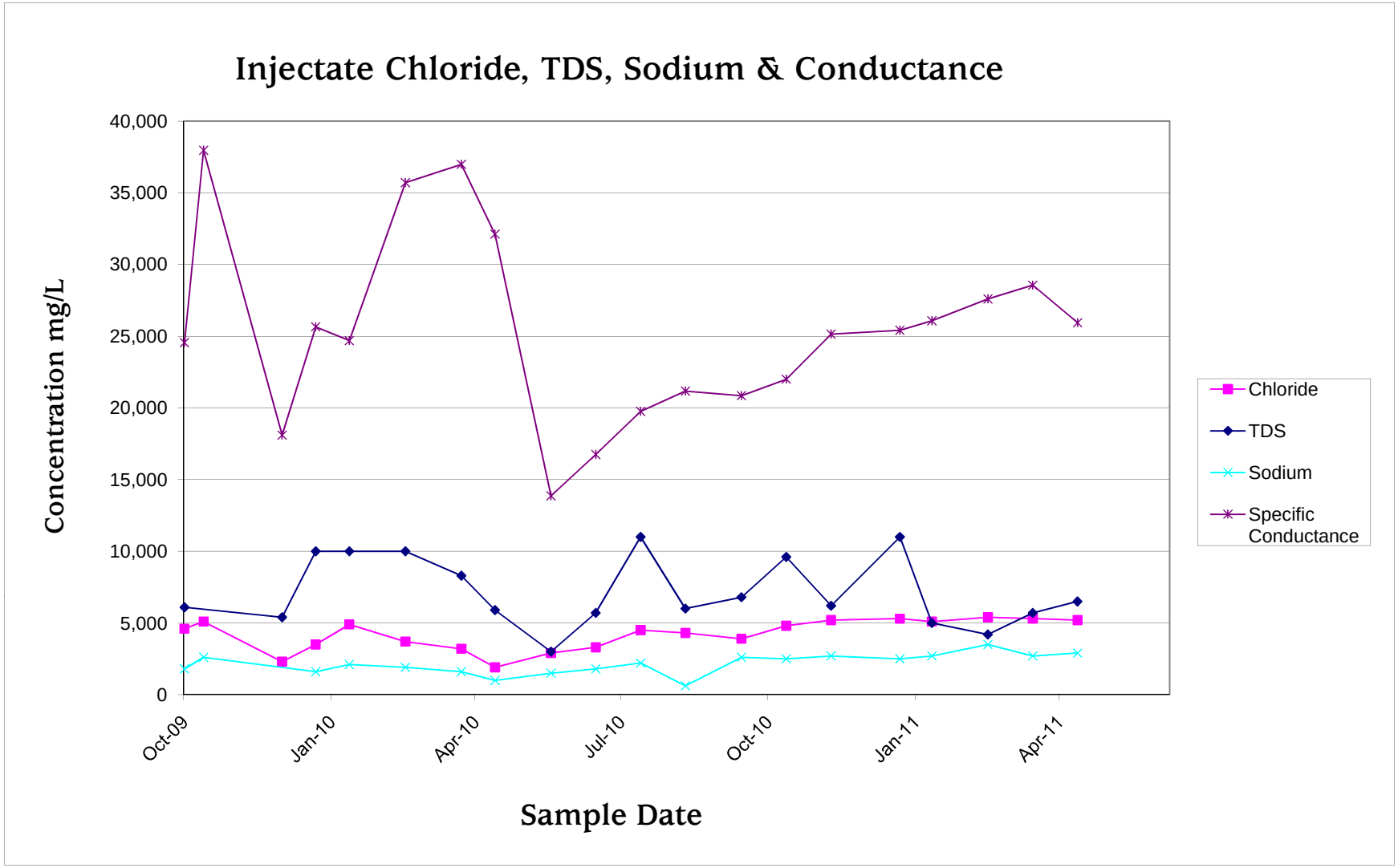
NA = Not analyzed

Below laboratry detection limit. Rpt'd value is half MDL.

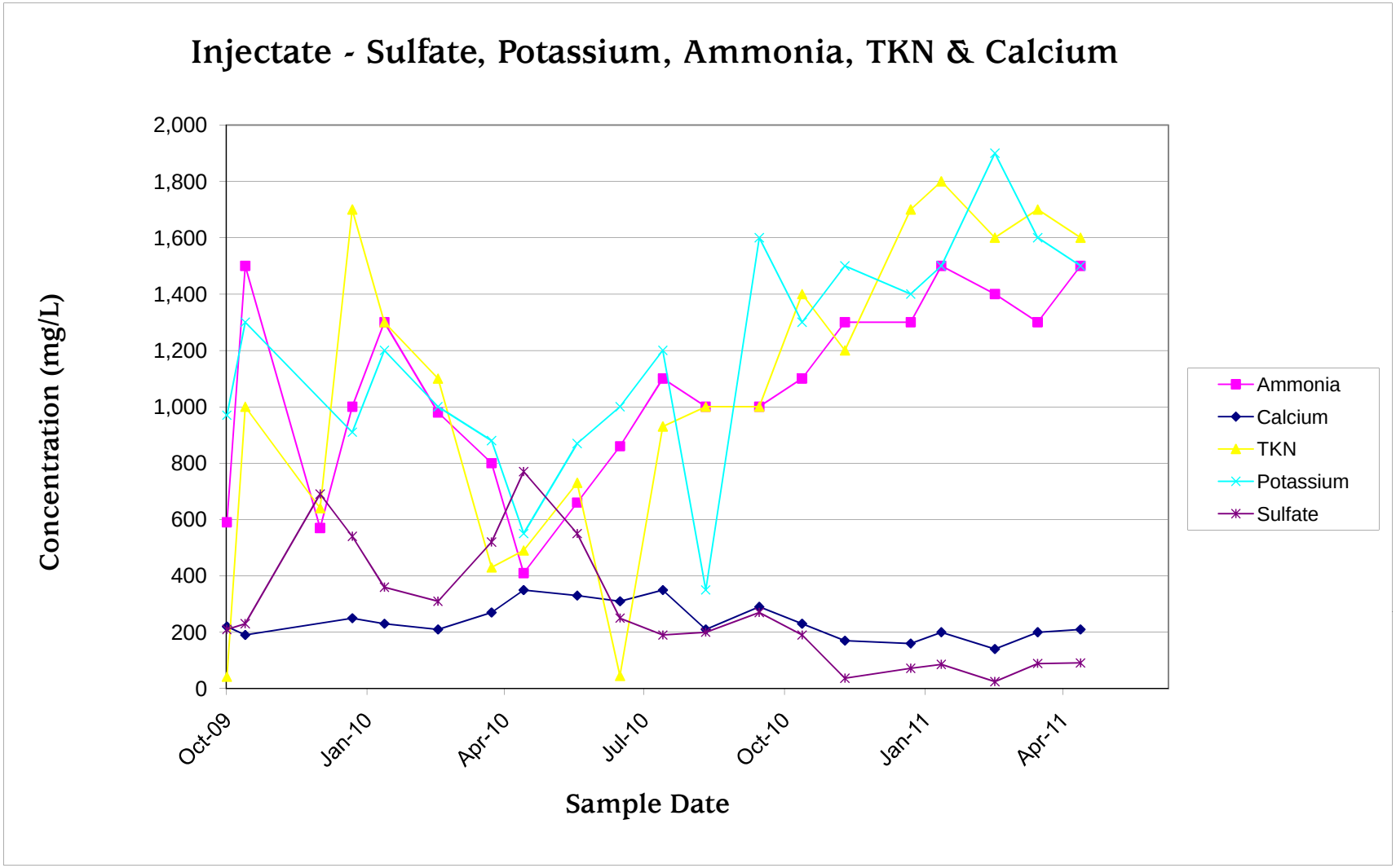
Analyte detected between laboratory detection limit and the laboratory reporting limit.

Appendix E

SUMMARY OF INJECTATE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA

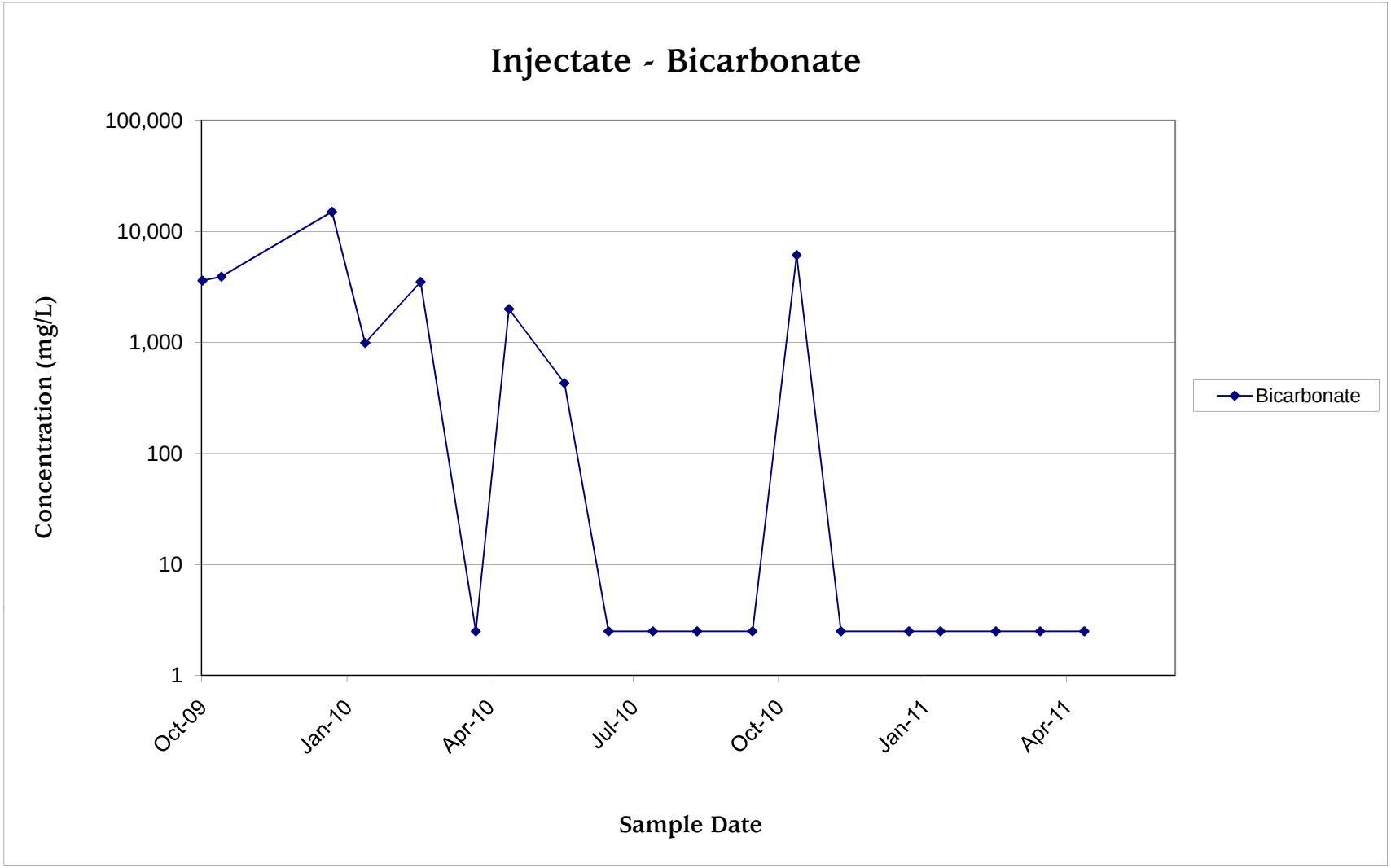


SUMMARY OF INJECTATE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



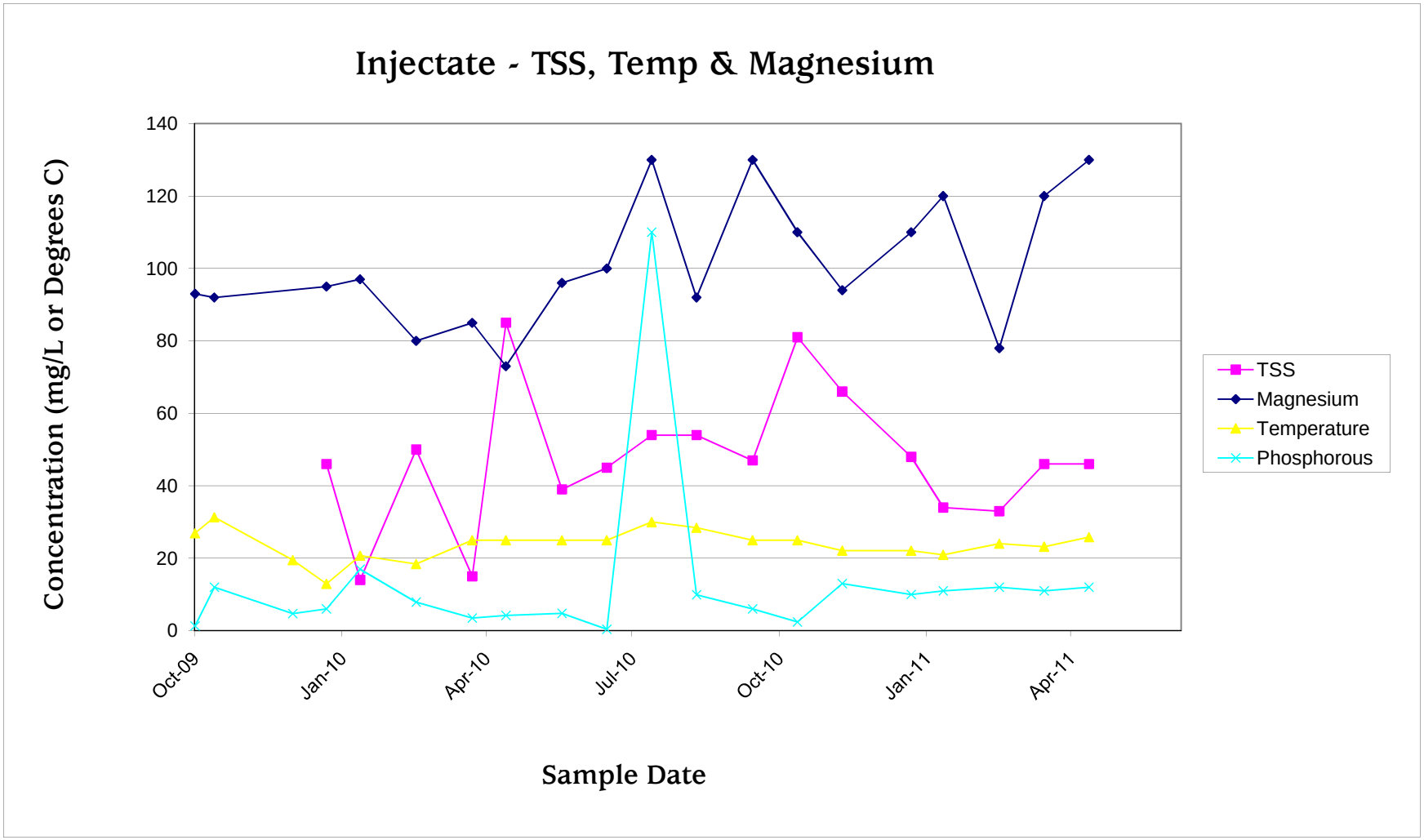
Appendix E

SUMMARY OF INJECTATE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA

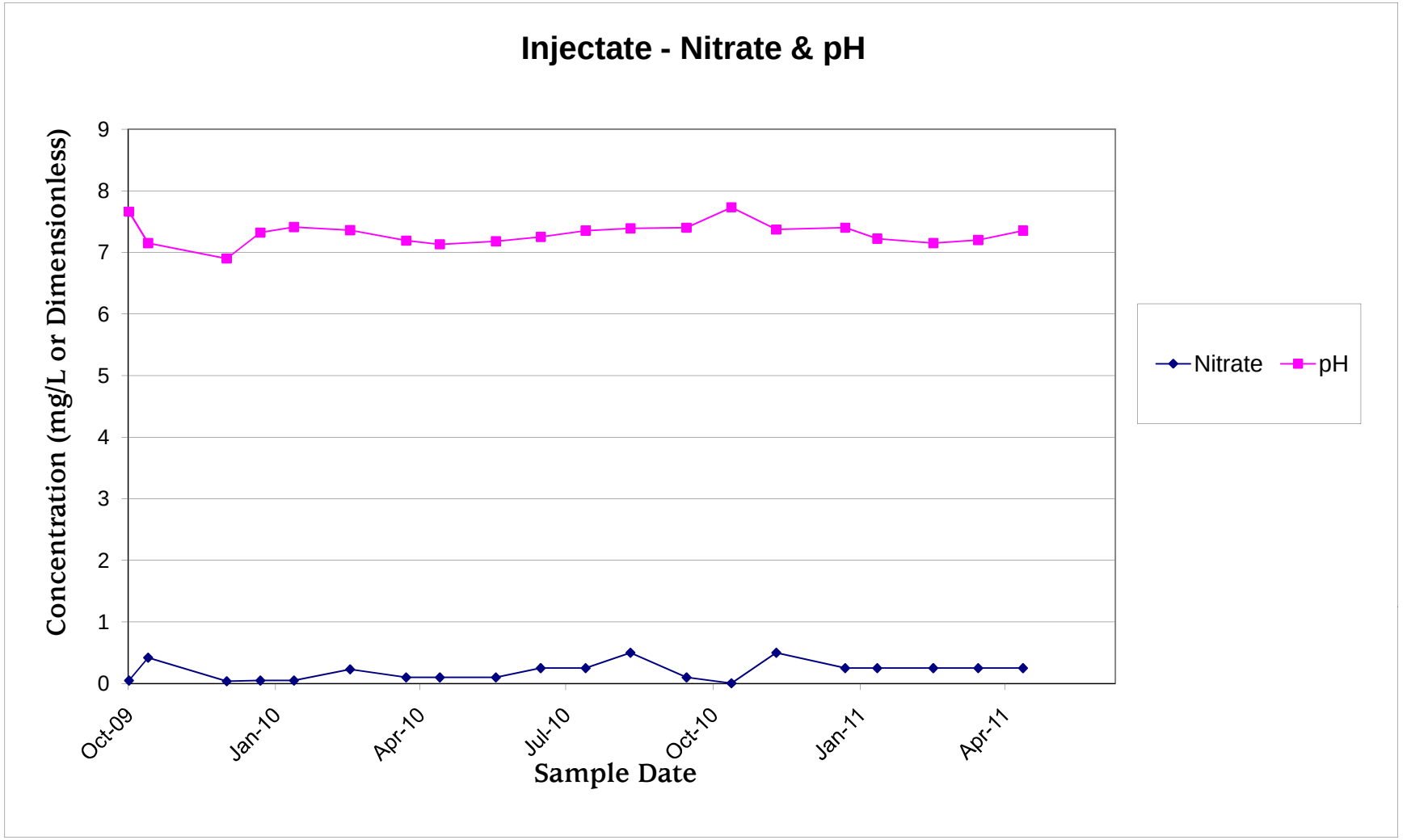


Appendix E

SUMMARY OF INJECTATE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA

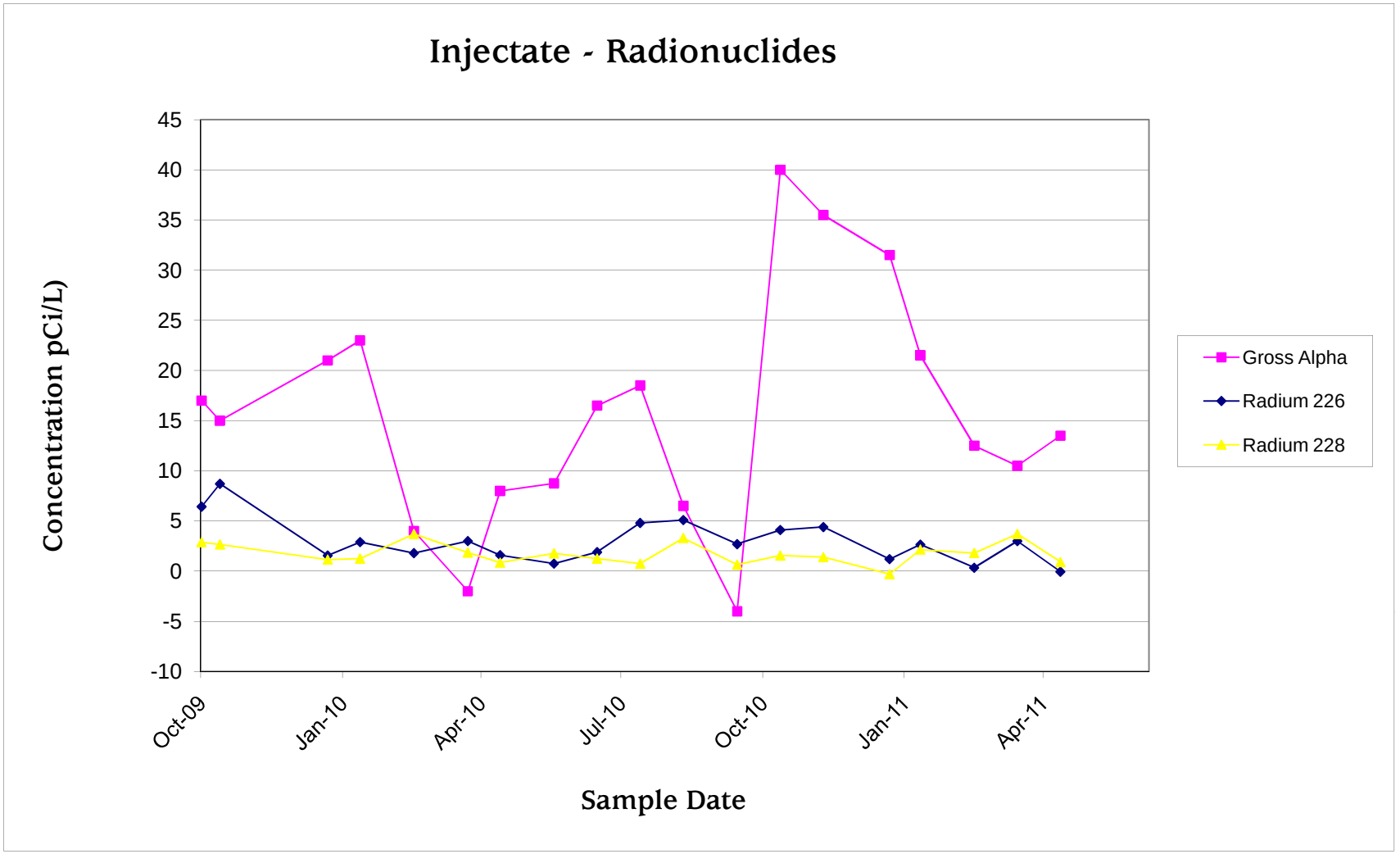


SUMMARY OF INJECTATE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



Appendix E

SUMMARY OF INJECTATE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



SUMMARY OF UPPER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA

MONTH	OCTOBER		NOVEMBER				DECEMBER				
Sample Date	23-Oct-09	29-Oct-09	4-Nov-09	11-Nov-09	19-Nov-09	24-Nov-09	2-Dec-09	9-Dec-09	17-Dec-09	23-Dec-09	30-Dec-09
Chloride (mg/L)	12,000	21,000	12,000	12,000	11,000	13,000	13,000	14,000	19,000	13,000	13,000
Calcium (mg/L)				720							
Bicarbonate (mg/L) as CaCO3											
Iron (mg/L)				3.60							
Magnesium (mg/L)				680							
Ammonia as N (mg/L)	1.80	1.60	1.80		1.5	1.6	1.70	1.70	0.24	1.6	1.5
Total kjeldahl nitrogen as N (mg/L)	0.075	1.200	1.300		0.790	1.900	1.100	1.100	0.830	1.200	1.100
Nitrate as N (mg/L)	0.022	0.005	0.015	0.030	0.014	0.030	0.038	0.008	0.008	0.008	0.008
Nitrite as N (mg/L)	0.005	0.005	0.005	0.010	0.005	0.018	0.038	0.038	0.038	0.038	0.038
pH (standard units)	6.87	6.94	7.12	7.53	7.21	7.44	7.16	7.60	7.46	7.14	6.9
Phosphorous, total as P (mg/L)	1.10	0.22	0.24		0.85	2.3	0.99	0.44	3.8	0.91	0.2
Potassium (mg/L)				150							
Total dissolved solids (mg/L)	21,000	22,000	20,000	21,000	23,000	21000	21,000	21,000	31,000	19,000	20,000
Sodium (mg/L)				6,400							
Specific Conductance (umohs/cm)	34,762	34,629	34,904	27,000	34,522	22,000	20,000	35,000	52,000	32,400	34,814
Sulfate (mg/L)	1,300	1,600	1,300	1,300	950	1,500	1,300	1,400	2,500	1,400	1,300
Temperature ◦C	29.1	29.2	28.2	30.7	30.1	30.4	28.7	29.6	26.1	30.1	29.7

mg/L - Milligrams Per Liter
°C - Degrees Celsius
umhos/cm - Micro mhos (siemens) Per Centin

Weekly Analyses
Monthly Analyses
NA = Not analyzed

Analyte detected between laboratory detection limit and the laboratory reporting limit. Rpt'd value is half MDL.

Appendix E

SUMMARY OF UPPER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA

MONTH	JANUARY				FEBRUARY				MARCH				
Sample Date	6-Jan-10	13-Jan-10	20-Jan-10	27-Jan-10	3-Feb-10	10-Feb-10	17-Feb-10	24-Feb-10	3-Mar-10	10-Mar-10	17-Mar-10	24-Mar-10	31-Mar-10
Chloride (mg/L)	13,000	13,000	14,000	13,000	13,000	13,000	12,000	13,000	13,000	13,000	12,000	12,000	12,000
Calcium (mg/L)		650			670					750			
Bicarbonate (mg/L) as CaCO3		120			120					140			
Iron (mg/L)		4.8			4.6					4.9			
Magnesium (mg/L)		650			670					680			
Ammonia as N (mg/L)	1.7	1.9	1.9	1.7	2.0	1.5	1.8	1.9	0.24	1.60	1.60	1.70	1.60
Total kjeldahl nitrogen as N (mg/L)	1.700	2.000	1.500	1.500	2.800	1.600	1.200	0.075	0.400	1.100	1.500	1.700	3.100
Nitrate as N (mg/L)	0.008	0.035	0.005	0.031	0.037	0.220	0.013	0.020	0.025	0.180	0.016	0.130	0.068
Nitrite as N (mg/L)	0.075	0.010	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.010	0.005	0.010	0.005
pH (standard units)	6.98	6.94	6.88	6.95	6.98	6.90	6.95	7.48	7.43	7.03	7.35	7.11	6.98
Phosphorous, total as P (mg/L)	0.012	0.035	0.012	0.043	0.38	0.08	0.12	1.20	0.095	0.22	0.05	0.05	0.01
Potassium (mg/L)		160			160					150			
Total dissolved solids (mg/L)	1,300	33,000	18,000	19,000	1,500	21,000	19,000	16,000	20,000	23,000	20,000	20,000	20,000
Sodium (mg/L)		6,200			6,200					6,400			
Specific Conductance (umohs/cm)	35,092	34,927	34,927	35,107	34,611	33,999	34,790	30,920	31,000	28,000	26,000	34,000	31,000
Sulfate (mg/L)	1,300	1,300	1,400	1,400	1,400	1,500	1,400	1,300	1,300	1,400	1,100	1,300	1,200
Temperature °C	27.3	29.6	29.6	29.7	29.2	29.2	28.8	30.5	27.7	30.1	29.4	31.0	29.3

mg/L - Milligrams Per Liter
°C - Degrees Celsius
umhos/cm - Micro mhos (siemens) Per Centin

Weekly Analyses
Monthly Analyses
NA = Not analyzed

Below laboratry detection limit. Rpt'd value is half MDL.
Analyte detected between laboratory detection limit and the laboratory reporting limit.

Appendix E

SUMMARY OF UPPER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA

MONTH	APRIL				MAY				JUNE		JULY
Sample Date	7-Apr-10	14-Apr-10	21-Apr-10	28-Apr-10	5-May-10	12-May-10	19-May-10	26-May-10	2-Jun-10	9-Jun-10	7-Jul-10
Chloride (mg/L)	13,000	11,000	13,000	13,000	13,000	12,000	13,000	13,000	12,000	13,000	14,000
Calcium (mg/L)		690			730					790	680
Bicarbonate (mg/L) as CaCO3		130			120					120	120
Iron (mg/L)		4.5			5.7					5.3	4.0
Magnesium (mg/L)		650			660					730	700
Ammonia as N (mg/L)	1.30	1.80	1.40	1.50	2.00	1.40	1.80	1.60	1.70	1.40	1.80
Total kjeldahl nitrogen as N (mg/L)	1.100	0.150	1.600	1.400	1.500	1.400	1.500	1.200	1.300	1.500	1.400
Nitrate as N (mg/L)	0.025	0.250	0.069	0.160	0.260	0.025	0.025	0.033	0.005	0.083	0.018
Nitrite as N (mg/L)	0.017	0.012	0.005	0.005	0.005	0.005	0.025	0.012	0.005	0.010	0.005
pH (standard units)	7.41	6.80	6.85	6.90	7.08	7.08	7.05	6.91	7.13	7.01	6.72
Phosphorous, total as P (mg/L)	0.09	0.91	0.06	0.02	0.042	0.012	0.012	0.04	0.061	0.04	0.13
Potassium (mg/L)		130			130					180	140
Total dissolved solids (mg/L)	20,000	21,000	18,000	19,000	20,000	18,000	20,000	18,000	24,000	11,000	17,000
Sodium (mg/L)		6,000			6,000					6,600	6,400
Specific Conductance (umohs/cm)	35,550	30,185	32,714	30,425	32,711	34,710	33,100	32,550	30,114	32,000	32,689
Sulfate (mg/L)	1,300	1,400	1,300	1,400	1,400	1,300	1,300	1,400	1,300	1,400	1,400
Temperature ◦C	31.3	30.4	30.2	29.2	31.3	30.3	31.3	30.3	30.7	30.8	29.9

mg/L - Milligrams Per Liter
°C - Degrees Celsius
umhos/cm - Micro mhos (siemens) Per Centin

Weekly Analyses
Monthly Analyses
NA = Not analyzed

Below laboratry detection limit. Rpt'd value is half MDL.
Analyte detected between laboratory detection limit and the laboratory reporting limit.

SUMMARY OF UPPER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA

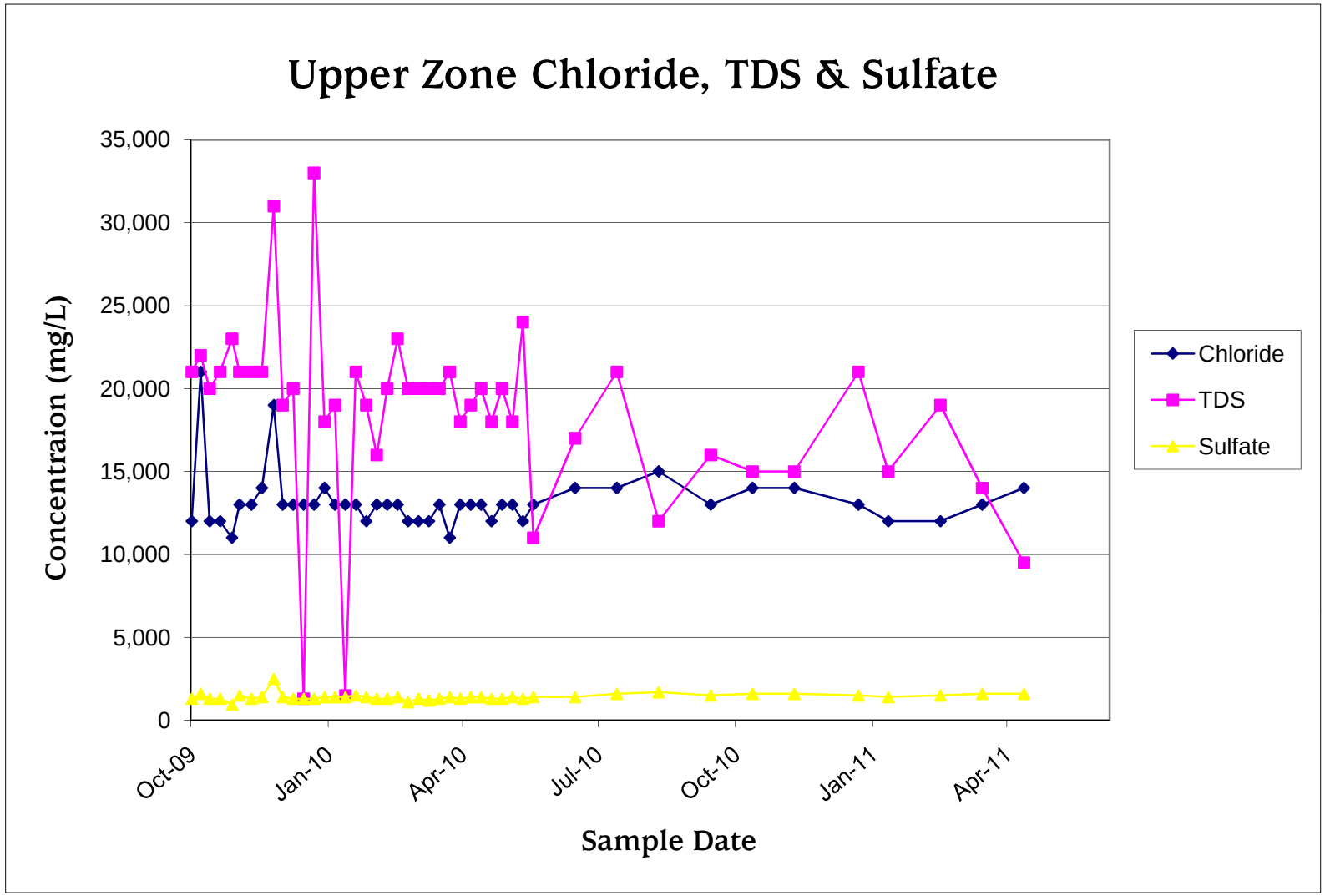
MONTH	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY		
Sample Date	4-Aug-10	1-Sep-10	6-Oct-10	3-Nov-10	1-Dec-10	13-Jan-11	2-Feb-11	9-Mar-11	6-Apr-11	4-May-11		
Chloride (mg/L)	14000	15,000	13,000	14,000	14,000	13,000	12,000	12,000	13,000	14,000		
Calcium (mg/L)	680	690	720	620	660	600	620	640	630	620		
Bicarbonate (mg/L) as CaCO3	120	120	120	110	130	120	55	110	100	88		
Iron (mg/L)	4.0	5.9	4.8	4.4	5.1	4.9	11.0	4.4	5.7	5.9		
Magnesium (mg/L)	730	290	720	690	680	670	750	740	670	730		
Ammonia as N (mg/L)	1.80	1.80	1.80	1.80	2.00	1.80	1.60	1.50	1.70	1.70		
Total kjeldahl nitrogen as N (mg/L)	1.100	1.700	1.700	1.400	1.900	1.700	1.400	1.600	1.100	1.100		
Nitrate as N (mg/L)	0.005	0.005	0.025	0.005	0.005	0.005	0.005	0.005	0.025	0.025		
Nitrite as N (mg/L)	0.005	0.005	0.025	0.005	0.005	0.005	0.005	0.005	0.025	0.025		
pH (standard units)	7.07	7.19	7.07	7.52	7.67	7.66	6.73	6.85	6.14	7.73		
Phosphorous, total as P (mg/L)	1.50	0.048	0.034	0.036	0.039	0.24	0.12	0.012	0.012	0.06		
Potassium (mg/L)	150	63	170	210	210	160	180	150	150	160		
Total dissolved solids (mg/L)	21000	12,000	16,000	15,000	15,000	21,000	15,000	19,000	14,000	9,500		
Sodium (mg/L)	6700	6,600	7,000	7,000	6,100	6,400	6,500	6,900	6,400	6,700		
Specific Conductance (umohs/cm)	32,231	34,834	33,845	31,664	34,910	34,550	33,338	29,799	33,919	35,645		
Sulfate (mg/L)	1600	1,700	1,500	1,600	1,600	1,500	1,400	1,500	1,600	1,600		
Temperature ◦C	30.0	30.0	30.8	29.9	28.5	28.6	27.0	28.8	27.9	29.3		

mg/L - Milligrams Per Liter
°C - Degrees Celsius
umhos/cm - Micro mhos (siemens) Per Centin

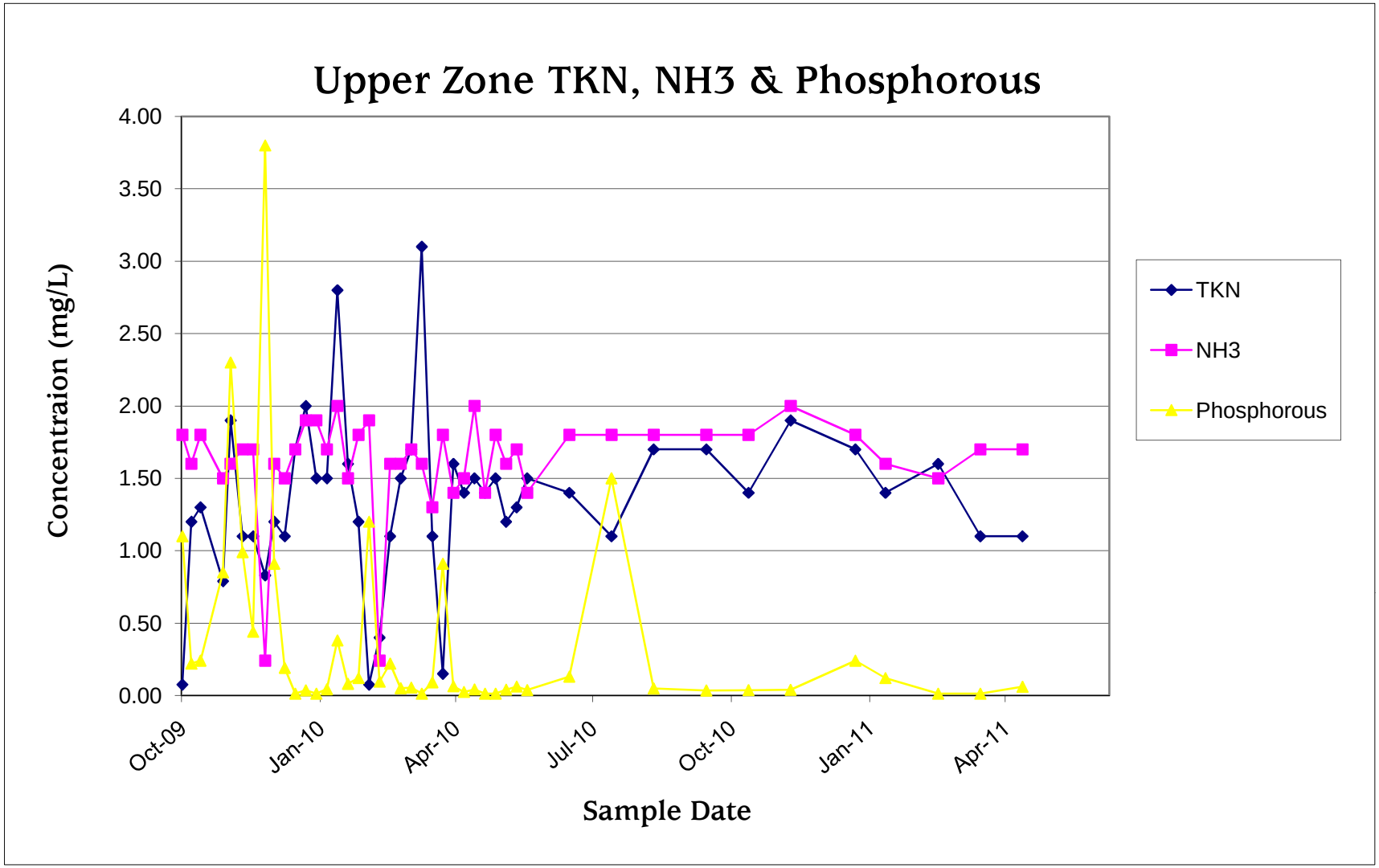
Weekly Analyses
Monthly Analyses
NA = Not analyzed

Below laboratry detection limit. Rpt'd value is half MDL.
Analyte detected between laboratory detection limit and the laboratory reporting limit.

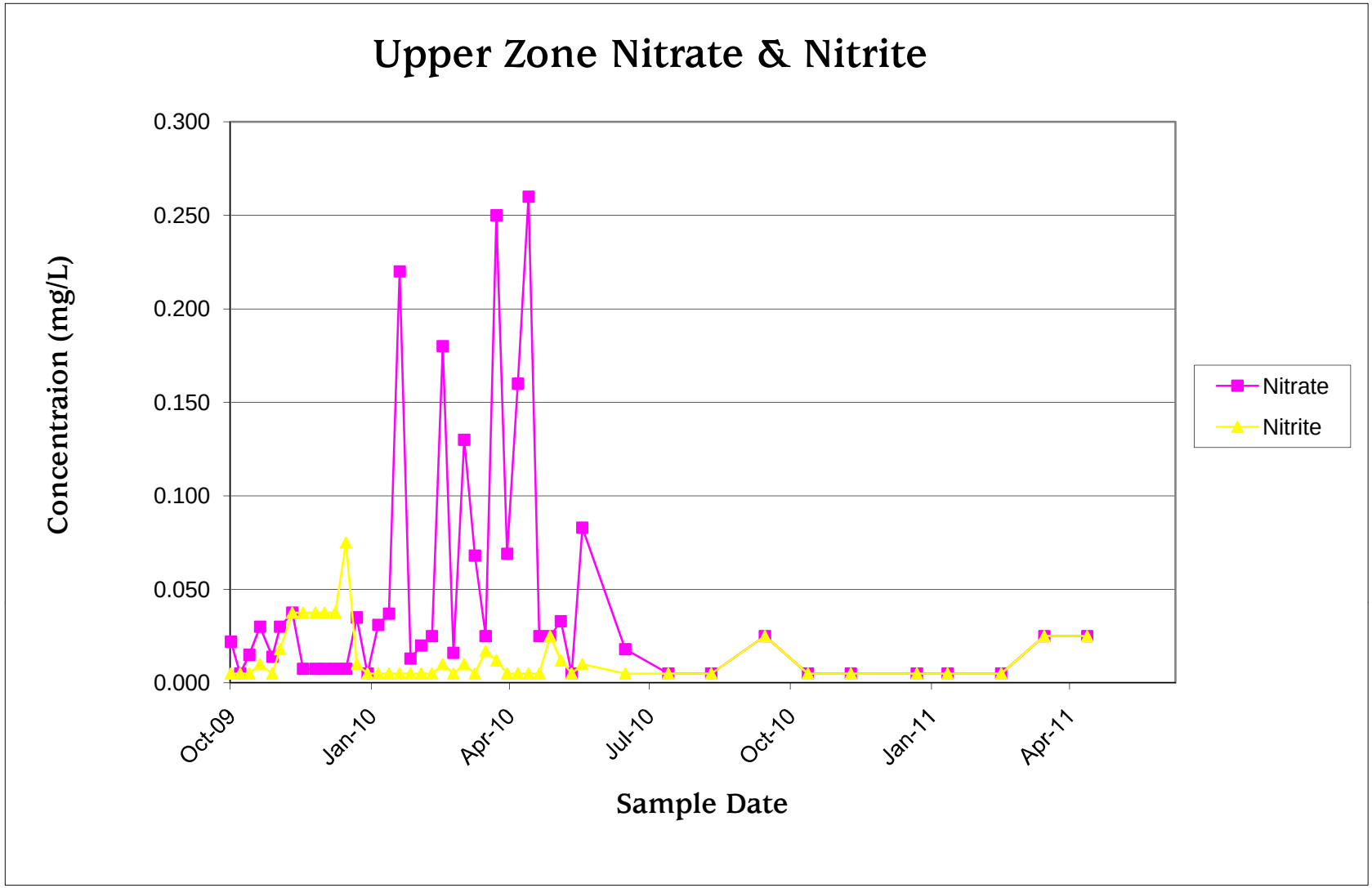
SUMMARY OF UPPER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



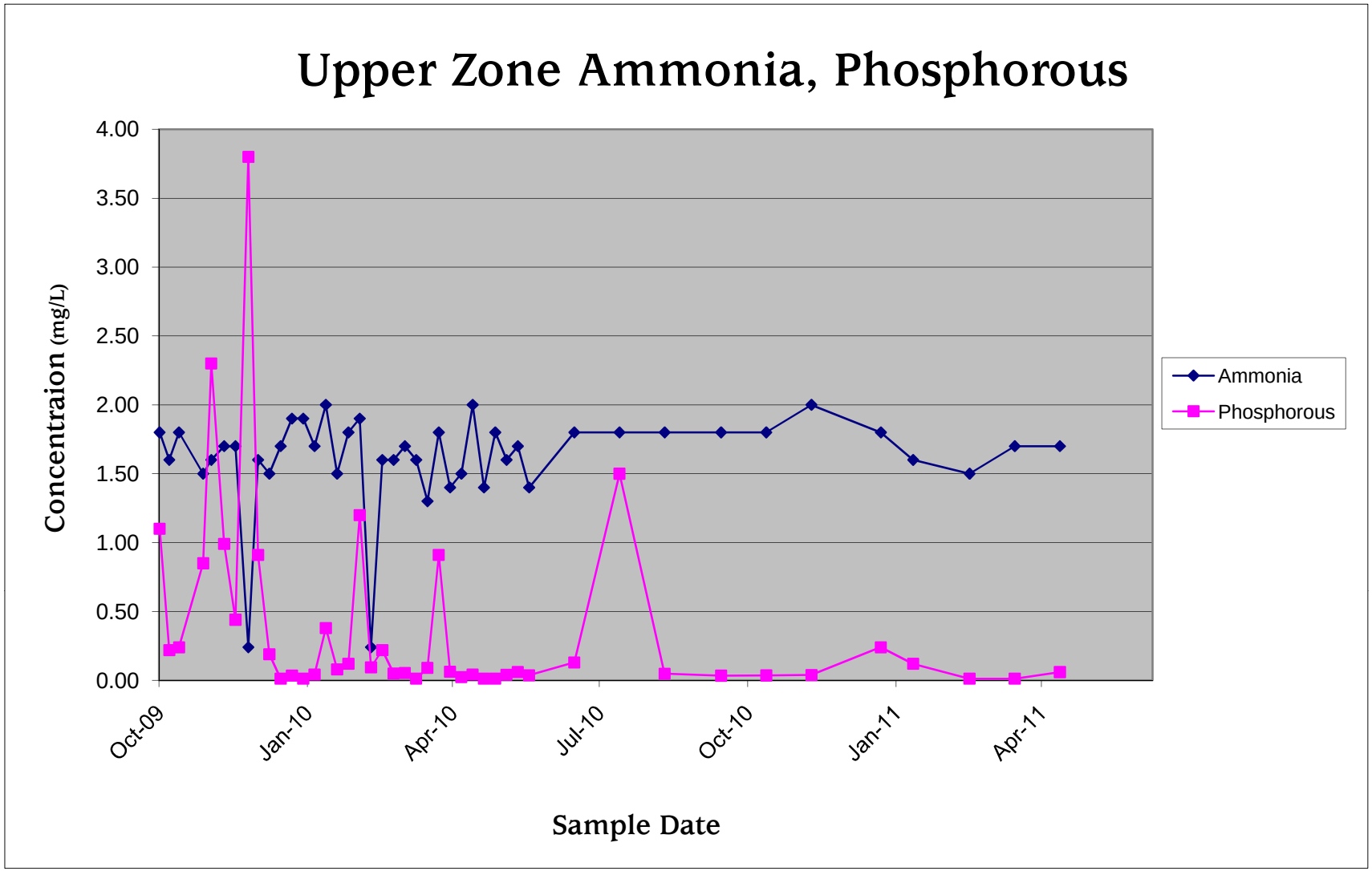
SUMMARY OF UPPER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



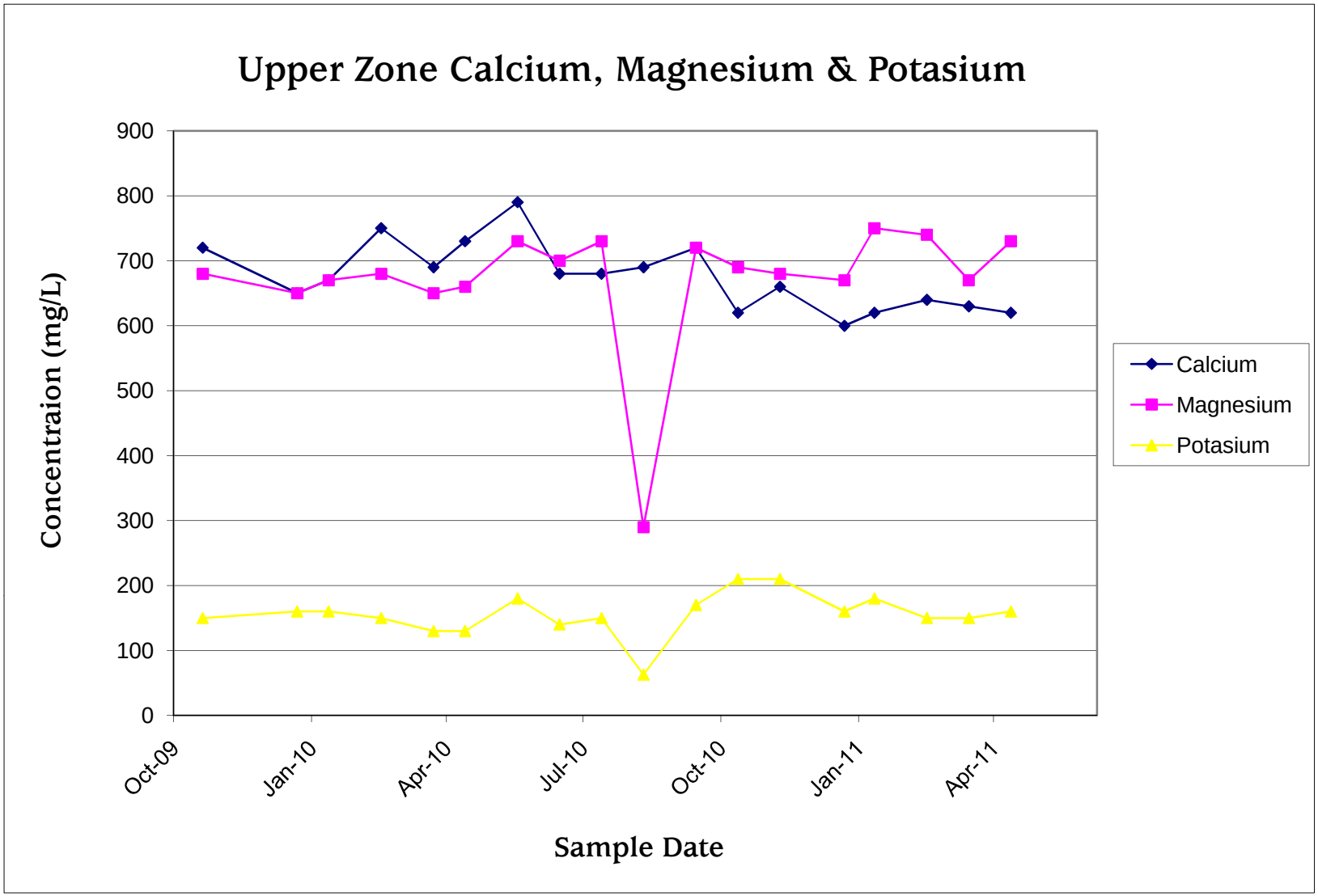
SUMMARY OF UPPER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



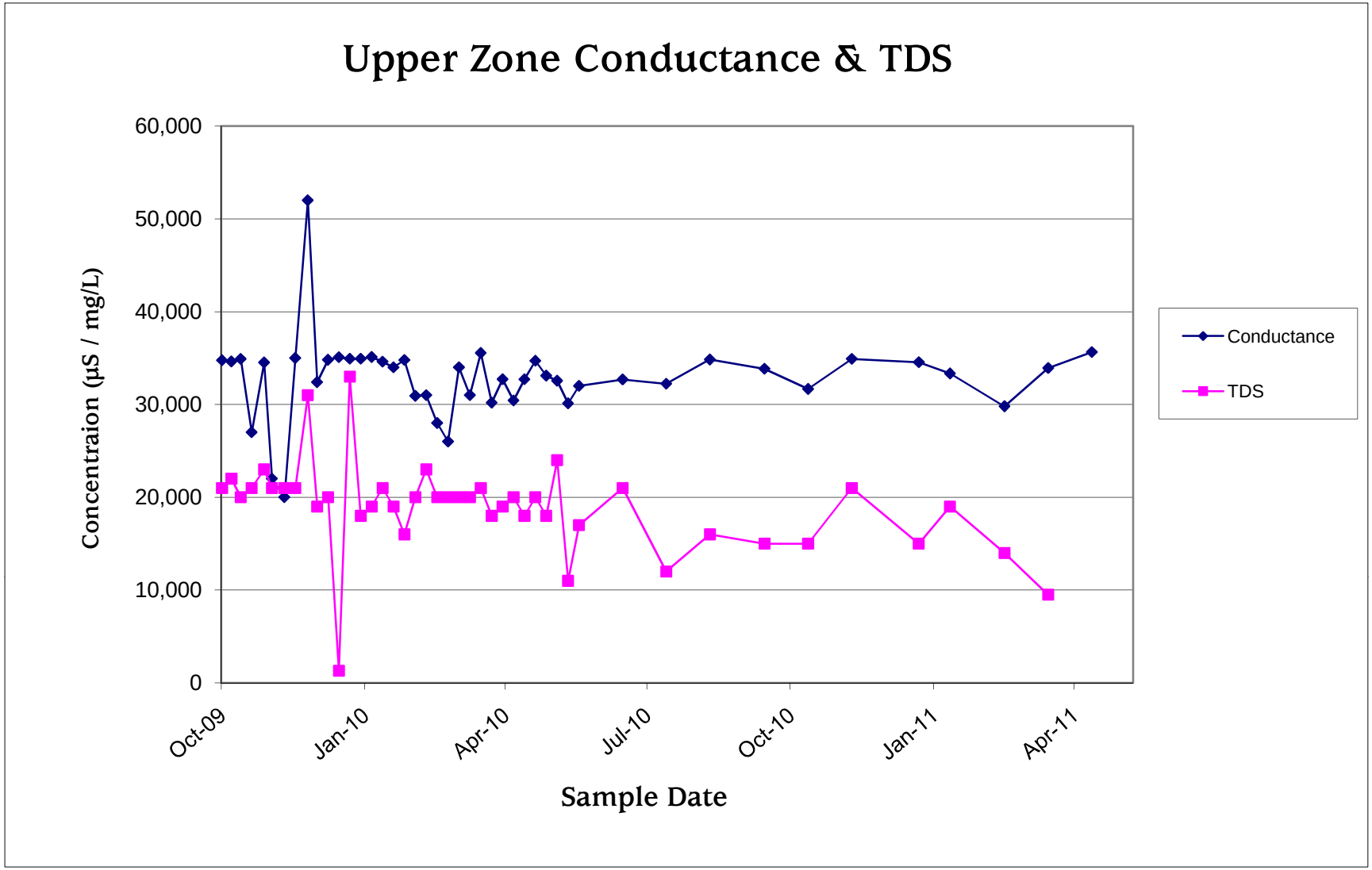
SUMMARY OF UPPER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



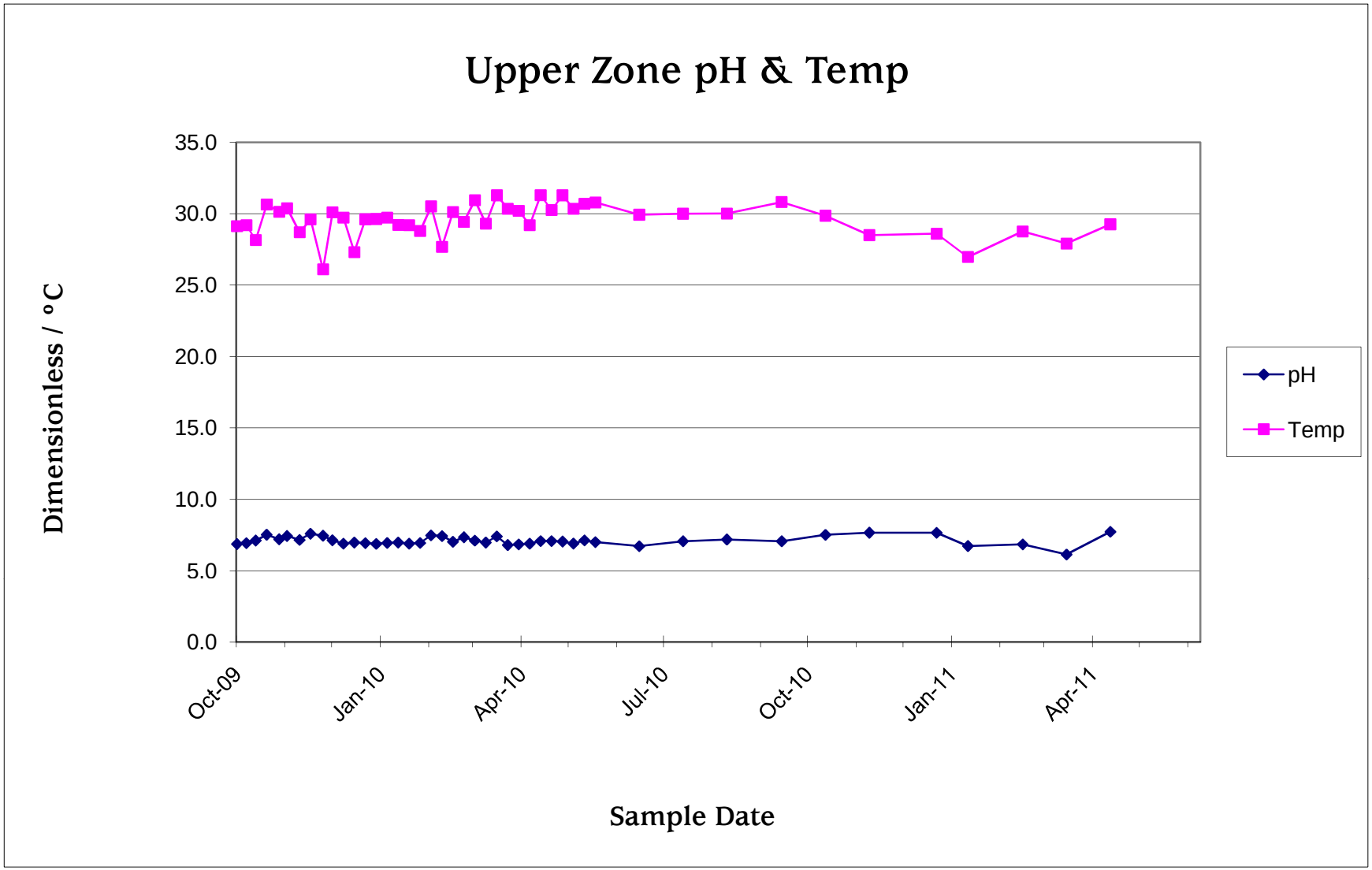
SUMMARY OF UPPER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



SUMMARY OF UPPER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



SUMMARY OF UPPER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



Appendix E

SUMMARY OF LOWER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA

MONTH	OCTOBER		NOVEMBER				DECEMBER				
Sample Date	23-Oct-09	29-Oct-09	4-Nov-09	11-Nov-09	19-Nov-09	24-Nov-09	2-Dec-09	9-Dec-09	17-Dec-09	23-Dec-09	30-Dec-09
Chloride (mg/L)	14,000	11,000	19,000	20,000	17,000	21000	20,000	21,000	12,000	18,000	20,000
Calcium (mg/L)				620							
Sodium (mg/L)				11,000							
Magnesium (mg/L)				1,200							
Bicarbonate (mg/L) as CaCO3											
Iron (mg/L)				0.12							
Ammonia as N (mg/L)	0.30	0.20	0.44		0.06	0.53	0.18	0.63	1.40	0.37	0.24
Total kjeldahl nitrogen as N (mg/L)	0.075	0.075	0.075		0.180	3.900	0.690	0.740	1.100	0.600	0.540
Nitrate as N (mg/L)	0.016	0.005	0.022	0.030	0.005	0.030	0.038	0.008	0.008	0.008	0.008
Nitrite as N (mg/L)	0.005	0.005	0.005	0.010	0.005	0.018	0.038	0.038	0.038	0.038	0.038
pH (standard units)	7.51	7.22	7.25	7.43	7.30	7.36	7.20	7.41	7.45	6.94	7.18
Phosphorous, total as P (mg/L)	2.200	2.400	3.600		1.800	0.770	0.650	0.340	0.150	0.830	0.490
Potassium (mg/L)				460							
Total dissolved solids (mg/L)	26,000	31,000	17,000	29,000	32,000	33,000	33,000	33,000	16,000	26,000	29,000
Specific Conductance (umohs/cm)	51,686	51,727	51,489	40,000	50,895	34,000	30,795	53,000	35,000	48,100	51,595
Sulfate, total as SO4 (mg/L)	2,700	2,600	2,600	2,600	2,500	2,800	2,700	2,500	1,300	2,500	2,500
gross alpha (pCi/L)	15			20							
radium 226 (pCi/L)	21.6			22.8							
radium 228 (pCi/L)	5.2			4.64							
Temperature ◦C	29.5	29.3	30.2	32.6	31.6	30.4	30.2	30.6	25.4	30.6	29.8

mg/L - Milligrams Per Liter
°C - Degrees Celsius
umhos/cm - Micro mhos (siemens) Per Centim

Weekly Analyses
Monthly Analyses
NA = Not analyzed

Below laboratry detection limit. Rpt'd value is half MDL.

Analyte detected between laboratory detection limit and the laboratory reporting limit.

Appendix E

SUMMARY OF LOWER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA

MONTH	JANUARY				FEBRUARY				MARCH				
Sample Date	6-Jan-10	13-Jan-10	20-Jan-10	27-Jan-10	3-Feb-10	10-Feb-10	17-Feb-10	24-Feb-10	3-Mar-10	10-Mar-10	17-Mar-10	24-Mar-10	31-Mar-10
Chloride (mg/L)	21,000	20,000	20,000	21,000	21,000	21,000	20,000	22,000	20,000	21,000	25,000	20,000	19,000
Calcium (mg/L)		530			570					590			
Sodium (mg/L)		11,000			10,000					11,000			
Magnesium (mg/L)		1,100			1,100					1,200			
Bicarbonate (mg/L) as CaCO3		110			120					110			
Iron (mg/L)		0.086			0.088					0.064			
Ammonia as N (mg/L)	0.27	0.25	0.23	0.26	0.51	0.23	0.22	0.27	0.24	1.40	0.38	0.25	0.23
Total kjeldahl nitrogen as N (mg/L)	0.690	3.500	0.340	0.400	2.200	0.580	0.310	0.150	0.430	0.260	0.380	0.580	0.350
Nitrate as N (mg/L)	0.038	0.025	0.079	0.013	0.046	0.069	0.010	0.012	0.025	0.280	0.014	0.110	0.068
Nitrite as N (mg/L)	0.075	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.010	0.005	0.005	0.005
pH (standard units)	7.10	7.09	7.10	7.01	7.31	7.29	7.23	7.07	7.23	7.24	7.07	7.25	7.15
Phosphorous, total as P (mg/L)	0.012	0.036	0.012	0.044	1.800	0.031	0.200	0.670	0.052	0.130	0.053	0.059	0.048
Potassium (mg/L)		380			400					400			
Total dissolved solids (mg/L)	26,000	16,000	29,000	28,000	24,000	30,000	28,000	25,000	33,000	29,000	32,000	33,000	30,000
Specific Conductance (umohs/cm)	51,622	51,475	51,400	51,526	52,000	48,000	49,000	49,000	49,000	46,000	41,000	54,000	58,000
Sulfate, total as SO4 (mg/L)	2,600	2,600	2,700	2,700	2,800	2,800	2,700	2,600	2,500	2,800	2,400	2,700	2,500
gross alpha (pCi/L)		30			-16.5					46			
radium 226 (pCi/L)		26.1			24.1					23.2			
radium 228 (pCi/L)		5.19			4.30					4.7			
Temperature ◦C	27.2	29.8	29.5	29.6	29.6	29.4	29.0	31.4	28.4	30.6	30.8	31.2	29.5

mg/L - Milligrams Per Liter
°C - Degrees Celsius
umhos/cm - Micro mhos (siemens) Per Cent NA = Not analyzed

Weekly Analyses
Monthly Analyses

Below laboratry detection limit. Rpt'd value is half MDL.
Analyte detected between laboratory detection limit and the laboratory reporting limit.

Appendix E

SUMMARY OF LOWER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA

MONTH	APRIL				MAY				JUNE		JULY
Sample Date	7-Apr-10	14-Apr-10	21-Apr-10	28-Apr-10	5-May-10	12-May-10	19-May-10	26-May-10	2-Jun-10	9-Jun-10	7-Jul-10
Chloride (mg/L)	21,000	19,000	22,000	21,000	22,000	21000	21,000	21,000	21,000	20,000	21,000
Calcium (mg/L)		580			620					600	470
Sodium (mg/L)		11,000			11,000					11,000	10,000
Magnesium (mg/L)		1,200			1,200					1,300	1,000
Bicarbonate (mg/L) as CaCO3		110			110					110	100
Iron (mg/L)		0.080			0.061					0.056	0.052
Ammonia as N (mg/L)	0.19	0.28	0.17	0.23	0.20	0.32	0.26	0.16	0.22	0.22	0.28
Total kjeldahl nitrogen as N (mg/L)	0.470	0.075	0.330	0.260	0.530	0.075	0.640	0.075	0.210	0.630	0.570
Nitrate as N (mg/L)	0.072	0.130	0.060	0.150	0.200	0.025	0.025	0.097	0.032	0.026	0.012
Nitrite as N (mg/L)	0.010	0.005	0.005	0.005	0.045	0.005	0.025	0.005	0.005	0.005	0.005
pH (standard units)	7.38	6.71	6.80	7.22	7.10	7.12	7.08	6.92	6.80	6.43	6.21
Phosphorous, total as P (mg/L)	0.120	1.800	0.060	0.160	0.065	0.100	0.012	1.900	0.081	0.100	0.075
Potassium (mg/L)		440			460					590	420
Total dissolved solids (mg/L)	27,000	32,000	NA	38,000	31,000	27,000	34,000	21,000	27,000		16,000
Specific Conductance (umohs/cm)	51,420	30,185	50,129	49,213	51,420	50,100	51,240	50,212	49,521	50,000	47,604
Sulfate, total as SO4 (mg/L)	2,500	2,700	2,900	2,800	2,700	2,700	2,900	2,600	2,700	2,800	2,600
gross alpha (pCi/L)		55			80					9.7	40.0
radium 226 (pCi/L)		23.5			23.4					20.3	22.0
radium 228 (pCi/L)		4.5			4.1					4.7	4.3
Temperature ◦C	31.1	30.3	30.5	30.4	30.3	30.1	31.1	30.7	31.4	30.1	30.9

mg/L - Milligrams Per Liter
°C - Degrees Celsius
umhos/cm - Micro mhos (siemens) Per Centim

Weekly Analyses
Monthly Analyses
NA = Not analyzed

Below laboratry detection limit. Rpt'd value is half MDL.
Analyte detected between laboratory detection limit and the laboratory reporting limit.

Appendix E

SUMMARY OF LOWER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA

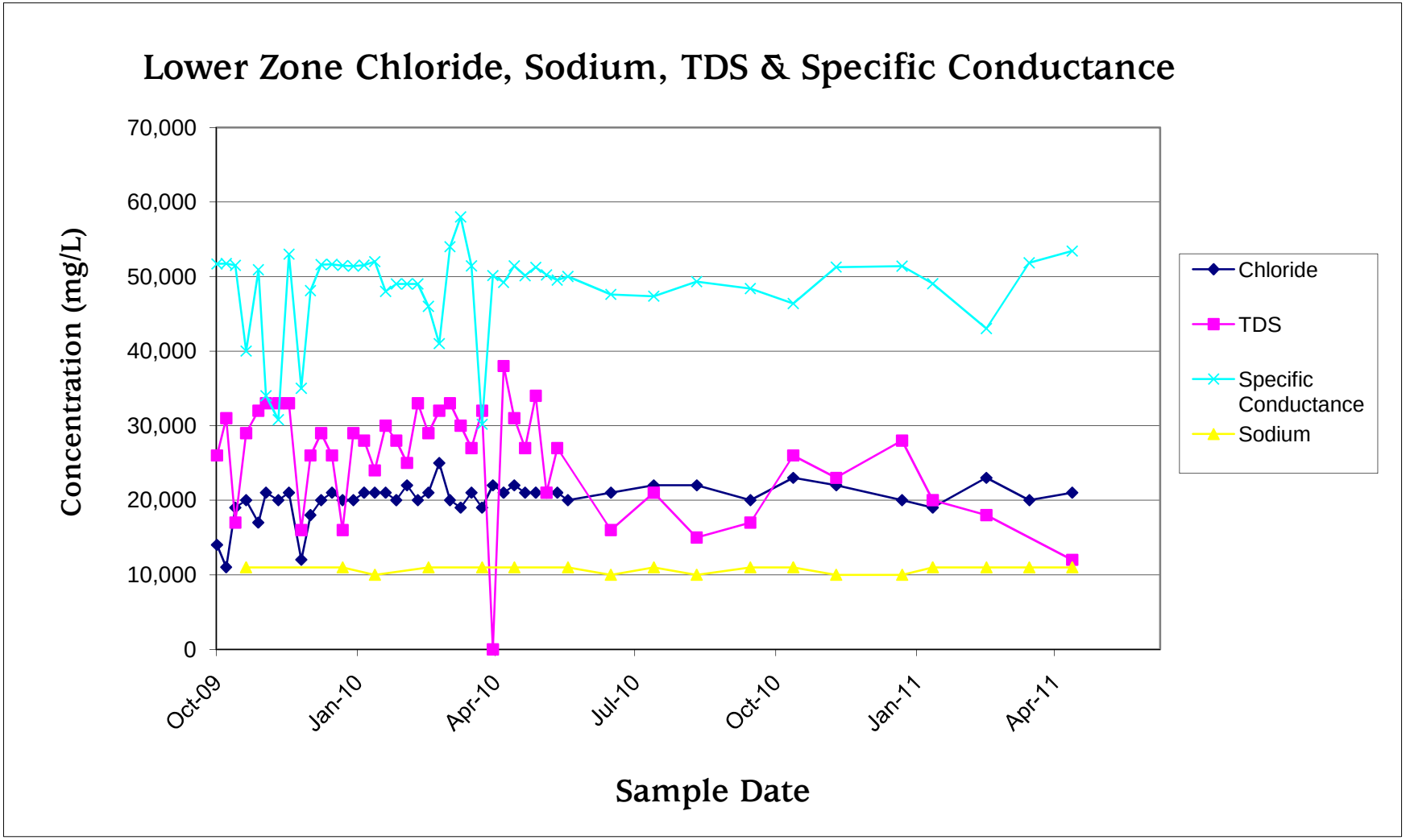
MONTH	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	
Sample Date	4-Aug-10	1-Sep-10	6-Oct-10	3-Nov-10	1-Dec-10	13-Jan-11	2-Feb-11	9-Mar-11	6-Apr-11	4-May-11	
Chloride (mg/L)	22000	22,000	20,000	23,000	22,000	20,000	19,000	23,000	20,000	21,000	
Calcium (mg/L)	570	560	520	480	520	430	520	430	480	480	
Sodium (mg/L)	11,000	10,000	11,000	11,000	10,000	10,000	11,000	11,000	11,000	11,000	
Magnesium (mg/L)	1,200	460	1,100	1,100	1,100	1,100	1,200	1,200	1,000	1,100	
Bicarbonate (mg/L) as CaCO3	110	100	100	100	100	100	110	86	110	93	
Iron (mg/L)	0.080	0.068	0.025	0.025	0.062	0.096	0.110	0.053	0.130	0.077	
Ammonia as N (mg/L)	0.20	0.42	0.39	0.38	0.92	0.81	0.40	0.28	0.27	0.29	
Total kjeldahl nitrogen as N (mg/L)	0.350	0.670	0.880	0.320	0.720	1.000	0.375	1.300	0.450	0.75	
Nitrate as N (mg/L)	0.005	0.005	0.025	0.005	0.050	0.050	0.050	0.005	0.025	0.025	
Nitrite as N (mg/L)	0.005	0.005	0.025	0.005	0.050	0.050	0.005	0.005	0.025	0.025	
pH (standard units)	7.00	6.82	6.87	6.85	7.09	7.10	6.88	6.49	6.29	6.94	
Phosphorous, total as P (mg/L)	0.840	0.076	0.031	0.027	0.038	0.160	0.120	0.012	0.024	0.060	
Potassium (mg/L)	420	180	440	390	390	470	530	420	390	410	
Total dissolved solids (mg/L)	21,000	15,000	17,000	26,000	23,000	28,000	20,000	18,000		12,000	
Specific Conductance (umohs/cm)	47,363	49,325	48,391	46,377	51,268	51,398	49,046	43,037	51,830	53,415	
Sulfate, total as SO4 (mg/L)	2,900	3,000	2,600	2,900	2,900	2,700	2,700	2,700	2,800	2,800	
gross alpha (pCi/L)	10.00	-35	35	5	60	90	60	105	40	80	
radium 226 (pCi/L)	25.5	20.1	21.5	22.5	22.5	22.8	20.0	20.90	20.6	19.2	
radium 228 (pCi/L)	4.27	3.9	3.7	4.0	4.3	3.8	4.0	4.83	3.9	4.8	
Temperature °C	31.5	31.2	31.2	31.1	29.9	29.9	29.4	29.6	29.6	31.3	

mg/L - Milligrams Per Liter
°C - Degrees Celsius
umhos/cm - Micro mhos (siemens) Per Centim NA = Not analyzed

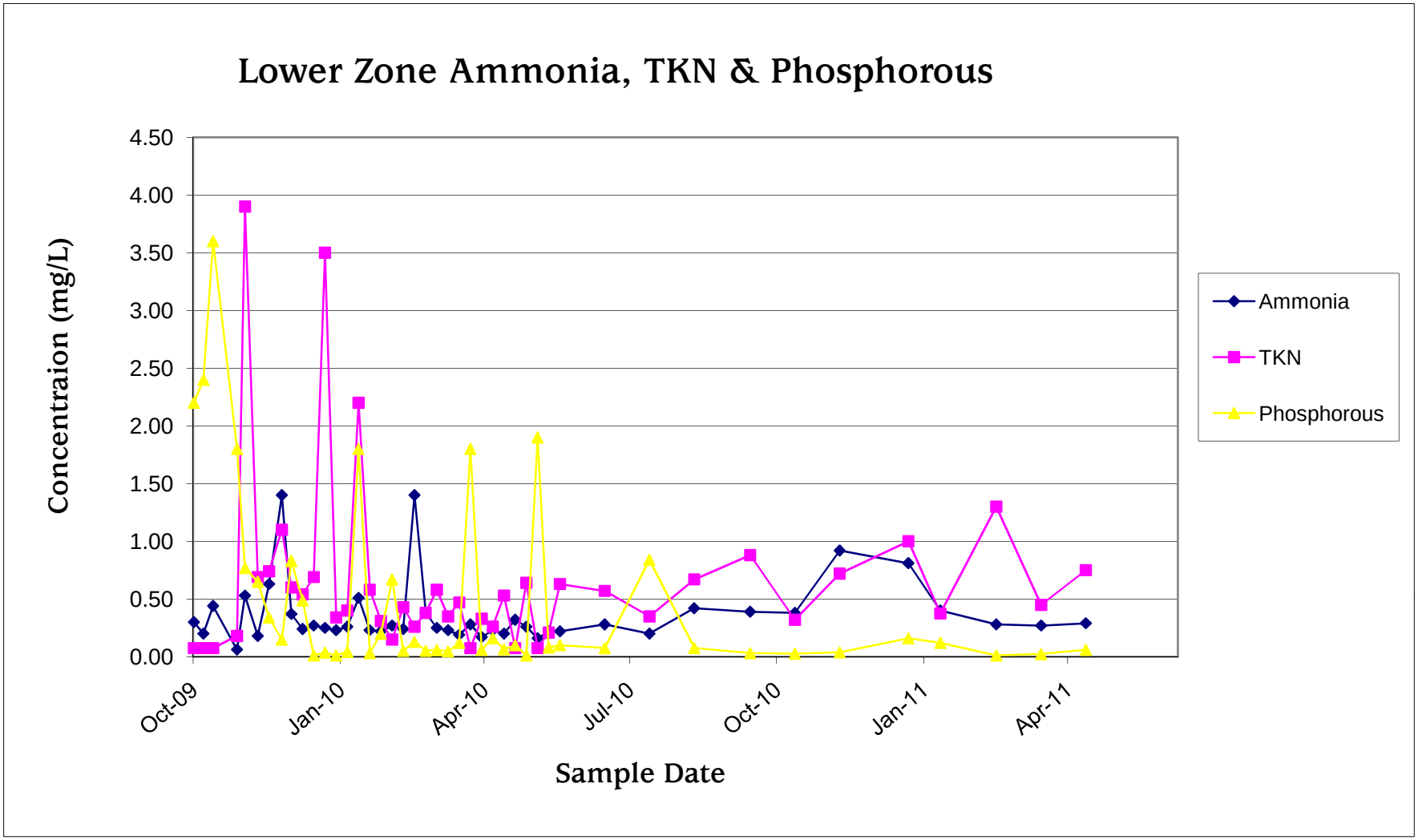
Weekly Analyses
Monthly Analyses

Below laboratry detection limit. Rpt'd value is half MDL.
Analyte detected between laboratory detection limit and the laboratory reporting limit.

SUMMARY OF LOWER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



SUMMARY OF LOWER MONITOR ZONE LAB DATA
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



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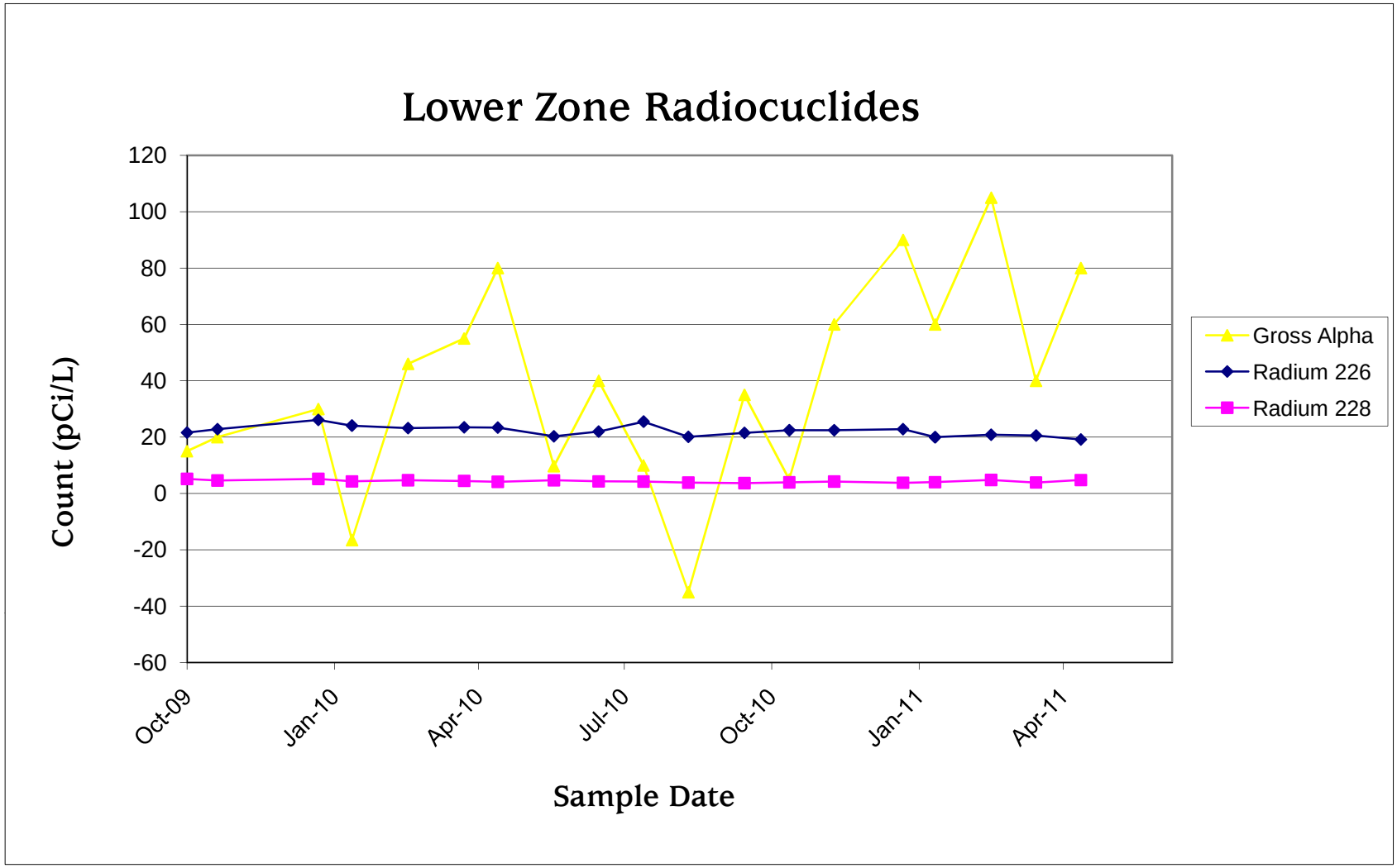

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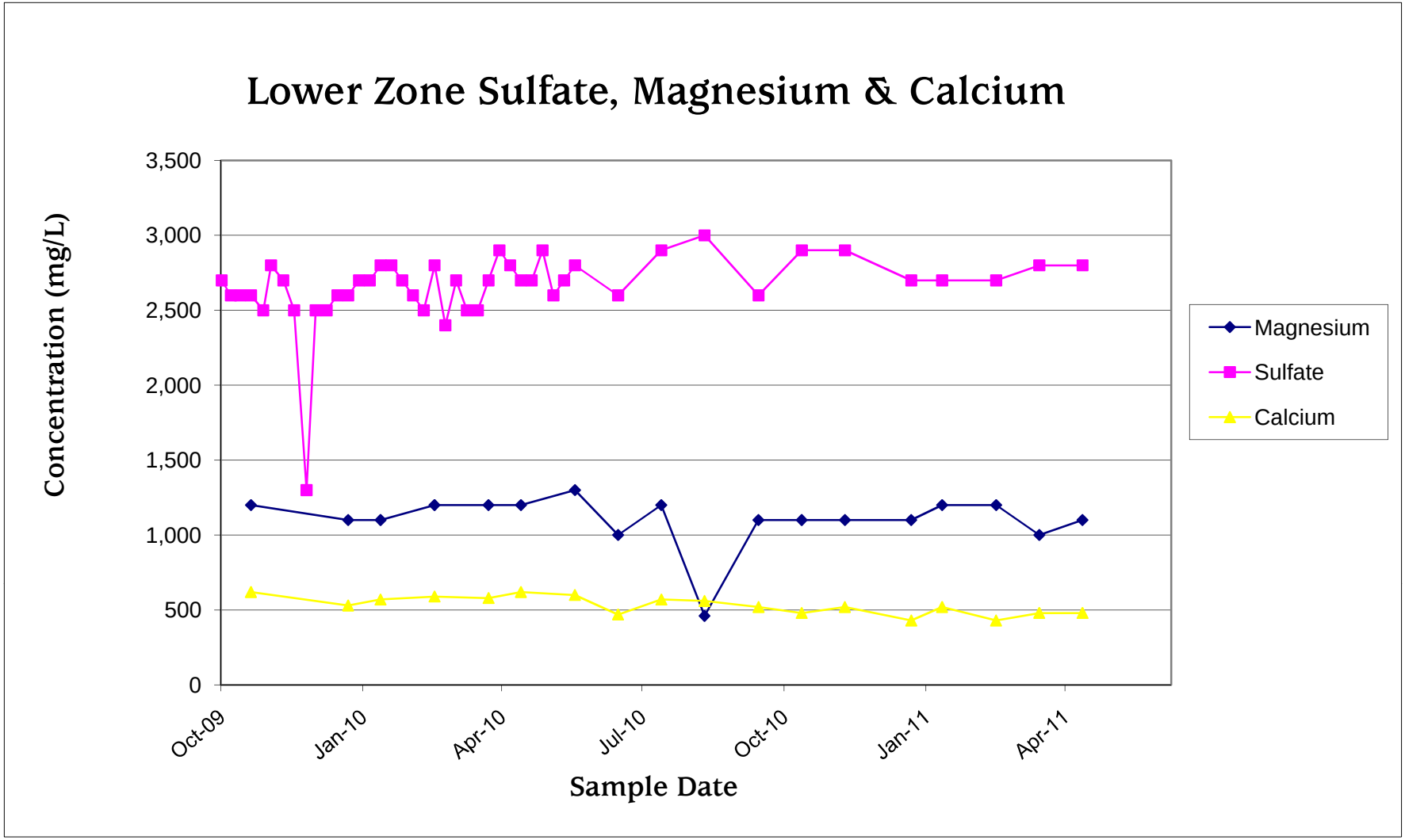
OKEECHOBEE LANDFILL INC., OKEECHOBEE, FLORIDA



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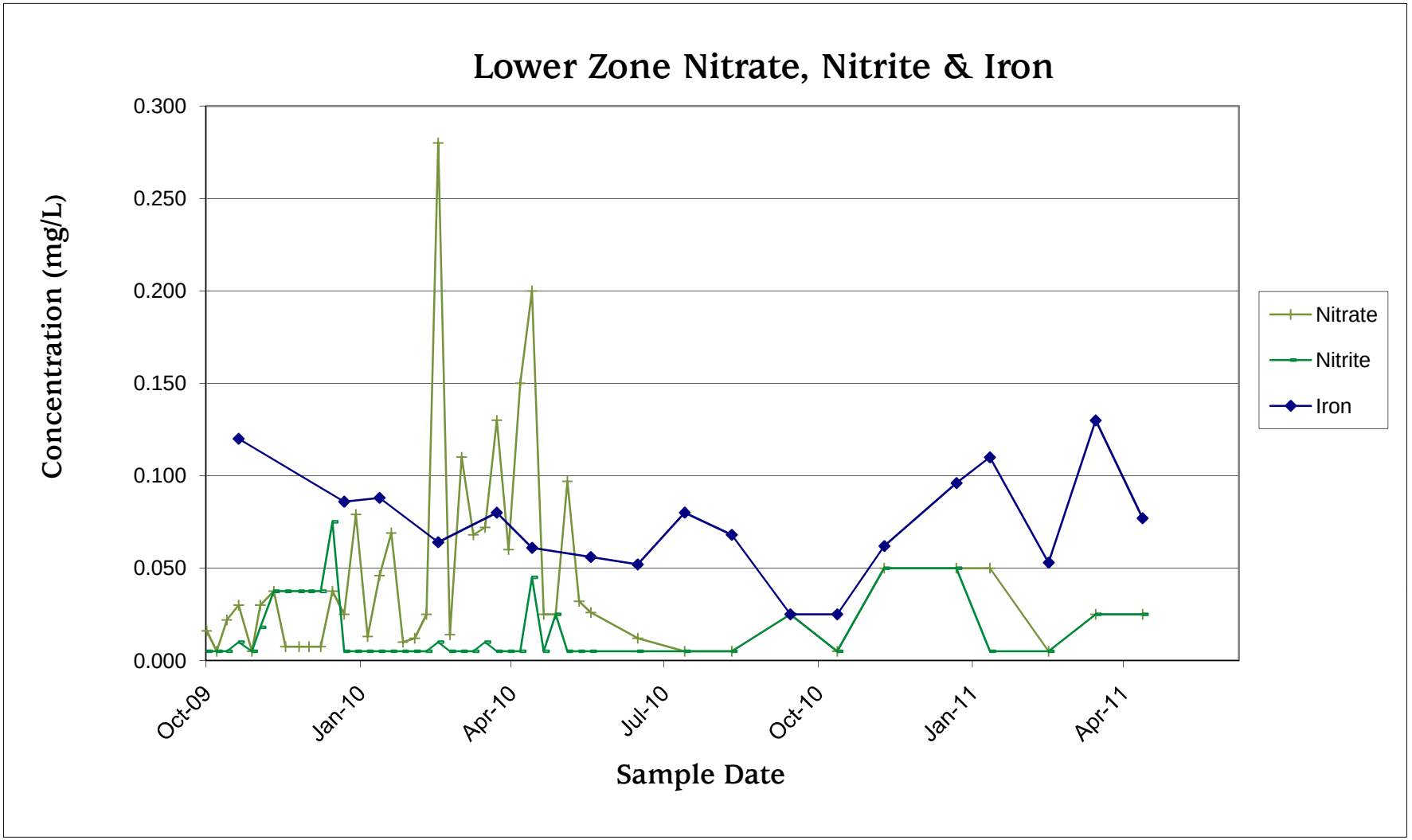

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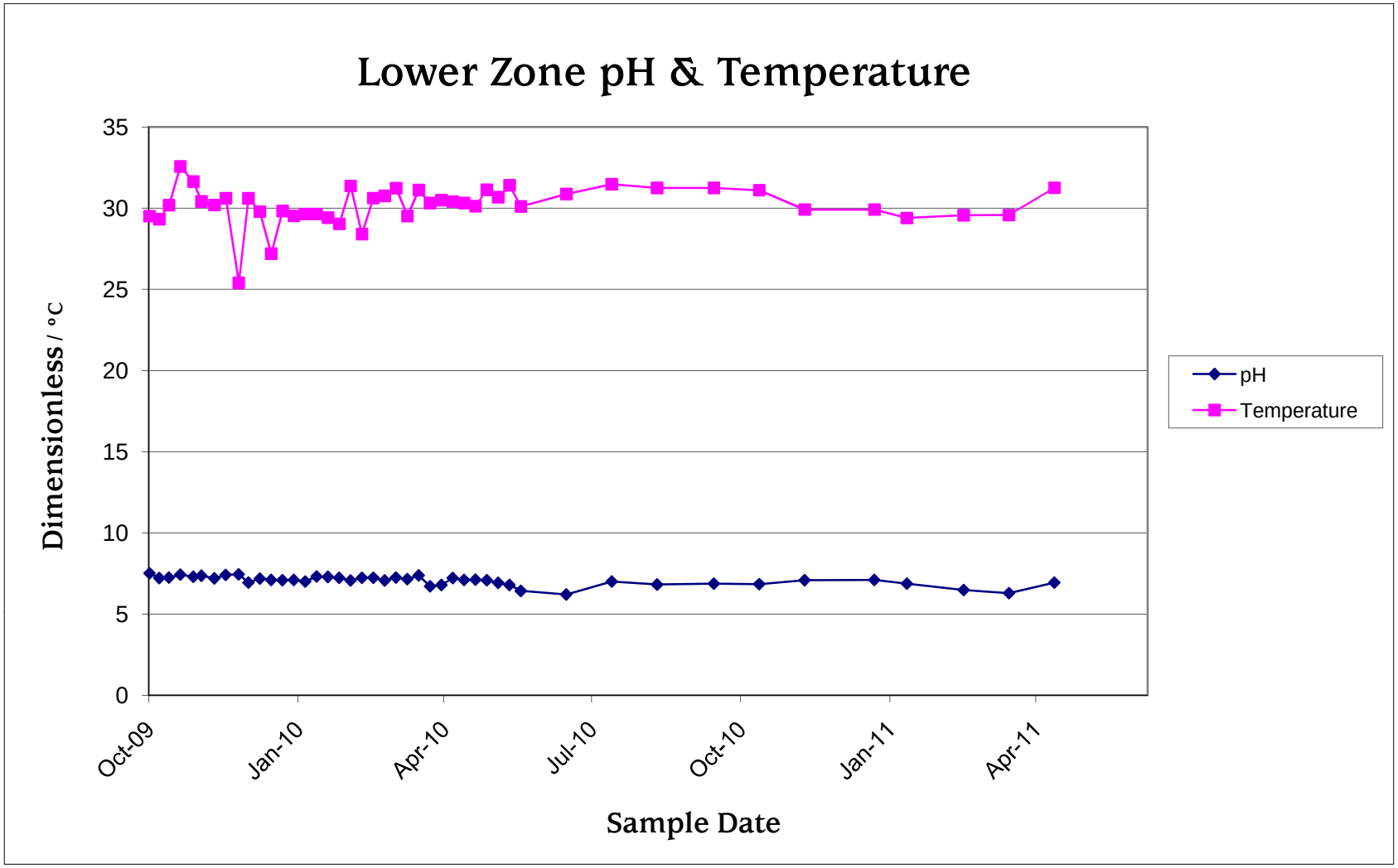

SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
10/01/09	0.00000					
10/02/09	0.00000					
10/03/09	0.00000					
10/04/09	0.00000					
10/05/09	0.00000					
10/06/09	0.00000					
10/07/09	0.00000					
10/08/09	0.00000					
10/09/09	0.00000					
10/10/09	0.00000					
10/11/09	0.00000					
10/12/09	0.00000					
10/13/09	0.00000					
10/14/09	0.00000					
10/15/09	0.00000					
10/16/09	0.12881			89		
10/17/09	0.00000			0		
10/18/09	0.00000			0		
10/19/09	0.11828			82		
10/20/09	0.12501			87		
10/21/09	0.12350			86		
10/22/09	0.14244			99		
10/23/09	0.15771			110		
10/24/09	0.00000			0		
10/25/09	0.00000			0		
10/26/09	0.13097			91		
10/27/09	0.13903			97		
10/28/09	0.17572			122		
10/29/09	0.14730			102		
10/30/09	0.14000			97		
10/31/09	0.00000			0		
11/01/09	0.12203			85		
11/02/09	0.12203			85		
11/03/09	0.12203			85		
11/04/09	0.12915			90		
11/05/09	0.11237			78		
11/06/09	0.00000			0		
11/07/09	0.00000			0		
11/08/09	0.00000			0		
11/09/09	0.04400			31		
11/10/09	0.18048			125		
11/11/09	0.13217			92		
11/12/09	0.00000			0		
11/13/09	0.00000			0		
11/14/09	0.00000			0		
11/15/09	0.00000			0		

PSI - Pounds Per Square Inch
MG - Million Gallons

FT - Feet
NAVD 1988 - North Atlantic Vertical Datum, 1988

SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
11/16/09	0.00000			0		
11/17/09	0.00000			0		
11/18/09	0.00000	5.0	56.1	0		
11/19/09	0.12073	3.1	57.3	84	26.02	
11/20/09	0.00000	2.9	56.4	0	25.37	
11/21/09	0.00000	2.9	56.9	0	25.08	
11/22/09	0.00000	2.7	55.9	0	24.87	
11/23/09	0.15415	4.0	55.9	107	24.40	
11/24/09	0.04022	4.3	56.5	28	22.98	8.38
11/25/09	0.00094	3.0	55.2	1	22.05	7.74
11/26/09	0.00000	2.9	55.3	0	21.87	7.46
11/27/09	0.00000	2.8	55.1	0	21.63	7.11
11/28/09	0.00000	2.7	49.1	0	21.55	6.97
11/29/09	0.00000	2.9	38.9	0	21.73	7.12
11/30/09	0.00000	3.0	34.1	0	21.80	7.17
12/01/09	0.00000	3.0	30.8	0	21.80	7.14
12/02/09	0.13693	9.2	24.9	95	21.73	7.39
12/03/09	0.12754	8.8	48.0	89	21.75	7.42
12/04/09	0.12429	8.2	56.2	86	21.48	7.11
12/05/09	0.00562	3.2	56.2	4	21.57	7.18
12/06/09	0.00000	2.8	56.4	0	21.55	7.16
12/07/09	0.13592	11.8	56.1	94	21.79	7.40
12/08/09	0.14627	11.8	56.2	102	21.10	7.22
12/09/09	0.16172	14.7	56.8	112	21.38	8.04
12/10/09	0.22642	18.5	56.1	157	22.20	8.32
12/11/09	0.02902	4.7	56.0	20	21.82	7.87
12/12/09	0.00000	3.0	56.4	0	21.83	7.86
12/13/09	0.00000	3.2	57.0	0	21.97	7.97
12/14/09	0.12092	12.1	55.9	84	22.01	7.99
12/15/09	0.12821	12.7	56.2	89	21.99	7.95
12/16/09	0.21909	19.8	56.0	152	21.94	7.88
12/17/09	0.20488	19.0	55.9	142	21.97	7.97
12/18/09	0.12429	14.0	55.8	86	22.36	8.31
12/19/09	0.00000	2.8	56.1	0	22.26	8.16
12/20/09	0.00000	2.6	55.8	0	22.01	7.96
12/21/09	0.20966	18.0	45.7	146	21.94	7.84
12/22/05	0.23042	27.0	49.4	160	21.16	7.75
12/23/09	0.17359	7.2	57.0	121	22.00	8.80
12/24/09	0.00000	3.0	57.8	0	22.96	9.23
12/25/09	0.00000	3.0	56.6	0	22.87	9.11
12/26/09	0.00000	2.7	56.0	0	22.57	8.76
12/27/09	0.00000	2.7	56.3	0	22.46	8.61
12/28/09	0.16756	1.3	56.1	116	22.61	8.75
12/29/09	0.29950	1.1	55.6	208	21.54	8.09
12/30/09	0.32966	0.9	57.6	229	21.98	8.70
12/31/09	0.26270	1.0	56.4	182	24.04	9.39

PSI - Pounds Per Square Inch
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SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
01/01/10	0.23374	0.9	55.9	162	24.94	9.05
01/02/10	0.11180	1.2	51.0	78	24.68	8.77
01/03/10	0.06585	1.3	34.9	46	24.46	8.52
01/04/10	0.04089	1.6	30.8	28	24.36	8.44
01/05/10	0.05106	1.7	58.2	35	22.06	7.35
01/06/10	0.04702	1.2	42.0	33	23.65	8.02
01/07/10	0.00000	0.9	29.7	0	24.66	8.51
01/08/10	0.00000	0.0		0		
01/09/10	0.00089	0.7	18.8	1	23.85	7.72
01/10/10	0.00000	0.8	16.5	0	23.64	7.50
01/11/10	0.00000	1.2	36.6	0	23.49	7.33
01/12/10	0.05337	1.6	53.2	37	21.92	6.73
01/13/10	0.26684	1.4	45.3	185	23.26	7.57
01/14/10	0.00000	2.4	62.7	0	24.43	8.29
01/15/10	0.00000	2.5	69.2	0	24.41	8.21
01/16/10	0.00000	2.5	70.3	0	24.47	8.23
01/17/10	0.00000	2.6	71.6	0	24.61	8.34
01/18/10	0.00000	2.3	64.4	0	24.38	8.07
01/19/10	0.05324	2.0	54.5	37	22.66	7.39
01/20/10	0.27988	0.7	47.6	194	24.11	8.31
01/21/10	0.38737	0.1	46.3	269	25.35	9.09
01/22/10	0.14791	0.5	61.0	103	25.24	8.95
01/23/10	0.00000	0.0		0		
01/24/10	0.00000	0.0		0		
01/25/10	0.00112	0.5	76.5	1	25.03	8.59
01/26/10	0.04971	0.8	64.6	35	23.33	7.68
01/27/10	0.23294	0.4	55.5	162	23.73	7.93
01/28/10	0.00000	0.6	53.9	0	25.40	9.10
01/29/10	0.00000	0.6	54.4	0	25.25	8.95
01/30/10	0.00000	0.7	55.0	0	25.41	9.06
01/31/10	0.00000	0.4	52.9	0	25.13	8.74
02/01/10	0.28298	0.4	51.1	197	25.14	8.72
02/02/10	0.28882	0.4	53.8	201	23.78	8.26
02/03/10	0.29133	0.6	54.7	202	24.80	8.85
02/04/10	0.26417	0.1	52.8	183	25.90	9.54
02/05/10	0.21582	0.5	55.6	150	25.91	9.50
02/06/10	0.00000	1.2	57.0	0	25.84	9.37
02/07/10	0.00000	0.7	52.2	0	25.50	9.00
02/08/10	0.00000	1.2	52.8	0	25.64	9.12
02/09/10	0.05009	1.1	54.0	35	24.36	8.56
02/10/10	0.29234	0.3	53.1	203	25.29	9.24
02/11/10	0.00000	2.2	52.1	0	25.97	9.61
02/12/10	0.00394	2.3	51.5	3	26.03	9.62
02/13/10	0.00000	2.1	51.0	0	25.74	9.28
02/14/10	0.00000	1.6	51.6	0	25.58	9.09
02/15/10	0.00000	1.8	53.6	0	25.84	9.32

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SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
02/16/10	0.05127	1.5	52.2	36	24.51	8.64
02/17/10	0.25591	0.6	51.6	178	25.28	9.16
02/18/10	0.23320	1.0	52.4	162	26.16	9.75
02/19/10	0.41519	-0.4	52.8	288	25.94	9.47
02/20/10	0.55740	-1.3	53.8	387	26.01	9.51
02/21/10	0.15543	1.0	55.8	108	26.04	9.52
02/22/10	0.00014	1.8	59.6	0	26.22	9.66
02/23/10	0.05086	1.7	65.1	35	24.73	9.00
02/24/10	0.24320	0.9	61.3	169	25.93	9.82
02/25/10	0.00000	2.6	52.5	0	26.40	9.95
02/26/10	0.00000	2.6	52.6	0	26.10	9.59
02/27/10	0.00061	2.4	50.7	0	25.99	9.42
02/28/10	0.00000	2.6	52.0	0	26.00	9.41
03/01/10	0.00061	2.7	52.8	0	26.03	9.41
03/02/10	0.00000	-0.4	51.5	0	24.75	8.97
03/03/10	0.23944			166		
03/04/10	0.52885			367		
03/05/10	0.25212			175		
03/06/10	0.00000			0		
03/07/10	0.00000			0		
03/08/10	0.00000			0		
03/09/10	0.00000			0		
03/10/10	0.07126			49		
03/11/10	0.20427			142		
03/12/10	0.00000			0		
03/13/10	0.00000			0		
03/14/10	0.00000			0		
03/15/10	0.01322	6.1	56.9	9	26.62	9.96
03/16/10	0.20476	1.9	54.6	142	24.72	10.35
03/17/10	0.31554	0.1	54.3	219	26.10	10.83
03/18/10	0.24895	0.8	53.7	173	26.86	10.41
03/19/10	0.00001	1.3	53.6	0	26.63	10.13
03/20/10	0.36292	1.2	54.1	252	26.59	10.06
03/21/10	0.25283	1.5	56.9	176	26.67	10.11
03/22/10	0.01677	2.6	58.6	12	26.62	10.03
03/23/10	0.05064	3.0	61.1	35	25.18	9.29
03/24/10	0.34449	0.3	55.9	239	26.38	10.18
03/25/10	0.10317	1.8	56.4	72	27.17	10.79
03/26/10	0.00031	3.1	60.3	0	27.11	10.67
03/27/10	0.00000	3.0	59.1	0	26.86	10.38
03/28/10	0.00756	2.8	59.4	5	26.87	10.36
03/29/10	0.00000	1.8	56.5	0		
03/30/10	0.00000	5.6	56.4	0		
03/31/10	0.23683	2.9	56.1	164		

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SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
04/01/10	0.00000	0.7	54.1	0		
04/02/10	0.20896	-0.4	53.7	145	23.00	7.31
04/03/10	0.00000	0.0		0		
04/04/10	0.00000	0.0		0		
04/05/10	0.16387	0.4	55.3	114	23.11	7.40
04/06/10	0.29476	4.1	54.5	205	22.82	7.38
04/07/10	0.47211	0.0	52.3	328		6.98
04/08/10	0.16484	0.0	42.5	114		
04/09/10	0.00000	0.0	57.5	0		6.66
04/10/10	0.00000	2.5	59.4	0		
04/11/10	0.00000	2.5	59.4	0		
04/12/10	0.24227	0.5	56.5	168	21.81	7.03
04/13/10	0.13523	1.9	58.0	94	20.89	6.27
04/14/10	0.19543	1.9	59.3	136	22.39	7.00
04/15/10	0.00000	2.7	58.1	0	23.04	7.42
04/16/10	0.00000	2.7	58.2	0	22.82	7.15
04/17/10	0.00051	2.7	58.0	0	22.77	7.07
04/18/10	0.00036	2.6	57.2	0	22.73	7.01
04/19/10	0.00000	2.7	58.0	0	22.77	7.03
04/20/10	0.02901	0.0	55.8	20	24.88	5.90
04/21/10	0.07654	0.0		53		
04/22/10	0.16275	0.0		113		
04/23/10	0.38294	0.0		266		
04/24/10	0.00000	0.0		0		
04/25/10	0.00000	0.0		0		
04/26/10	0.31548	0.0	51.2	219		6.60
04/27/10	0.30266	0.0	50.6	210		5.52
04/28/10	0.00000	0.0		0		
04/29/10	0.00000	0.0		0		
04/30/10	0.00000	0.0		0		
05/01/10	0.00000	1.6	55.3	0	21.83	6.72
05/02/10	0.56470		55.5	392		6.35
05/03/10	0.18898	-1.8	55.9	131	21.27	7.05
05/04/10	0.60873	5.8	57.4	423	22.20	6.85
05/05/10	0.15722	2.9	57.7	109	22.99	7.37
05/06/10	0.00000	2.9	56.5	0	23.80	7.91
05/07/10	0.00183	2.8	55.4	1	23.46	7.55
05/08/10	0.00000	2.9	54.9	0	23.29	7.36
05/09/10	0.00000	2.9	53.8	0	23.11	7.16
05/10/10	0.27064	2.4	51.7	188	22.94	6.99
05/11/10	0.15581	2.7	53.3	108	21.56	6.16
05/12/10	0.02256	2.1	53.5	16	22.46	6.84
05/13/10	0.13874	2.9	53.1	96	23.08	7.32
05/14/10	0.00000	2.9	53.4	0	22.77	6.96
05/15/10	0.00000	2.9	53.4	0	22.61	6.78

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SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
05/16/10	0.00042	2.8	52.0	0	22.54	6.66
05/17/10	0.11632	1.8	50.7	81	22.55	6.64
05/18/10	0.22106	1.9	53.4	154	21.38	5.98
05/19/10	0.23173	1.7	54.6	161	22.34	6.73
05/20/10	0.14807	1.5	53.3	103	23.10	7.37
05/21/10	0.00000	3.0	53.6	0	22.79	7.00
05/22/10	0.00000	3.0	53.5	0	22.62	6.79
05/23/10	0.00000	3.0	53.8	0	22.54	6.69
05/24/10	0.13977	1.3	52.4	97	22.50	6.63
05/25/10	0.05976	3.0	53.3	42	21.31	5.77
05/26/10	0.03685	3.4	56.6	26	22.15	6.51
05/27/10	0.00000	2.9	56.4	0	22.49	7.01
05/28/10	0.00409	2.9	54.8	3	22.19	6.67
05/29/10	0.00000	2.9	54.4	0	22.06	6.51
05/30/10	0.00055	2.9	55.3	0	21.95	6.38
05/31/10	0.00121	2.9	55.4	1	21.89	6.29
06/01/10	0.49521	2.8	54.5	344	20.87	5.61
06/02/10	0.22025	2.7	55.0	153	21.97	6.39
05/03/10	0.47369	2.6	56.4	329	22.75	7.12
06/04/10	0.06628	2.9	57.8	46	22.53	6.85
06/05/10	0.00181	2.8	56.5	1	22.39	6.68
06/06/10	0.00000			0		
06/07/10	0.00000			0		
06/08/10	0.27074		59.5	188	23.30	5.35
06/09/10	0.28372	3.1	60.1	197	22.34	6.92
06/10/10	0.00058	3.0	61.6	0	22.84	7.41
06/11/10	0.00043	0.0	62.1	0		6.84
06/12/10	0.00040	0.0	60.8	0		6.08
06/13/10	0.00000	3.0	63.2	0	22.46	6.92
06/14/10	0.38160	4.1	64.3	265	22.46	6.90
06/15/10	0.37788	4.1	66.3	262	22.38	6.80
06/16/10	0.00043	3.1	65.7	0	22.28	6.68
06/17/10	0.00159	3.0	63.6	1	22.18	6.54
06/18/10	0.00079	2.9	62.8	1	22.12	6.47
06/19/10	0.00087	2.9	62.7	1	22.12	6.46
06/20/10	0.00339	2.9	61.7	2	22.14	6.47
06/21/10	0.38709	3.8	62.0	269	22.21	6.54
06/22/10	0.32704	4.0	63.5	227	22.20	6.52
06/23/10	0.00000	3.1	63.6	0	22.23	6.53
06/24/10	0.00047	3.1	63.3	0	22.24	6.53
06/25/10	0.13850	3.7	63.3	96	22.23	6.52
06/26/10	0.00000	3.1	63.6	0	22.26	6.59
06/27/10	0.00000	0.0		0		
06/28/10	0.00000	0.0		0		
06/29/10	0.00000	0.0		0		
06/30/10	0.00000	0.0		0		

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SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
07/01/10	0.00000	0.0		0		
07/02/10	0.00000	0.0		0		
07/03/10	0.00000	0.0		0		
07/04/10	0.00000	0.0		0		
07/05/10	0.34705	0.8	61.1	241	22.26	6.54
07/06/10	0.06128	-0.7	60.0	43	21.14	5.98
07/07/10	0.18991	0.6	62.0	132	21.27	7.02
07/08/10	0.14650	0.9	61.5	102	21.61	7.42
07/09/10	0.15169	0.8	62.5	105	21.41	7.18
07/10/10	0.00000	0.9	63.0	0	21.33	7.06
07/11/10	0.00000	0.9	62.4	0	21.28	6.99
07/12/10	0.00000	0.8	62.4	0	21.25	6.94
07/13/10	0.00000	0.9	62.3	0	21.18	6.85
07/14/10	0.00000	0.9	62.2	0	21.12	6.77
07/15/10	0.00000	0.9	62.3	0	21.10	6.73
07/16/10	0.00000	0.9	61.9	0	21.02	6.64
07/17/10	0.00000	0.9	61.9	0	20.99	6.60
07/18/10	0.00000	0.9	61.8	0	20.99	6.59
07/19/10	0.24421	-1.9	62.8	170	20.99	6.57
07/20/10	0.08924	-0.2	64.0	62	20.90	6.47
07/21/10	0.00000	0.9	63.1	0	20.81	6.37
07/22/10	0.41409	0.2	63.3	288	20.76	6.31
07/23/10	0.11987	0.2	62.5	83	20.72	6.27
07/24/10	0.00000	0.9	62.8	0	20.75	6.29
07/25/10	0.00000	0.8	62.7	0	20.74	6.29
07/26/10	0.00000	0.8	62.8	0	20.76	6.29
07/27/10	0.00129	0.9	62.6	1	20.75	6.26
07/28/10	0.00000	0.9	62.9	0	20.75	6.27
07/29/10	0.00000	0.9	63.2	0	20.76	6.28
07/30/10	0.00000	0.9	63.2	0	20.82	6.32
07/31/10	0.00000	0.9	63.0	0	20.83	6.32
08/01/10	0.18300	3.2	62.8	127	20.79	6.29
08/02/10	0.00000	3.0	62.0	0	20.66	6.15
08/03/10	0.20743	1.6	63.7	144	20.03	5.65
08/04/10	0.29564	0.8	64.7	205	20.56	6.44
08/05/10	0.36732	0.1	65.5	255	20.85	6.72
08/06/10	0.09667	2.2	66.4	67	20.65	6.50
08/07/10	0.00000	3.0	64.6	0	20.52	6.33
08/08/10	0.00096	2.8	62.8	1	20.43	6.20
08/09/10	0.00073	3.0	63.1	1	20.50	6.25
08/10/10	0.00070	3.0	62.5	0	20.48	6.22
08/11/10	0.00159	3.0	63.4	1	20.53	6.26
08/12/10	0.00000	3.1	65.2	0	20.64	6.35
08/13/10	0.00000	3.2	66.0	0	20.70	6.41
08/14/10	0.00000	3.2	65.9	0	20.66	6.36
08/15/10	0.00000	3.0	65.0	0	20.63	6.31

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SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
08/16/10	0.27954	1.1	65.4	194	20.66	6.31
08/17/10	0.11885	1.1	64.3	83	19.92	5.93
08/18/10	0.26032	1.2	67.8	181	20.61	6.26
08/19/10	0.11094	2.4	69.3	77	20.62	6.24
08/20/10	0.00001	3.1	68.8	0	20.68	6.29
08/21/10	0.00667	3.0	67.1	5	20.63	6.23
08/22/10	0.00229	3.6	65.5	2	20.64	6.24
08/23/10	0.00000	4.6	66.2	0	20.69	6.28
08/24/10	0.00269	5.4	65.6	2	20.71	6.28
08/25/10	0.05733	3.6	67.6	40	20.71	6.22
08/26/10	0.42891	3.2	69.5	298	20.77	6.31
08/27/10	0.17659	3.2	70.7	123	20.83	6.41
08/28/10	0.00000	3.0	70.4	0	20.86	6.43
08/29/10	0.00000	3.0	69.8	0	20.81	6.38
08/30/10	0.00000	2.9	69.6	0	20.81	6.37
08/31/10	0.03775	2.1	69.0	26	20.59	5.97
09/01/10	0.19142	2.3	70.6	129	21.08	7.04
09/02/10	0.20699	2.7	70.9	140	21.25	7.57
09/03/10	0.00000	3.1	72.1	0	20.95	7.23
09/04/10	0.00000	3.1	72.7	0	20.82	7.07
09/05/10	0.00387	3.0	72.3	3	20.72	6.94
09/06/10	0.00346	4.7	69.2	3	20.55	
09/07/10	0.34333	5.4	69.2	230	20.43	
09/08/10	0.31999	3.6	71.7	218	20.68	
09/09/10	0.00154	3.0	72.6	1	20.77	6.62
09/10/10	0.00000	3.1	74.1	0	20.86	6.69
09/11/10	0.00000	3.1	74.8	0	20.87	6.70
09/12/10	0.00000	3.1	75.2	0	20.89	6.71
09/13/10	0.11888	2.6	75.1	80	20.89	6.69
09/14/10	0.00000	3.1	75.1	0	20.85	6.63
09/15/10	0.37486	5.7	76.0	259	20.80	6.57
09/16/10	0.37037	5.3	76.9	253	20.83	6.61
09/17/10	0.25397	4.3	76.2	172	20.84	6.61
09/18/10	0.00000	2.9	75.9	0	20.78	6.52
09/19/10	0.00000	3.0	75.5	0	20.75	6.49
09/20/10	0.14524	2.0	75.0	100	20.75	6.47
09/21/10	0.15328	2.2	75.5	158	20.65	6.36
09/22/10	0.00950	3.0	76.5	0	20.59	6.30
09/23/10	0.00000	0.0	76.2	0	20.50	6.20
09/24/10	0.00076	0.0	76.0	1	20.45	6.15
09/25/10	0.00044	0.0	76.9	0	20.53	6.22
09/26/10	0.00001	0.0	77.7	0	20.63	6.33
09/27/10	0.00052	0.0	77.1	0	20.66	6.36
09/28/10	0.16282	1.5	76.3	103	20.71	6.39
09/29/10	0.00126	0.0	75.1	0	20.92	6.61
09/30/10	0.22776	1.1	76.6	157	20.96	6.65

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SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
10/01/10	0.16877	1.9	76.7	117	20.88	6.57
10/02/10	0.00000	0.0	78.2	0	20.95	6.64
10/03/10	0.00000	0.0	77.8	0	20.86	6.54
10/04/10	0.00000	3.2	77.0	0	20.76	6.42
10/05/10	0.31392	1.2	74.5	218	20.44	5.89
10/06/10	0.28184	1.9	72.2	195	20.99	6.73
09/07/10	0.18041	2.2	67.7	125	21.07	7.10
10/08/10	0.00000	3.1	70.0	0	20.82	6.79
10/09/10	0.00000		70.0	0	20.66	6.61
10/10/10	0.00000		69.2	0	20.58	6.50
10/11/10	0.38628	2.1	65.6	268	20.51	6.41
10/12/10	0.03634	1.7	65.7	25	20.40	6.27
10/13/10	0.00000		68.5	0	20.36	6.22
10/14/10	0.00000		69.0	0	20.30	6.13
10/15/10	0.00000		69.3	0	20.21	6.04
10/16/10	0.00000		64.0	0	20.04	5.85
10/17/10	0.00000		59.6	0	20.01	5.79
10/18/10	0.00000		57.4	0	20.01	5.78
10/19/10	0.00000		57.5	0	20.02	5.79
10/20/10	0.00000		58.6	0	19.99	5.77
10/21/10	0.00000		59.7	0	19.92	5.68
10/22/10	0.00000		59.4	0	19.77	5.51
10/23/10	0.00000		60.1	0	19.64	5.38
10/24/10	0.00000		61.5	0	19.65	5.39
10/25/10	0.38014	2.3	59.5	264	19.70	5.43
10/26/10	0.46951	2.4	59.8	326	19.67	5.40
10/27/10	0.01408	1.0	62.2	9	19.55	5.27
10/28/10	0.00000	0.0	64.3	0	19.49	5.19
10/29/10	0.00000	-0.1	64.4	0	19.42	5.10
10/30/10	0.00000	-0.2	64.3	0	19.28	4.96
10/31/10	0.00000	-0.1	63.4	0	19.29	4.97
11/01/10	0.00000	-0.1	62.7	0	19.25	4.91
11/02/10	0.00000	-0.2	61.9	0	19.21	4.86
11/03/10	0.07771	1.4	64.0	54	19.78	5.79
11/04/10	0.00209	3.0	62.5	1	19.72	5.86
11/05/10	0.00000	0.2	59.0	0	19.72	5.42
11/06/10	0.00000			0		
11/07/10	0.00000			0		
11/08/10	0.00000			0		
11/09/10	0.00000			0		
11/10/10	0.00000			0		
11/11/10	0.00000	0.1	56.5	0	19.19	5.05
11/12/10	0.00000	-0.4	56.9	0	19.03	4.83
11/13/10	0.00000	-0.4	55.2	0	19.01	4.80
11/14/10	0.00000	-0.4	55.6	0	19.07	4.87
11/15/10	0.23909	-1.2	53.3	166	19.13	4.93

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SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
11/16/10	0.55692	-3.9	53.3	387	19.31	4.87
11/17/10	0.27010	-4.0	56.2	188	19.22	4.76
11/18/10	0.00000	-0.3	60.2	0	18.93	4.70
11/19/10	0.00000	-0.5	57.0	0	18.76	4.53
11/20/10	0.00000	-0.5	54.5	0	18.68	4.45
11/21/10	0.00000	-0.4	56.9	0	18.71	4.48
11/22/10	0.00000	-0.3	59.1	0	18.75	4.52
11/23/10	0.00000	-1.0	56.2	0	18.63	4.35
11/24/10	0.00000			0		
11/25/10	0.00000			0		
11/26/10	0.00000			0		
11/27/10	0.00000			0		
11/28/10	0.00000			0		
11/29/10	0.00000	-0.6	58.2	0	18.76	4.50
11/30/10	0.02172	-0.9	59.7	15	18.69	4.31
12/01/10	0.16519	-1.0	55.3	115	19.03	4.80
12/02/10	0.24952	-2.0	51.4	173	18.96	5.07
12/03/10	0.00000	-0.7	52.2	0	18.71	4.79
12/04/10	0.00000	-0.6	52.2	0	18.63	4.69
12/05/10	0.00000	-0.6	51.6	0	18.64	4.68
12/06/10	0.00000	-0.9	50.7	0	18.43	4.44
12/07/10	0.00000	-1.0	50.8	0	18.20	4.17
12/08/10	0.00000	-0.8	52.5	0	18.11	4.07
12/09/10	0.00000	-0.9	50.7	0	17.99	3.95
12/10/10	0.00000	-0.4	54.0	0	18.25	4.24
12/11/10	0.00000	-0.6	53.2	0	18.10	4.04
12/12/10	0.00000	-0.6	52.5	0	18.20	4.11
12/13/10	0.08375	-0.5	55.4	58	18.30	4.31
12/14/10	0.15102	-1.7	52.1	105	17.64	3.46
12/15/10	0.14161	-1.6	52.9	98	17.43	3.22
12/16/10	0.00098	-0.6	56.2	1	17.37	3.18
12/17/10	0.00000	-0.5	55.0	0	17.45	3.29
12/18/10	0.00000	-0.6	53.5	0	17.62	3.45
12/19/10	0.00000	-0.6	52.7	0	17.71	3.52
12/20/10	0.36470	-2.5	51.0	253	17.62	3.42
12/21/10	0.21305	-1.8	54.8	148	17.73	3.53
12/22/10	0.00000	-0.5	55.0	0	17.81	3.60
12/23/10	0.10563	-1.0	53.8	73	17.90	3.70
12/24/10	0.00000	-0.5	54.1	0	17.86	3.65
12/25/10	0.00000	-0.5	55.0	0	18.04	3.81
12/26/10	0.00000	-0.8	51.9	0	17.90	3.68
12/27/10	0.00025	-1.0	51.2	0	17.56	3.30
12/28/10	0.35283	-3.3	51.0	245	17.32	3.04
12/29/10	0.17152	-2.2	55.6	119	17.28	3.02
12/30/10	0.00000	-0.5	54.9	0	17.35	3.11
12/31/10	0.00000	-0.4	54.3	0	17.46	3.22

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SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
01/01/11	0.00000	-0.4	53.8	0	17.55	3.33
01/02/11	0.00000	-0.4	54.8	0	17.64	3.42
01/03/11	0.00000	0.0	53.8	0	17.55	3.28
01/04/11	0.00000	-1.6	52.7	0	17.59	3.35
01/05/11	0.00000	-0.7	58.3	0	17.75	3.49
01/06/11	0.00464	-4.4	55.5	3	17.85	3.40
01/07/11	0.19402	-2.1	52.7	135	17.96	3.26
01/08/11	0.00000	-0.7	54.6	0	18.09	3.42
01/09/11	0.00000	-0.7	53.3	0	17.99	3.32
01/10/11	0.24788	-1.9	54.9	172	18.14	3.57
01/11/11	0.00000	-0.5	63.4	0	18.12	3.97
01/12/11	0.03539	-2.0	55.0	24	17.76	3.12
01/13/11	0.21299	-2.5	52.4	146	18.06	3.74
01/14/11	0.00000	-0.7	55.3	0	18.22	4.58
01/15/11	0.00000	-0.5	54.9	0	18.09	4.50
01/16/11	0.00000	-0.5	54.6	0	18.11	4.55
01/17/11	0.00000	-0.5	54.3	0	18.17	4.65
01/18/11	0.00000	-0.5	53.9	0	18.19	4.71
01/19/11	0.00000	-0.4	55.3	0	18.25	4.78
01/20/11	0.00000	-0.4	54.8	0	18.25	4.80
01/21/11	0.00029	-0.3	55.2	0	18.38	4.93
01/22/11	0.00000	-0.7	52.3	0	18.28	4.83
01/23/11	0.00000	-0.8	52.0	0	18.08	4.60
01/24/11	0.16980	-1.7	52.8	117	18.20	4.73
01/25/11	0.00000	-0.4	61.4	0	18.42	4.96
01/26/11	0.35017	-3.9	55.2	240	18.34	4.87
01/27/11	0.36279	-3.5	52.5	252	18.38	4.91
01/28/11	0.00000	-0.8	52.9	0	18.43	4.95
01/29/11	0.00000	-0.7	53.8	0	18.47	4.99
01/30/11	0.00000	-0.7	53.2	0	18.52	5.05
01/31/11	0.00000	-0.6	53.2	0	18.64	5.17
02/01/11	0.00000	-0.5	53.5	0	18.75	5.28
02/02/11	0.15689	-1.6	53.6	109	19.00	5.44
02/03/11	0.00000	-0.3	59.6	0	19.05	5.62
02/04/11	0.00000	-0.2	63.5	0	19.01	5.56
02/05/11	0.00000	-0.3	65.1	0	18.90	5.56
02/06/11	0.00000	-0.3	66.1	0	18.93	5.47
02/07/11	0.00000	-0.3	66.8	0	18.84	5.35
02/08/11	0.00000			0		
02/09/11	0.00000	-0.4	55.8	0	18.72	5.20
02/10/11	0.00000	-0.4	56.9	0	19.10	5.38
02/11/11	0.00000	-0.7	51.1	0	18.71	5.18
02/12/11	0.00000	-0.7	51.3	0	18.60	5.07
02/13/11	0.00000	-0.6	52.7	0	18.64	5.10
02/14/11	0.00000	-0.5	52.9	0	18.74	5.20
02/15/11	0.00000	-0.5	52.8	0	18.74	5.19

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SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
02/16/11	0.21804	-1.9	54.3	151	18.79	5.26
02/17/11	0.05260	-0.7	60.0	37	18.76	5.22
02/18/11	0.17363	-1.4	56.9	121	18.75	5.21
02/19/11	0.00000	-0.3	59.3	0	18.79	5.25
02/20/11	0.00000	-0.4	57.5	0	18.76	5.20
02/21/11	0.07061	-0.8	55.4	49	18.85	5.29
02/22/11	0.00000	-0.3	56.2	0	18.83	5.28
02/23/11	0.00000	-0.3	57.8	0	18.77	5.22
02/24/11	0.00000	-0.3	59.0	0	18.90	5.18
02/25/11	0.00000	-0.3	60.1	0	18.60	5.10
02/26/11	0.00000	-0.4	59.5	0	18.60	5.00
02/27/11	0.00000	-0.3	59.0	0	18.60	5.00
02/28/11	0.00000	-0.3	58.7	0	18.70	5.10
03/01/11	0.00061	2.7	52.8	0	26.03	9.41
03/02/11	0.00000	-0.4	51.5	0	24.75	8.97
03/03/11	0.23944			166		
03/04/11	0.52885			367		
03/05/11	0.25212			175		
03/06/11	0.00000			0		
03/07/11	0.00000			0		
03/08/11	0.00000			0		
03/09/11	0.00000			0		
03/10/11	0.07126			49		
03/11/11	0.20427			142		
03/12/11	0.00000			0		
03/13/11	0.00000			0		
03/14/11	0.00000			0		
03/15/11	0.01322	6.1	56.9	9	26.62	9.96
03/16/11	0.20476	1.9	54.6	142	24.72	10.35
03/17/11	0.31554	0.1	54.3	219	26.10	10.83
03/18/11	0.24895	0.8	53.7	173	26.86	10.41
03/19/11	0.00001	1.3	53.6	0	26.63	10.13
03/20/11	0.36292	1.2	54.1	252	26.59	10.06
03/21/11	0.25283	1.5	56.9	176	26.67	10.11
03/22/11	0.01677	2.6	58.6	12	26.62	10.03
03/23/11	0.05064	3.0	61.1	35	25.18	9.29
03/24/11	0.34449	0.3	55.9	239	26.38	10.18
03/25/11	0.10317	1.8	56.4	72	27.17	10.79
03/26/11	0.00031	3.1	60.3	0	27.11	10.67
03/27/11	0.00000	3.0	59.1	0	26.86	10.38
03/28/11	0.00756	2.8	59.4	5	26.87	10.36
03/29/11	0.00000	1.8	56.5	0		
03/30/11	0.00000	5.6	56.4	0		
03/31/11	0.23683	2.9	56.1	164		

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SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
04/01/11	0.19142	2.30	70.65	129.3	21.08	7.04
04/02/11	0.20699	2.67	70.89	139.9	21.25	7.57
04/03/11	0.00000	3.06	72.12	0.0	20.95	7.23
04/04/11	0.00000	3.11	72.73	0.0	20.82	7.07
04/05/11	0.00387	3.00	72.30	3.0	20.72	6.94
04/06/11	0.00346	4.73	69.18	3.0	20.55	
04/07/11	0.34333	5.38	69.15	229.7	20.43	
04/08/11	0.31999	3.56	71.69	217.7	20.68	
04/09/11	0.00154	3.01	72.62	1.1	20.77	6.62
04/10/11	0.00000	3.07	74.06	0.0	20.86	6.69
04/11/11	0.00000	3.08	74.75	0.0	20.87	6.70
04/12/11	0.00000	3.10	75.19	0.0	20.89	6.71
04/13/11	0.11888	2.65	75.14	79.6	20.89	6.69
04/14/11	0.00000	3.06	75.09	0.0	20.85	6.63
04/15/11	0.37486	5.73	76.05	258.6	20.80	6.57
04/16/11	0.37037	5.27	76.92	252.5	20.83	6.61
04/17/11	0.25397	4.33	76.23	171.9	20.84	6.61
04/18/11	0.00000	2.94	75.90	0.0	20.78	6.52
04/19/11	0.00000	2.96	75.50	0.0	20.75	6.49
04/20/11	0.14524	2.01	75.01	100.0	20.75	6.47
04/21/11	0.15328	2.25	75.54	157.5	20.65	6.36
04/22/11	0.00950	2.99	76.48	0.0	20.59	6.30
04/23/11	0.00000		76.23	0.0	20.50	6.20
04/24/11	0.00076		76.00	0.5	20.45	6.15
04/25/11	0.00044		76.88	0.2	20.53	6.22
04/26/11	0.00001		77.66	0.0	20.63	6.33
04/27/11	0.00052		77.09	0.2	20.66	6.36
04/28/11	0.16282	1.50	76.27	102.9	20.71	6.39
04/29/11	0.00126		75.06	0.4	20.92	6.61
04/30/11	0.22776	1.10	76.60	156.9	20.96	6.65
05/01/11	0.00000	2.65	67.55	0.0	18.13	4.74
05/02/11	0.00000	2.23	68.44	0.0	18.10	4.70
05/03/11	0.03519	2.37	68.82	24.4	18.14	3.99
05/04/11	0.16965	3.34	68.18	117.8	18.64	4.90
04/05/11	0.45681	3.24	65.70	317.2	18.35	5.27
05/06/11	0.34012	4.26	65.67	236.2	18.10	4.98
05/07/11	0.00000	2.21	68.71	0.0	17.97	4.82
05/08/11	0.00000	3.57	70.68	0.0	17.94	4.76
05/09/11	0.17171	2.74	69.34	119.2	17.88	4.69
05/10/11	0.00000	3.50	70.31	0.0	17.77	4.55
05/11/11	0.00000	2.76	71.90	0.0	17.70	4.46
05/12/11	0.00000	2.99	72.49	0.0	17.60	4.37
05/13/11	0.00000	2.47	72.89	0.0	17.56	4.29
05/14/11	0.00000	2.47	72.05	0.0	17.52	4.23
05/15/11	0.00097	1.11	71.20	0.7	17.57	4.27

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SUMMARY OF INJECTION WELL DATA
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

Sample Date	Daily injected volume	Average Well Head Pressure	Average Annular	Average Flow Rate	Average UMZ Water Level Measurements	Average LMZ Water Level Measurements
(m/d/y)	MG	(PSI)	(PSI)	(GPM)	(FT NAVD 1988)	(FT NAVD 1988)
05/16/11	0.12605	2.99	68.39	87.5	17.61	4.30
05/17/11	0.00000	3.24	67.50	0.0	17.65	4.33
05/18/11	0.01898	3.37	65.94	13.2	17.53	3.80
05/19/11	0.33701	3.85	64.48	234.0	17.89	3.37
05/20/11	0.42162	3.37	63.43	292.8	17.98	3.35
05/21/11	0.40648	3.67	66.58	282.3	18.11	3.35
05/22/11	0.19191	4.23	69.80	133.3	18.15	3.29
05/23/11	0.05901	3.40	71.51	41.0	18.29	4.15
05/24/11	0.00000	1.16	71.49	0.0	18.10	4.86
05/25/11	0.00000	0.21	71.29	0.0	17.82	4.55
05/26/11	0.00000	0.04	71.37	0.0	17.63	4.33
05/27/11	0.00000	(0.11)	71.72	0.0	17.51	4.18
05/28/11	0.00001	(0.87)	72.13	0.0	17.42	4.08
05/29/11	0.00006	(0.83)	72.85	0.0	17.34	3.98
05/30/11	0.00371	(0.31)	73.04	2.6	17.26	3.88
05/31/11	0.03961	2.65	73.23	27.5	17.34	3.01
min	0.00000	-4.4	16.5	0.0	17.3	3.0
max	0.60873	27.0	78.2	422.7	27.2	10.8
avg	0.08095	1.7	60.1	57.6	21.2	6.5

Water elevation data includes measurements during monthly well development for sample collection.

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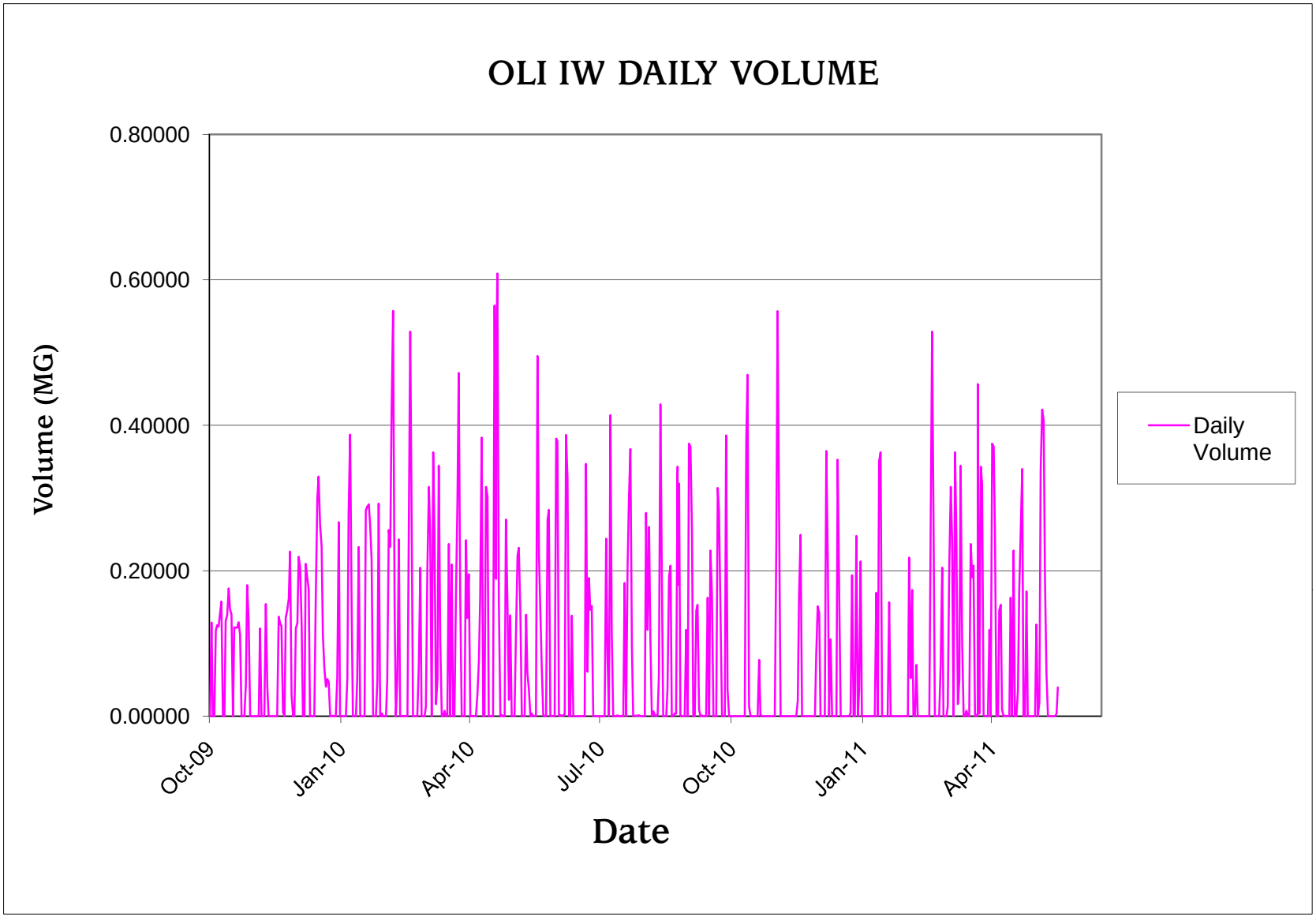
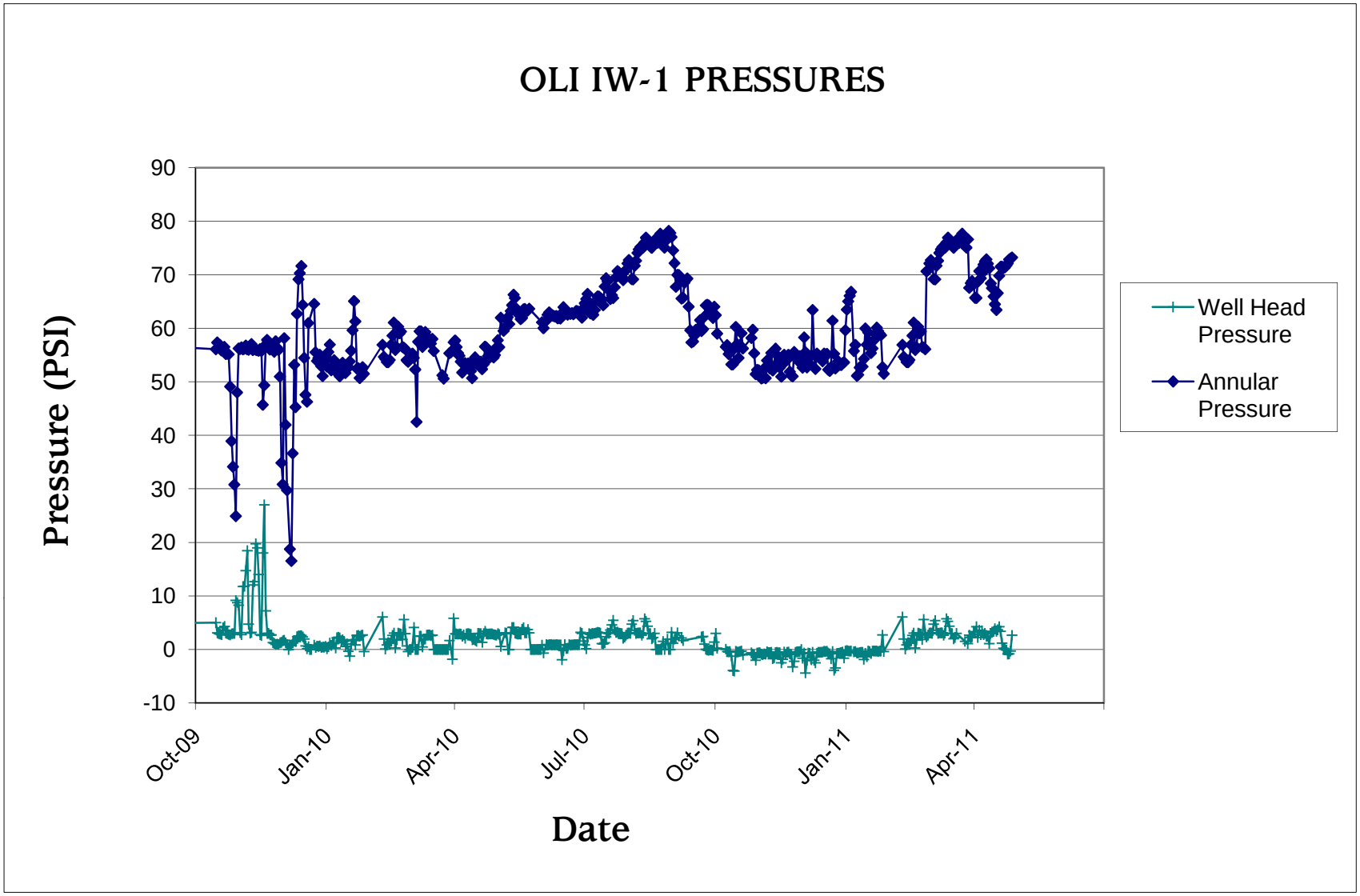
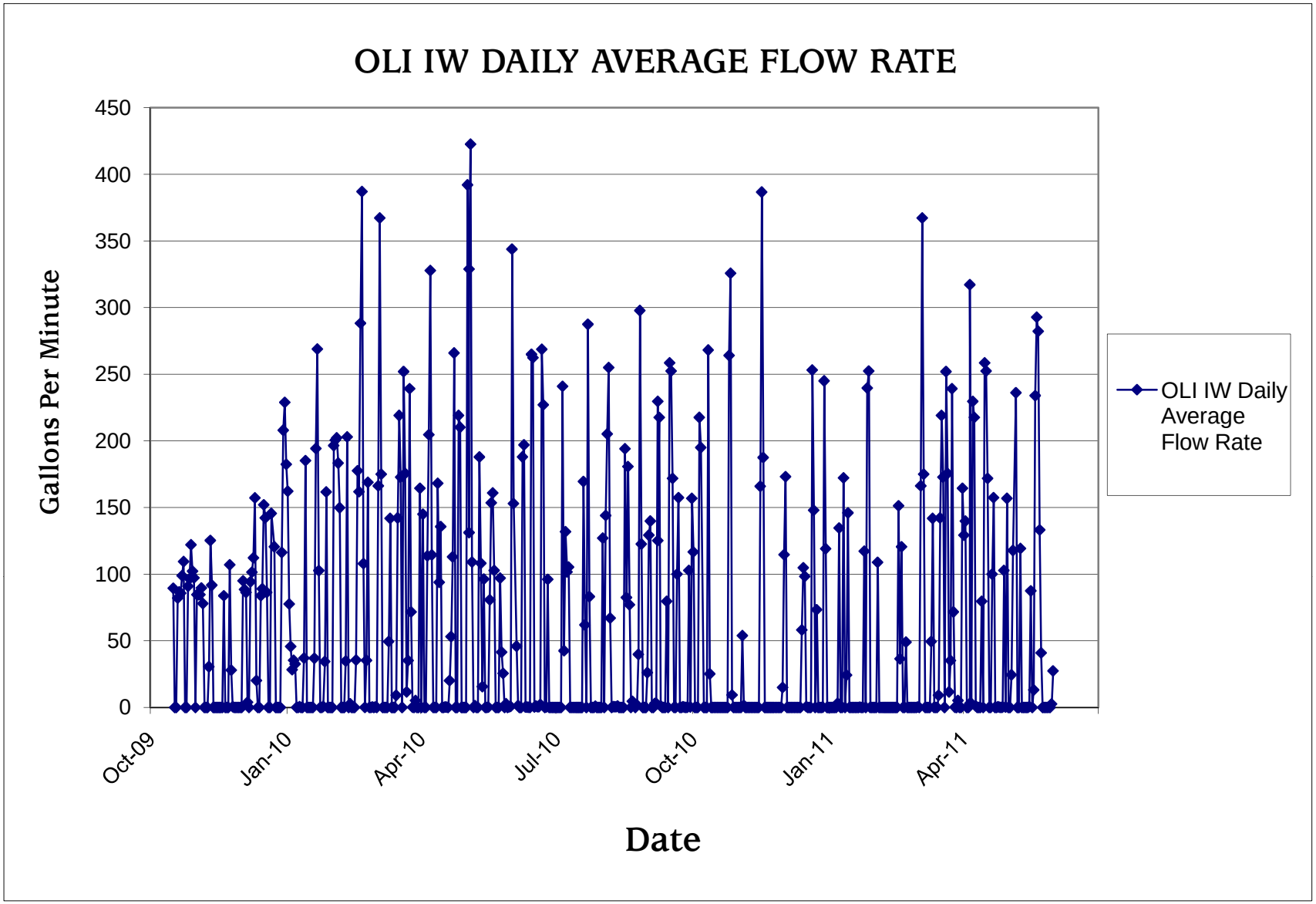
INJECTION WELL IW-1 DATA SUMMARY GRAPHS
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA



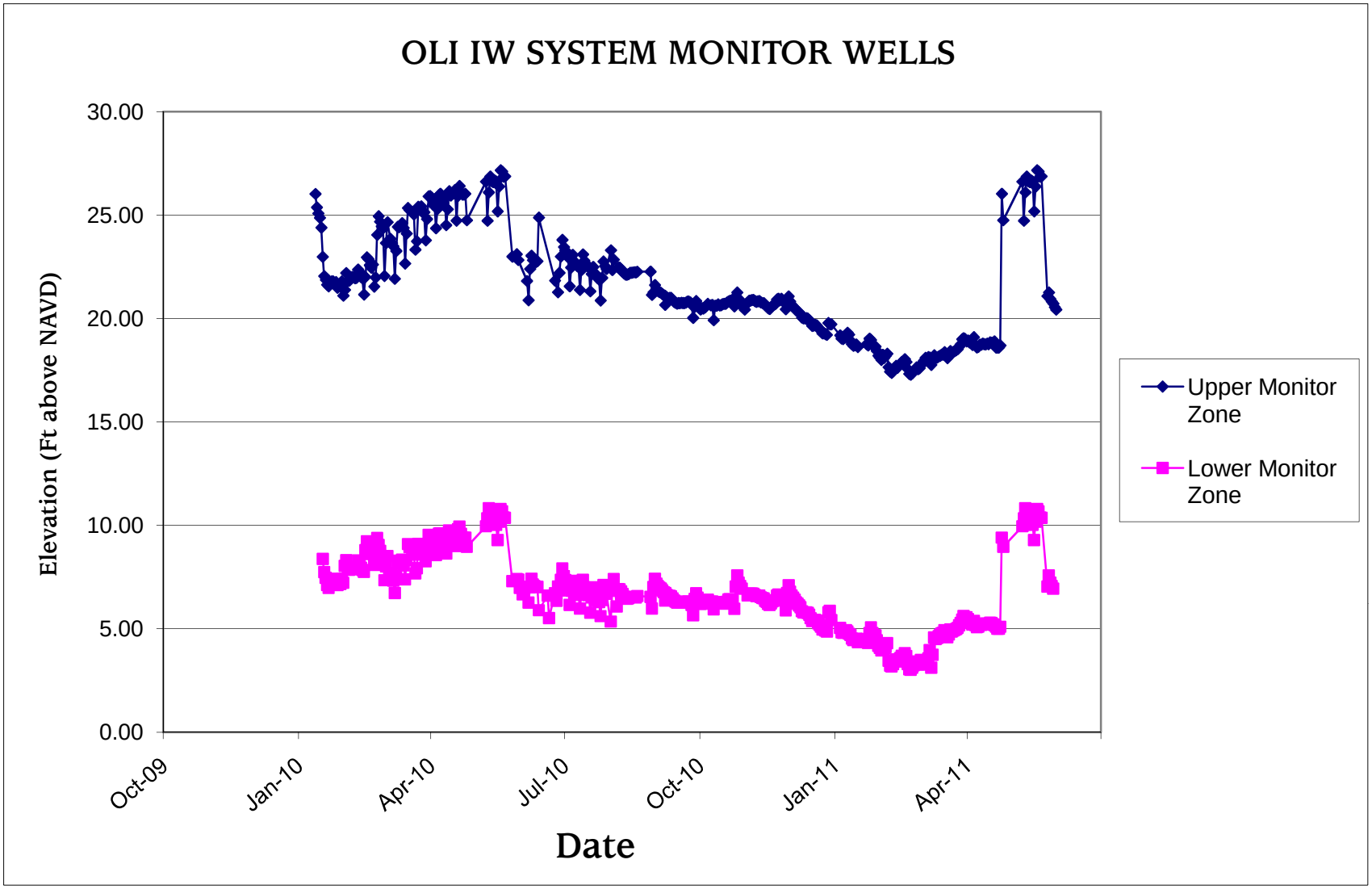
INJECTION WELL IW-1 DATA SUMMARY GRAPHS
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA



INJECTION WELL IW-1 DATA SUMMARY GRAPHS
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

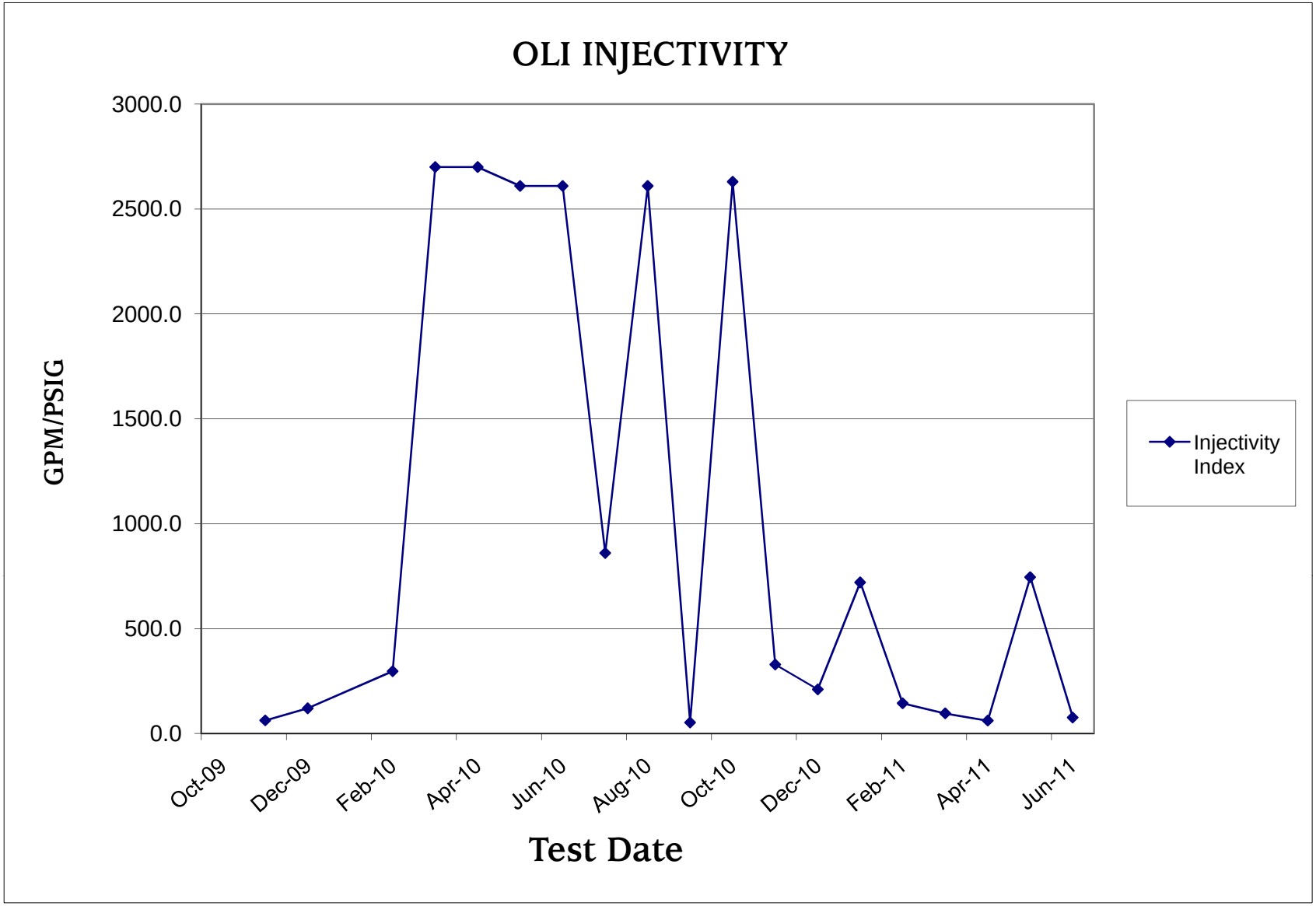


INJECTION WELL IW-1 DATA SUMMARY GRAPHS
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA

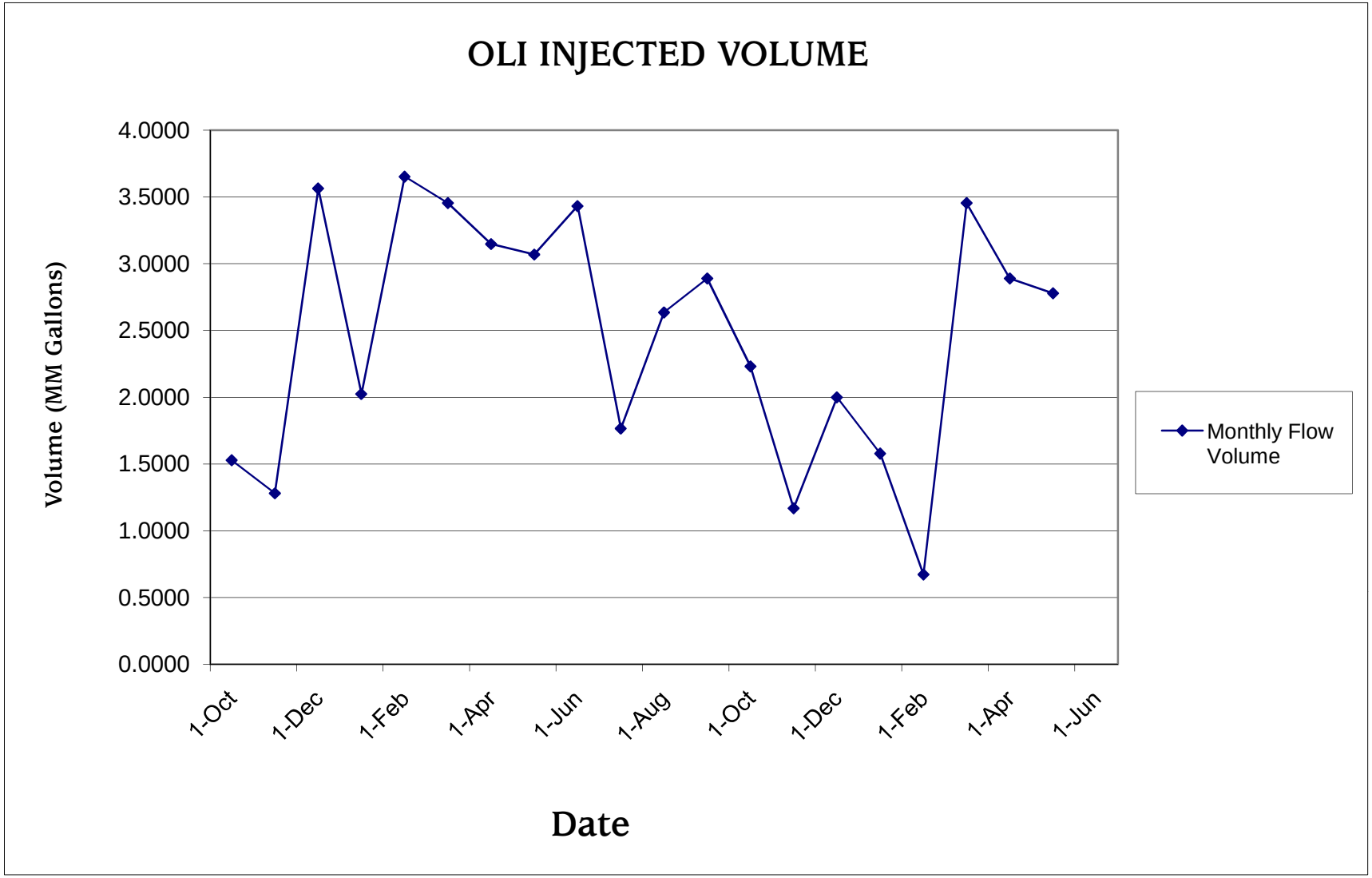


Potentiometric surface elevation data includes measurements during monthly well development for sample collection

INJECTION WELL IW-1 DATA SUMMARY GRAPHS
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA



INJECTION WELL IW-1 DATA SUMMARY GRAPHS
OKEECHOBEE LANDFILL, INC., OKEECHOBEE, FLORIDA



TestAmerica TDS Letter *(6/28/11)*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

June 28, 2011

Mr. Jim McGrath
Waste Management
1530 U.S. Highway 1
Rockledge, FL 32955

Re: Total Dissolved Solids (TDS) Historicals
Okeechobee Injection Wells

Dear Mr. McGrath:

This letter provides a summary of TestAmerica Savannah's investigation into samples analyzed for Total Dissolved Solids (TDS) via SM2540C in support of Waste Management's Okeechobee Injection Wells Project. The results reported for TDS since May 2010 were questioned as they were not consistent with historical values reported for this site. These more recent values indicate a negative bias, and the laboratory was requested to re-evaluate this procedure.

An investigation was initiated to determine the source of this trend, and the Department Manager re-evaluated the data associated with these sampling events. As indicated in the original Waste Management inquiry, a personnel change was made in May 2010, which coincided with the start of the low biased trend and indicates analyst technique needs to be closely evaluated. Review of the data indicates these samples routinely have high conductivity, and as such are typically performed using lesser volumes (i.e., 5mL) to provide a final TDS residue of less than 200mg. It was determined that using a reduced volume of sample resulted in lower final values as there is an insufficient volume to thoroughly rinse the filter.

As a result of this investigation, a change in procedure has been initiated. Going forward, when sample conductivities indicate a reduced sample volume must be used, an additional volume of reagent water (~20mL) will be incorporated and filtered with the sample. Tests have been performed using this new technique on samples from this site, and the results obtained were higher (~30000mg/L) and more in line with those results seen historically. This change in procedure will be incorporated into the laboratory's SOP, and re-training of all analysts will be performed to ensure consistent implementation and technique.

We are confident that the corrective action outlined above will improve our performance for this method. If you have any questions regarding this matter or have any further items you would like to discuss with the laboratory, please feel free to contact me at (912) 354-7858 ext. 3055 or via email at andrea.teal@testamericainc.com.

Sincerely,

Andrea Teal
Quality Assurance Manager
TestAmerica Savannah

Annual DWS Analytical Results

HBEL, Inc.
2340 SW Poma Drive, Palm City FL 34990
Phone: (772) 465-8584 Fax: (772) 467-1584

Date issued: May 5, 2011

To: Jim McGrath
L.S. Sims & Associates
1530 US 1
Rockledge, FL 32955

Client: L.S. Sims & Associates
Workorder ID: Okeechobee Landfill Injectate **[2042955]**
Received: 4/13/11 14:15

Dear Jim McGrath;

Analytical results presented in this report have been reviewed for compliance with the HBEL, Inc. Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:
E96080, E83509

Questions regarding this report should be directed to the Report Signatory at (772) 465-8584 referencing the HBEL Workorder ID [Number].

Respectfully submitted,

Eric Charest
HBEL, Inc. Laboratory Manager

HBEL, Inc.
2340 SW Poma Drive, Palm City, FL 34990
Phone: (772) 465-8584 Fax: (772) 467-1584

Quality Control Summary

Client: L.S. Sims & Associates
Workorder ID: Okeechobee Landfill Injectate **[2042955]**
Received: 4/13/11 14:15

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

Method Narratives (If Applicable)

HBEL Sample Number	Sample ID	Analytical Method	Description

Quality Control Summary

Method	HBEL Batch	Analyte	Analytical Issue
EPA 505			
	PEST5730		
2042955001		Decachlorobiphenyl	Surrogate - Outside acceptance Limits.
Thallium-Furnace-			
	META10569		
2042955001		Thallium	Accuracy - Outside acceptance limits in the MS.
2042955001		Thallium	Accuracy - Outside acceptance limits in the MSD.

HBEL, Inc.

2340 SW Poma Drive, Palm City FL 34990
Phone: (772) 465-8584 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2042955]

Client: L.S. Sims & Associates *Workorder ID:* Okeechobee Landfill Injectate

Laboratory ID: **2042955001**
Sample ID: **Composite**

Sampled: 04/13/11 9:40 *Received:* 04/13/11 14:15
Matrix: Water
Results reported on Wet Weight Basis

Parameter	Qualifier	Result [1]	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Gross Alpha		**12 +/- 5.2**	pCi/L		EPA 00-02	SAL1262		04/27/11 10:28	SAL	E84129
pH	Q	**7.58**	SU	0.200	EPA 150.1	WCGE33967		04/17/11 14:30	GG	E96080
Aluminum		**16**	mg/L	0.011	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Antimony		**0.039**	mg/L	0.0035	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Arsenic		**0.36**	mg/L	0.0026	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Barium		**0.098**	mg/L	0.0010	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Beryllium		**0.00040**	mg/L	0.00010	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Cadmium		**0.00038**	mg/L	0.00020	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Chromium		**0.32**	mg/L	0.00060	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Copper		**0.0071**	mg/L	0.0010	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Iron		**2.0**	mg/L	0.0050	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Lead		**0.0038**	mg/L	0.0029	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Manganese		**0.35**	mg/L	0.0020	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Nickel		**0.15**	mg/L	0.0016	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Selenium		**0.018**	mg/L	0.0043	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Silver		**0.00067**	mg/L	0.00050	EPA 200.7	META10557	04/25/11 9:47	04/27/11 16:42	SP	E96080
Sodium		**3100**	mg/L	2.5	EPA 200.7	META10557	04/25/11 9:47	04/28/11 14:40	SP	E96080
Zinc		**0.70**	mg/L	0.0050	EPA 200.7	META10557	04/25/11 9:47	04/26/11 11:14	SP	E96080
Mercury		**0.00024 U**	mg/L	0.00024	EPA 245.1	META10546	04/14/11 12:47	04/15/11 11:46	SP	E96080
Thallium		**0.0012 U**	mg/L	0.0012	EPA 279.2	META10569	04/26/11 15:07	04/29/11 11:17	SP	E96080
Chloride		**4700**	mg/L	250	EPA 300.0	IC8762		04/14/11 3:29	JL	E96080
Sulfate		**180**	mg/L	70	EPA 300.0	IC8762		04/14/11 3:29	JL	E96080
Nitrate as N		**0.31**	mg/L	0.0075	EPA 353.2	CALC5894		04/14/11 13:45	DH	E96080
Nitrate/Nitrite as N		**0.48**	mg/L	0.075	EPA 353.2	AUTO19247		04/14/11 12:20	JL	E96080
Nitrite as N		**0.17**	mg/L	0.080	EPA 353.2	AUTO19248		04/13/11 18:01	JL	E96080
1,2-Dibromo-3-chloropropane		**0.0035 U**	ug/L	0.0035	EPA 504.1	PEST5728	04/20/11 11:00	04/20/11 23:34	JL	E96080
1,2-Dibromoethane		**0.0046 U**	ug/L	0.0046	EPA 504.1	PEST5728	04/20/11 11:00	04/20/11 23:34	JL	E96080
Chlordane		**0.13 U**	ug/L	0.13	EPA 505	PEST5730	04/19/11 12:00	04/19/11 23:03	JL	E96080
Endrin		**0.099 U**	ug/L	0.099	EPA 505	PEST5730	04/19/11 12:00	04/19/11 23:03	JL	E96080
gamma-BHC (Lindane)		**0.019 U**	ug/L	0.019	EPA 505	PEST5730	04/19/11 12:00	04/19/11 23:03	JL	E96080
Heptachlor		**0.035 U**	ug/L	0.035	EPA 505	PEST5730	04/19/11 12:00	04/19/11 23:03	JL	E96080
Heptachlor epoxide		**0.027 U**	ug/L	0.027	EPA 505	PEST5730	04/19/11 12:00	04/19/11 23:03	JL	E96080
Methoxychlor		**0.043 U**	ug/L	0.043	EPA 505	PEST5730	04/19/11 12:00	04/19/11 23:03	JL	E96080
PCB		**0.13 U**	ug/L	0.13	EPA 505	PEST5730	04/19/11 12:00	04/19/11 23:03	JL	E96080
Toxaphene		**0.59 U**	ug/L	0.59	EPA 505	PEST5730	04/19/11 12:00	04/19/11 23:03	JL	E96080
2,4,5-TP		**0.19 U**	ug/L	0.19	EPA 515.1	PEST5731	04/18/11 8:00	04/21/11 23:47	JL	E96080
2,4-D		**0.22 U**	ug/L	0.22	EPA 515.1	PEST5731	04/18/11 8:00	04/21/11 23:47	JL	E96080
Dalapon		**2.3 U**	ug/L	2.3	EPA 515.1	PEST5731	04/18/11 8:00	04/21/11 23:47	JL	E96080
Dinoseb		**0.23 U**	ug/L	0.23	EPA 515.1	PEST5731	04/18/11 8:00	04/21/11 23:47	JL	E96080
Pentachlorophenol		**0.39 U**	ug/L	0.39	EPA 515.1	PEST5731	04/18/11 8:00	04/21/11 23:47	JL	E96080

HBEL, Inc.

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CERTIFICATE OF ANALYSIS

[2042955]

Client: L.S. Sims & Associates *Workorder ID:* Okeechobee Landfill Injectate

Parameter	Qualifier	Result [1]	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Picloram		**0.23 U**	ug/L	0.23	EPA 515.1	PEST5731	04/18/11 8:00	04/21/11 23:47	JL	E96080
Alachlor		**0.60 U**	ug/L	0.60	EPA 525.2	SVOC2983	04/18/11 5:00	05/3/11 14:18	WR	E96080
Atrazine		**0.47 U**	ug/L	0.47	EPA 525.2	SVOC2983	04/18/11 5:00	05/3/11 14:18	WR	E96080
Benzo(a)pyrene		**0.069 U**	ug/L	0.069	EPA 525.2	SVOC2983	04/18/11 5:00	05/3/11 14:18	WR	E96080
bis(2-ethylhexyl)phthalate		**0.83 U**	ug/L	0.83	EPA 525.2	SVOC2983	04/18/11 5:00	05/3/11 14:18	WR	E96080
Di(2-ethylhexyl)adipate		**0.67 U**	ug/L	0.67	EPA 525.2	SVOC2983	04/18/11 5:00	05/3/11 14:18	WR	E96080
Hexachlorobenzene		**0.30 U**	ug/L	0.30	EPA 525.2	SVOC2983	04/18/11 5:00	05/3/11 14:18	WR	E96080
Hexachlorocyclopentadiene		**0.23 U**	ug/L	0.23	EPA 525.2	SVOC2983	04/18/11 5:00	05/3/11 14:18	WR	E96080
Simazine		**0.62 U**	ug/L	0.62	EPA 525.2	SVOC2983	04/18/11 5:00	05/3/11 14:18	WR	E96080
3-Hydroxycarbofuran		**0.44 U**	ug/L	0.44	EPA 531.1	HPLC2790		04/25/11 22:07	JJM	E96080
Aldicarb		**0.54 U**	ug/L	0.54	EPA 531.1	HPLC2790		04/25/11 22:07	JJM	E96080
Aldicarb sulfone		**0.45 U**	ug/L	0.45	EPA 531.1	HPLC2790		04/25/11 22:07	JJM	E96080
Aldicarb sulfoxide		**0.36 U**	ug/L	0.36	EPA 531.1	HPLC2790		04/25/11 22:07	JJM	E96080
Carbaryl		**0.53 U**	ug/L	0.53	EPA 531.1	HPLC2790		04/25/11 22:07	JJM	E96080
Carbofuran		**0.41 U**	ug/L	0.41	EPA 531.1	HPLC2790		04/25/11 22:07	JJM	E96080
Methomyl		**0.42 U**	ug/L	0.42	EPA 531.1	HPLC2790		04/25/11 22:07	JJM	E96080
Oxamyl		**0.13 U**	ug/L	0.13	EPA 531.1	HPLC2790		04/25/11 22:07	JJM	E96080
Glyphosate		**13 U**	ug/L	13	EPA 547	HPLC2789		04/21/11 10:54	JL	E96080
Endothall		**2.8 U**	ug/L	2.8	EPA 548.1	SVOC2982	04/18/11 9:00	04/28/11 19:25	WR	E96080
Diquat		**1.9 U**	ug/L	1.9	EPA 549.2	HPLC2791	04/19/11 12:00	04/25/11 13:14	JJM	E96080
Radium 226		**1.4 +/- 0.19**	pCi/L		EPA 903.1	SAL1262		04/29/11 15:16	SAL	E84129
Radium 228		**0.5 U +/- 0.3**	pCi/L		RA-05	SAL1262		04/28/11 16:59	SAL	E84129
Color		**8800**	CU	1.8	SM2120 B	WCGE33946		04/13/11 13:10	DWC	E96080
Total Dissolved Solids		**14000**	mg/L	403	SM2540 C	WCGE33947		04/14/11 8:10	DWC	E96080
Fluoride		**0.099**	mg/L	0.024	SM4500F C	WCGE34000		04/26/11 11:00	GG	E96080
Surfactants as LAS, Mol.wt.340		**9.3**	mg/L	0.080	SM5540 C	SAL1258		04/14/11 16:15	SAL	E84129

HBEL, Inc.
2340 SW Poma Drive, Palm City FL 34990
Phone: (772) 465-8584 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2042955]

Client: L.S. Sims & Associates *Workorder ID:* Okeechobee Landfill Injectate

Laboratory ID: **2042955002** *Sampled:* 04/13/11 9:40 *Received:* 04/13/11 14:15
Sample ID: **Grab** *Matrix:* Water Results reported on Wet Weight Basis

Parameter	Qualifier	Result [1]	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
1,1,1,2-Tetrachloroethane		**0.18 U**	ug/L	0.18	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,1,1-Trichloroethane		**0.31 U**	ug/L	0.31	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,1,2,2-Tetrachloroethane		**0.13 U**	ug/L	0.13	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,1,2-Trichloroethane		**0.22 U**	ug/L	0.22	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,1-Dichloroethane		**0.35 U**	ug/L	0.35	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,1-Dichloroethene		**0.35 U**	ug/L	0.35	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,1-Dichloropropene		**0.26 U**	ug/L	0.26	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,2,3-Trichloropropane		**0.26 U**	ug/L	0.26	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,2,4-Trichlorobenzene		**0.12 U**	ug/L	0.12	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,2-Dichlorobenzene		**0.15 U**	ug/L	0.15	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,2-Dichloroethane		**1.2**	ug/L	0.21	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,2-Dichloropropane		**0.24 U**	ug/L	0.24	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,3-Dichlorobenzene		**0.17 U**	ug/L	0.17	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,3-Dichloropropane		**0.34 U**	ug/L	0.34	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,3-Dichloropropene		**0.32 U**	ug/L	0.32	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
1,4-Dichlorobenzene		**4.7**	ug/L	0.18	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
2,2-Dichloropropane		**0.20 U**	ug/L	0.20	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
2-Chlorotoluene		**0.20 U**	ug/L	0.20	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
4-Chlorotoluene		**0.20 U**	ug/L	0.20	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Benzene		**6.4**	ug/L	0.15	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Bromobenzene		**0.22 U**	ug/L	0.22	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Bromodichloromethane		**0.26 U**	ug/L	0.26	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Bromoform		**0.15 U**	ug/L	0.15	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Bromomethane		**0.34 U**	ug/L	0.34	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Carbon tetrachloride		**0.36 U**	ug/L	0.36	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Chlorobenzene		**0.17 U**	ug/L	0.17	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Chloroethane		**0.36 U**	ug/L	0.36	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Chloroform		**0.24 U**	ug/L	0.24	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Chloromethane		**0.23 U**	ug/L	0.23	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
cis-1,2-Dichloroethene		**0.25 U**	ug/L	0.25	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Dibromochloromethane		**0.15 U**	ug/L	0.15	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Dibromomethane		**0.20 U**	ug/L	0.20	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Dichlorodifluoromethane		**0.28 U**	ug/L	0.28	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Ethylbenzene		**16**	ug/L	0.17	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Methylene chloride		**0.43 U**	ug/L	0.43	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Methyl-tert-butyl-ether		**0.13 U**	ug/L	0.13	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Styrene		**0.17 U**	ug/L	0.17	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Tetrachloroethene		**0.26 U**	ug/L	0.26	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Toluene		**35**	ug/L	0.26	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Total THMs		**0.15 U**	ug/L	0.15	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Total Xylenes		**36**	ug/L	0.41	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080

HBEL, Inc.
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CERTIFICATE OF ANALYSIS

[2042955]

Client: L.S. Sims & Associates *Workorder ID:* Okeechobee Landfill Injectate

Parameter	Qualifier	Result [1]	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
trans-1,2-Dichloroethene		**0.30 U**	ug/L	0.30	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Trichloroethene		**0.17 U**	ug/L	0.17	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Trichlorofluoromethane		**0.40 U**	ug/L	0.40	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Vinyl chloride		**0.25 U**	ug/L	0.25	EPA 524.2	VOC3418		04/25/11 0:58	WR	E96080
Odor		**240000**	T.O.N.	1.0	SM2150 B	WCGE33950		04/13/11 14:45	DWC	E96080
Cyanide		**0.047**	mg/L	0.023	SM4500CN E	WCGE33965	04/15/11 9:30	04/15/11 16:13	GG	E96080
Background on Total Coli	Z	**0.1 MLS FILTERED**	CFU/100mL	1000	SM9222 B	MICR15221		04/13/11 15:28	GG	E96080

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CERTIFICATE OF ANALYSIS

[2042955]

Client: L.S. Sims & Associates *Workorder ID:* Okeechobee Landfill Injectate

Laboratory ID: **2042955003**
Sample ID: **Trip Blank**

Sampled: 04/13/11 9:40 *Received:* 04/13/11 14:15
Matrix: Water Results reported on Wet Weight Basis

Parameter	Qualifier	Result [1]	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
1,1,1,2-Tetrachloroethane		**0.18 U**	ug/L	0.18	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,1,1-Trichloroethane		**0.31 U**	ug/L	0.31	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,1,2,2-Tetrachloroethane		**0.13 U**	ug/L	0.13	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,1,2-Trichloroethane		**0.22 U**	ug/L	0.22	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,1-Dichloroethane		**0.35 U**	ug/L	0.35	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,1-Dichloroethene		**0.35 U**	ug/L	0.35	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,1-Dichloropropene		**0.26 U**	ug/L	0.26	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,2,3-Trichloropropane		**0.26 U**	ug/L	0.26	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,2,4-Trichlorobenzene		**0.12 U**	ug/L	0.12	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,2-Dichlorobenzene		**0.15 U**	ug/L	0.15	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,2-Dichloroethane		**0.21 U**	ug/L	0.21	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,2-Dichloropropane		**0.24 U**	ug/L	0.24	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,3-Dichlorobenzene		**0.17 U**	ug/L	0.17	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,3-Dichloropropane		**0.34 U**	ug/L	0.34	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,3-Dichloropropene		**0.32 U**	ug/L	0.32	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
1,4-Dichlorobenzene		**0.18 U**	ug/L	0.18	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
2,2-Dichloropropane		**0.20 U**	ug/L	0.20	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
2-Chlorotoluene		**0.20 U**	ug/L	0.20	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
4-Chlorotoluene		**0.20 U**	ug/L	0.20	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Benzene		**0.15 U**	ug/L	0.15	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Bromobenzene		**0.22 U**	ug/L	0.22	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Bromodichloromethane		**0.26 U**	ug/L	0.26	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Bromoform		**0.15 U**	ug/L	0.15	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Bromomethane		**0.34 U**	ug/L	0.34	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Carbon tetrachloride		**0.36 U**	ug/L	0.36	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Chlorobenzene		**0.17 U**	ug/L	0.17	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Chloroethane		**0.36 U**	ug/L	0.36	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Chloroform		**0.24 U**	ug/L	0.24	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Chloromethane		**0.23 U**	ug/L	0.23	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
cis-1,2-Dichloroethene		**0.25 U**	ug/L	0.25	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Dibromochloromethane		**0.15 U**	ug/L	0.15	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Dibromomethane		**0.20 U**	ug/L	0.20	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Dichlorodifluoromethane		**0.28 U**	ug/L	0.28	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Ethylbenzene		**0.17 U**	ug/L	0.17	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Methylene chloride		**0.43 U**	ug/L	0.43	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Methyl-tert-butyl-ether		**0.13 U**	ug/L	0.13	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Styrene		**0.17 U**	ug/L	0.17	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Tetrachloroethene		**0.26 U**	ug/L	0.26	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Toluene		**0.26 U**	ug/L	0.26	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Total THMs		**0.15 U**	ug/L	0.15	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Total Xylenes		**0.41 U**	ug/L	0.41	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080

HBEL, Inc.
2340 SW Poma Drive, Palm City FL 34990
Phone: (772) 465-8584 Fax: (772) 467-1584

CERTIFICATE OF ANALYSIS

[2042955]

Client: L.S. Sims & Associates *Workorder ID:* Okeechobee Landfill Injectate

Parameter	Qualifier	Result[1]	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
trans-1,2-Dichloroethene		**0.30 U**	ug/L	0.30	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Trichloroethene		**0.17 U**	ug/L	0.17	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Trichlorofluoromethane		**0.40 U**	ug/L	0.40	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080
Vinyl chloride		**0.25 U**	ug/L	0.25	EPA 524.2	VOC3418		04/25/11 1:33	WR	E96080

[1]Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

Q Sample held beyond the accepted holding time.

Z Too many colonies were present (TNTC), the numeric value represents the filtration volume.

HBEL, Inc.

Environmental Testing Services

Phone (772) 465-8584 Fax (772) 467-1584

Chain-of-Custody

and

Agreement to Perform Services

USE BALL POINT PEN
PRESS HARD
COMPLETELY FILL OUT
ALL NON GREYED AREAS
PRINT LEGIBLY

Laboratory not responsible for omitted information

X FDOH ID # E96080
Southeast Florida
2340 SW Poma Drive
Palm City, FL 34990

____ FDOH ID # E83509
Central Florida
4155 St. Johns Pkwy, Suite 1300
Sanford, FL 32771

Company: **Okeechobee Landfill**

Address: **10800 NE 128 Ave**

City/State **Okeechobee, FL** Zip: **34972**

Phone: _____ Fax: _____

Client Contact: **Jim McGrath**

Project Name: **Injectate Composite**

Sampled By: **Jim Norton**

Method(s) of Shipment: **Self**

email: _____

X Standard Laboratory Turn Around Time

Or

Rush in ____ Business Days

Requires Laboratory Approval

For Lab Use Only

Temperature Checked Y N: 2.6 °C

Custody Seals Intact Y N

LAB # 1042955

PRESERVATIVE

N	NaOH	U	U	U	H	ST	N

ANALYSES REQUESTED

A2	A	A1	A1	B	C	D	C1,2
1° and 2° Metals	Cyanide	Nitrate, Nitrite, Choride, Sulfate, Flouride, pH, TDS, Color	MBAS	Odor	VOC, THM	Total Coliform	Gross Alpha, Rad 226/228

Preservation Key

H=Hydrochloric Acid P=Phosphoric Acid
N=Nitric Acid ST=Sodium
S=Sulfuric Acid Thiosulfate
SH=Sodium Hydroxide U=Unpreserved

* LAB ID	COLLECTION DATE	COLLECTION TIME	Sample Type*	MATRIX**	# Containers	SAMPLE DESCRIPTION As Will Appear On Report	1° and 2° Metals	Cyanide	Nitrate, Nitrite, Choride, Sulfate, Flouride, pH, TDS, Color	MBAS	Odor	VOC, THM	Total Coliform	Gross Alpha, Rad 226/228	COMMENTS
	4-13-11	9:40	C	SW	9	Composite	1		1	1		9		3	
	"	9:40	G	SW	3	Grab		1			1	3	1		
	"	—		DI	3	Trip Blank						3			

* Sample Type: G=Grab C=Composite

** Matrix: S=Solid St=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

Report Page 1 of 2

RELINQUISHED BY	RELINQUISHED BY	RELINQUISHED BY
DATE/TIME	DATE/TIME	DATE/TIME
RECEIVED BY	RECEIVED BY	RECEIVED FOR HBEL CUSTODY BY
DATE/TIME	DATE/TIME	DATE/TIME 4/13/11 0915

Distribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

CHAIN PAGE 1 of 2

HBEL, Inc.

Environmental Testing Services

Phone (772) 465-8584 Fax (772) 467-1584

Chain-of-Custody

and

Agreement to Perform Services

USE BALL POINT PEN
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Laboratory not responsible for omitted information

X FDOH ID # E96080
Southeast Florida
2340 SW Poma Drive
Palm City, FL 34990

____ FDOH ID # E83509
Central Florida
4155 St. Johns Pkwy, Suite 1300
Sanford, FL 32771

Company: **Okeechobee Landfill**

Address: **10800 NE 128 Avenue**

City/State **Okeechobee, FL** Zip: **34972**

Phone: _____ Fax: _____

Client Contact: **Jim McGrath**

Project Name: **Injectate Composite**

Sampled By: **Jim Norton**

Method(s) of Shipment: **Self**

email: _____

X Standard Laboratory Turn Around Time

Or

Rush in ____ Business Days

Requires Laboratory Approval

For Lab Use Only

Temperature Checked Y N 4.0 °C

Custody Seals Intact Y N

LAB # 20120355

LAB ID	COLLECTION DATE	COLLECTION TIME	Sample Type*	MATRIX**	# Containers	SAMPLE DESCRIPTION As Will Appear On Report	PRESERVATIVE								COMMENTS
							ST	ST	ST	MCAAB	ST	S			
							ANALYSES REQUESTED								
							B6 504/505/548	B1 515.1	B2 525.2	B3 531.1 (Carbamates)	B4 547 (Glyphosate)	B5 549 (Diquat), NO_x			
	4-13-11	9:40	C	SW	11	Composite	6	1	1	1	1	1			

Preservation Key

H=Hydrochloric Acid P=Phosphoric Acid
N=Nitric Acid ST=Sodium
S=Sulfuric Acid Thiosulfate
SH=Sodium Hydroxide U=Unpreserved

* Sample Type: G=Grab C=Composite

** Matrix: S=Solid SL=Sludge DW=Drinking Water GW=Ground Water SW=Surface Water WW=Wastewater M=Marine

RELINQUISHED BY	RELINQUISHED BY	RELINQUISHED BY
DATE/TIME	DATE/TIME	DATE/TIME
RECEIVED BY	RECEIVED BY	RECEIVED FOR HBEL CUSTODY BY
DATE/TIME	DATE/TIME	DATE/TIME 4/13/11 @ 1715

Report Page 6 of 6

Distribution: WHITE with REPORT; YELLOW for FILE; PINK to CLIENT; GOLD for SAMPLER

CHAIN PAGE 2 of 2

Field Data Sheet

Form 300
Revision 008
01/24/08

HBEL, Inc.
Environmental Testing Services
Phone (772) 465-8584 Fax (772) 467-1584

Project Name: ***Okeechobee Landfill*** Date Sampled: ***4/13/2011*** **Page 1 of 2**

Sample Type:	WW		SW	X	GW		DW		DI		Sludge		Sed.		Soil	
Sample Site Identification:	***Injectate Well***													
Sampling Method:	Grab		Comp.	X	MW		Bailer		Pump					
Sampling Equipment:	***ISCO Composite Sampler***													
Site & Weather Conditions:	***Warm / Sunny / Breezy***													

Field Instrument Beginning **Verification** X **Calibration**

										Slope
pH Meter	YES		Buffer		4.0	***4.09***	7.0	***6.98***	10.0	***10.00***
Conductivity Meter	YES		Buffer		147		1412	***1422***	12900	
Turbidity Meter	YES		Buffer		1.0	***0.97***	10.0	***10.03***	20	
DO Meter	NO		Buffer		Air Cal	Adjust	***100.00%***	From	***95.70%***	
Chlorimeter	YES		Buffer		0.21	***0.21***	0.91	***0.89***	1.62	***1.58***

Field Filtered	Yes		No	X
Field Decon	Yes	X	No	
Duplicate	Yes		No	X

Well Diameter	Multiplier
1.5 inches	0.092
2 inches	0.163
4 inches	0.653
6 inches	1.469

Parameter	Sample Containers	pH check	
Nutrient	Plastic – H2SO4	<2	
Metals	Plastic – HNO3	<2	X
Sulfide	Plastic –NaOH/Zn Acetate	>12	
Cyanide	Plastic –NaOH/Ascorbic Acid	>12	X
Bacteriological	$Na_2S_2O_3$ (DW NO Chlorine Res)		X
Oil & Grease	Glass – HCl	<2	
TOC	Glass-- HCl	<2	
TRPH	Glass - HCl	<2	
VOA	Glass – HCl	<2	
SVOC	Glass – (DW NO Chlorine Res)		X
Phenols	Glass – H2SO4	<2	
Other	unpreserved		X

Field Instrument Ending **Verification** X **Calibration**

pH Meter	NO		Buffer		4.0	***4.06***	7.0	***6.96***	10.0	***10.00***
Conductivity Meter	NO		Buffer		147		1412	***1412***	12900	
Turbidity Meter	NO		Buffer		1.0	***0.99***	10.0	***10.10***	20	
DO Meter	NO		Buffer			Adjust	***100.00%***	From	***92.10%***	
Chlorimeter	NO		Buffer		0.21	***0.21***	0.90	***0.87***	1.62	***1.56***

General Site Information and Comments:

Next Event	***Annual***
C.O.C. #	***2042955***
Field Book #	***21 page 156 and 157***
Sampled By (Print)	***Jim Norton***
Affiliation	***HBEL, Inc***

Sampler(s) Signatures(s) Jim Norton

Southeast Florida
2340 SW Poma Drive
Palm City, FL 34990
FDOH #E96080

Central Florida
4155 St. Johns Pkwy, Suite 1300
Sanford, FL 32771
FDOH #E83509

HBEL, Inc.

ANALYTICAL FIELD DATA

Project Name:	*(OL) Annual Injectate Well Composite*
Date Sampled:	*4/13/2011*

C.O.C.# *2042955*

LOCATION	Time	pH (SU)	Temperature (°C)	Specific Conductivity (umhos)	D.O. (mg/L)	Turbidity (NTUs)	Residual Chlorine (mg/L)	Comments
Composite	*9:40*							
Grab	*9:40*	*7.26*	*27.60*	*27400.0*	*2.18*	*70.60*	*0.00*	*see notes below*

Notes:

Grab for grab samples and field readings

Sampled By (Print)	*Jim Norton*	Sampler(s) Signatures(s)	Jim Norton
Affiliation	*HBEL, Inc*		

SOUTHERN ANALYTICAL LABORATORIES, INC.
110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

HBEL, Inc.
2340 Poma Drive
Palm City, FL 34990

April 15, 2011
Work Order: 1103256

Laboratory Report

Project Name **2042955**

Sample Description	**2042955 001**
Matrix	**Other aqueous**
SAL Sample Number	**1103256-01**
Date/Time Collected	**04/13/11 09:40**
Collected by	**Client**
Date/Time Received	**04/14/11 09:50**

Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	By
Inorganics								
Surfactants (MBAS,mw342)	mg/L	9.3	SM 5540C	8.0	5.0		04/14/11 16:15	SMD

SOUTHERN ANALYTICAL LABORATORIES, INC.
110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

HBEL, Inc.
2340 Poma Drive
Palm City, FL 34990

April 15, 2011
Work Order: 1103256

* Qualifiers, Notes and Definitions

Results followed by a "U" indicate that the sample was analyzed but the compound was not detected. Results followed by "I" indicate that the reported value is between the laboratory method detection limts and the laboratory practical quantitation limit.

A statement of estimated uncertainty of test results is available upon request.

For methods marked with **, all QC criteria have been met for this method which is equivalent to a SAL certified method.

Test results in this report meet all the requirements of the NELAC standards. Any applicable qualifiers are shown below. Questions regarding this report should be directed to Client Services at 813-855-1844.

HBEL, Inc.
2340 SW Poma Drive, Palm City, FL 34990, 772-465-8584
Fax: (772) 467-1584

CHAIN OF CUSTODY RECORD

Subcontracting Form 001A
REV 002
Effective Date 03/15/11

Receiving Laboratory: SAL

The samples are to be shipped by Fed. Ex to arrive on 4.13.11 (14 ©). TAT: Std

1103256

HBEL, Inc.

PROJECT NAME: 2042955

SAMPLE TYPE: Composite = C, Grab = G,

Preservative: HCl = H, HNO_3 = N, $Na_2S_2O_3$ = ST, H_2SO_4 = S, NaOH = SH, Unpreserved = U

MATRIX: Drinking Water = DW, Groundwater = GW, Surface Water = SW, Wastewater = WW, Soil or solids = S, Waste = W, Oil = O

Client Code.	MATRIX	COLLECTION DATE	COLLECTION TIME	TYPE	HBEL SAMPLE ID	# Bottles	ANALYSIS REQUIRED: PRESERVATIVE U	MBAS	COLLECTION REMARKS: SAMPLE COMMENTS
01 SIMS	L	4.13.11	0940	C	2042955.001	1		✓	* Leachate
					1 250ml P, Cool				

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME
[signature]	4.13.11	1600	FED EX [signature]	4/14/11	1000 0950 4-14-11
RELINQUISHED BY:	DATE	TIME	LABORATORY NAME AND RECEIVED BY:	DATE	TIME

0.9

SOUTHERN ANALYTICAL LABORATORIES, INC.
110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

HBEL, Inc.
2340 Poma Drive
Palm City, FL 34990

May 2, 2011
Work Order: 1103383

Laboratory Report

Project Name **2042955**

Sample Description	**2042955001**
Matrix	**Other aqueous**
SAL Sample Number	**1103383-01**
Date/Time Collected	**04/13/11 09:40**
Collected by	**Client**
Date/Time Received	**04/18/11 15:30**

Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	By
Radiochemistry								
Gross Alpha (Incl. Uranium)	pCi/L	12 ± 5.2	EPA 00-02	2.5	2.5	04/25/11 09:00	04/27/11 10:28	ARM
Radium-226	pCi/L	1.4 ± 0.19	EPA 903.1	0.1	0.1	04/20/11 16:30	04/29/11 15:16	KTC
Radium-228	pCi/L	0.5 ± 0.3 U	EPA Ra-05	0.5	0.5	04/20/11 16:30	04/28/11 16:59	KTC

SOUTHERN ANALYTICAL LABORATORIES, INC.
110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

HBEL, Inc.
2340 Poma Drive
Palm City, FL 34990

May 2, 2011
Work Order: 1103383

* Qualifiers, Notes and Definitions

Results followed by a "U" indicate that the sample was analyzed but the compound was not detected. Results followed by "I" indicate that the reported value is between the laboratory method detection limts and the laboratory practical quantitation limit.

A statement of estimated uncertainty of test results is available upon request.

For methods marked with **, all QC criteria have been met for this method which is equivalent to a SAL certified method.

Test results in this report meet all the requirements of the NELAC standards. Any applicable qualifiers are shown below. Questions regarding this report should be directed to Client Services at 813-855-1844.

HBEL, Inc.

HBEL, Inc.
2340 SW Poma Drive, Palm City, FL 34990, 772-465-8584
Fax: (772) 467-1584
CHAIN OF CUSTODY RECORD

Subcontracting Form 001A
REV 002
Effective Date 03/15/11

Receiving Laboratory: SAL

The samples are to be shipped by Fed. Ex to arrive on 4.18.11. TAT: Std.

1103383

HBEL, Inc.

PROJECT NAME: 2042955

SAMPLE TYPE: Composite = C, Grab = G,

Preservative: HCl = H, HNO_3 = N, $Na_2S_2O_3$ = ST, H_2SO_4 = S, NaOH = SH, Unpreserved = U

MATRIX: Drinking Water = DW, Groundwater = GW, Surface Water = SW, Wastewater = WW, Soil or solids = S, Waste = W, Oil =O

	Client Code	MATRIX	COLLECTION DATE	COLLECTION TIME	TYPE	HBEL SAMPLE ID	# Bottles	ANALYSIS REQUIRED: PRESERVATIVE N	N	N				COLLECTION REMARKS: SAMPLE COMMENTS
								Grossα High Solids	Rad 224	Radzzd				
01	SIMS	L*	4.13.11	0940	C	2042955 001	3	✓	✓	✓				* Caution - Leachate
						3 1LP, HNO3								

RELINQUISHED BY:	DATE	TIME		RECEIVED BY:	DATE	TIME
[signature]	4.15.11	1600	FED EX	[signature]	4/18/11	1530
RELINQUISHED BY:	DATE	TIME		LABORATORY NAME AND RECEIVED BY:	DATE	TIME