



**CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES**

**WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVMENTS**

EXHIBITS

JULY 2015

<u>Exhibit No.</u>	<u>Description</u>
Exhibit 1	Geotechnical Report
Exhibit 2	Lead Report
Exhibit 3	Asbestos Report
Exhibit 4	Inspection Report for 750,000 Gallon Tank
Exhibit 5	Inspection Report for 1.5 Million Gallon Tank
Exhibit 6	Inspection Report for Clearwell
Exhibit 7	Basis of Design Report
Exhibit 8	Filter Rehab - Florida Department of Health Permit
Exhibit 9	DRC Site Plan Approval
Exhibit 10	Design Criteria
Exhibit 11	Record Drawings

Exhibit 1

Geotechnical Report

The attached geotechnical report is provided for informational purposes. The Owner and the Engineer make no guarantee, either expressed or implied, as to its accuracy or completeness.

**REPORT OF
GEOTECHNICAL EXPLORATION**

**NORTH MIAMI WINSON WATER TREATMENT PLANT REHABILITATION
12100 NW 11TH STREET
NORTH MIAMI, FLORIDA**

FOR

**HAZEN SAWYER
4000 HOLLYWOOD BLVD, #750N
NORTH TOWER
HOLLYWOOD, FLORIDA 33021**

PREPARED BY

**NUTTING ENGINEERS OF FLORIDA, INC.
2051 NW 112TH AVE
SUITE No. 126
MIAMI, FLORIDA 33172**

PROJECT No.: 110.2

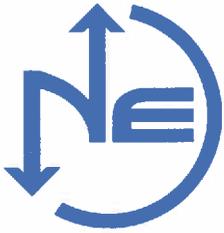
JUNE 2013



*Geotechnical & Construction Materials
Engineering, Testing & Inspection
Environmental Services*

Offices throughout the state of Florida

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Nutting Engineers

of Florida Inc. | Established 1967

Your Project is Our Commitment

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June 12, 2013

Mr. Jorge Atoche, P.E.
Hazen Sawyer
4000 Hollywood Blvd, #750N
North Tower
Hollywood, Florida 33021
Phone: (954) 987-0066 Ext. 57034
Fax: (954) 987-2949

Subject: Report of Geotechnical Exploration
North Miami Winson Water Treatment Plant Rehabilitation
12100 NW 11th Street
North Miami, Florida

Dear Mr. Atoche,

Nutting Engineers of Florida, Inc. has performed a geotechnical exploration for the proposed construction at the above referenced site. The purpose of this exploration was to obtain information concerning the site and subsurface conditions at specific locations in order to provide site preparation and foundation design recommendations for support of the proposed structures. This report presents our findings and recommendations.

PROJECT INFORMATION

Per your email on April 9, 2013 and review of the site plan provided by your office, we understand that plans for the project include constructing an approximately 50 ft by 75 ft two story administration building which will be located partially over the footprint of an existing water storage tank (which is scheduled for demolition), a sodium hypochlorite facility (pre-engineered metal building) supported on an approximately 20 ft by 42 ft reinforced concrete slab on grade, aerator platform and stairs consisting of several structures including reinforced concrete equipment pads, deep pump cans and a reinforced concrete box as an extension of the existing filter clearwell. The below ground structures are understood to be based approximately 15 feet below grade.

We note that if any of our understandings or assumptions are incorrect, we should be notified so that we may amend our report accordingly.

OFFICES

Palm Beach
Miami-Dade
St. Lucie

GENERAL SUBSURFACE SOIL CONDITIONS

Subsurface Soil Exploration

The exploration of subsurface conditions included site observation, review of the soil survey of Dade County, and conducting a field geotechnical exploration.

Nutting Engineers of Florida, Inc. performed a total of eight (8) Standard Penetration Test (SPT) borings (ASTM D-1586) to depths of 15 to 30 feet below the existing ground surface in order to evaluate the subsurface soil conditions at the site. Standard Penetration Tests were performed continuously for 12-ft at each boring location with successive sampling at 5-foot intervals thereafter. The number of successive blows required to drive the sampler into the soil constitutes the test result commonly referred to as the "N" value. The "N" value has been empirically correlated with various soil properties and is considered to be indicative of the relative density of cohesionless soils and the consistency of cohesive soils.

The locations of the test borings are indicated on the attached Boring Location Plan. Individual test boring reports are presented in the Appendix of this report. The borings were established in the field using approximate methods; namely, a measuring wheel and available surface controls.

Soil Survey Maps Review

A review of the Soil Survey for Dade County revealed that at the time the survey was conducted, the soils at the site were described as Urban land. This map unit is in areas where shopping centers, parking lots, streets, sidewalks, airports, large buildings, houses, and other structures cover more than 85 percent of the surface. The natural soil cannot be observed. The soils in open areas, mostly lawns, vacant lots, playgrounds, and parks are mainly Udorthents. We note that the maximum depth of the survey is approximately 6 feet.

Test Boring Results

The appended test boring logs present information and descriptions of the subsurface conditions at each specific test boring location. In general, test boring logs indicate a surface layer of vegetation and topsoil, underlain by very loose to loose quartz fine sand to depths of approximately 13 to 18 feet below existing grade. Below this layer, test borings revealed medium dense quartz fine sand to 30 feet below existing grade, the maximum depth explored.

A detailed description of the soil/rock profile is presented in the test boring records provided in the Appendix. The Standard Penetration Test N-values are used to evaluate the relative density of granular soils. The correlation of penetration resistance with relative density is presented in the Soil Classification Criteria attached in the Appendix.

Note: Although not readily identified in the borings, it is possible that weathered rock may exist beyond the limits described above or in the soil boring record shown in the appendix. Generally, rock in the South Florida area may include limestone or sandstone which has irregularities and discontinuities including vertical and horizontal solution features, varying surface and bottom elevations, and varying degrees of hardness. The rock features may also contain intervening sand and other material filled lenses. The standard penetration test borings executed in this evaluation were performed in accordance with the normal standard of care in this area. Despite this, this process may sometimes fail to detect the presence of rock strata by passing through solution features. Solution features can be very common in rock strata in Southeast Florida. Also given the brittle nature of some rock strata, rocks may readily shatter when hit by the split spoon. Despite this, these strata may present significant resistance to excavation. Resistance to excavation may generate vibrations which may be perceived to or actually induce settlements in subject nearby structures. Pre and post condition surveys and vibration monitoring would be advantageous in such circumstances.

For these reasons, appropriate due care shall be exercised by contractors performing excavation operations in this area, utilizing local experience and test excavations if feasible. Buried debris may or may not be identified or adequately delineated by soil borings. Test pit excavation can provide more insight into such conditions and rock lithology if present. Such conditions may be revealed during site development activities (e.g. proof rolling, utility & foundation excavation activities) or other related activities. Should additional assurance be desired by the client, further subsurface investigation could be performed.

Groundwater Levels

The immediate groundwater level was measured at the boring locations at the time of drilling. The groundwater level was encountered at depths of approximately 9.5 to 10 feet below the existing ground surface. Additionally, two monitoring wells were installed adjacent to Test Boring locations B-2 and B-7. Readings of the water levels were taken with Pumps 1 & 2 both operating, both turned off, and staggered (i.e. one off and the other on). Results of the readings are presented in the table below.

Results of Monitoring Wells Readings

Monitoring Well	Water Depths Below Grade (ft)			
	Pumps 1 & 2 On	Pumps 1 & 2 Off	Pump 1 On/ Pump 2 Off	Pump 2 On/ Pump 1 Off
B-2	9.82	8.96	7.96	8.26
B-7	9.38	9.45	8.46	8.75



The immediate depth to groundwater measurements presented in this report may not provide a reliable indication of stabilized or longer term depth to groundwater at this site. Water table elevations can vary dramatically with time through rainfall, droughts, storm events, flood control activities, nearby surface water bodies, tidal activity, pumping and many other factors. Based on our experience in the area, the ground water level is likely to rise approximately two to three feet during the year, with the yearly high typically in or around October. For these reasons, this immediate depth to water data **should not** be relied upon alone for project design considerations.

Further information regarding stabilized groundwater elevations at the site could be developed upon specific request. Additional evaluation might include long term monitoring of piezometers, survey of the project area for evidence of current groundwater elevation influences such as well fields, obvious construction dewatering, tidal activity, flood control canals and other surface water bodies.

Exfiltration Results

One 'Usual Open-Hole' exfiltration test was performed in general accordance with South Florida Water Management District (SFWMD) specifications to a depth of 15 feet below the existing ground surface. The test was performed in order to determine the hydraulic conductivity of the in situ subsurface soils to evaluate drainage requirements for the project.

The hydraulic conductivity value was determined to be 5.57×10^{-2} cubic feet per second, per square foot, per foot of head. Detailed soil descriptions and flow rates are presented in the Appendix.

ANALYSIS AND RECOMMENDATIONS

The test borings performed for this project revealed that the soils within the soil profile are in a loose state. In order to properly prepare the foundation soils, an undercut and intense compaction program will need to be accomplished prior to construction.

Once the site has been prepared in accordance with our site preparation recommendations presented in this report, the proposed structures may be supported on a shallow foundation system using an allowable soil bearing pressure of ***3,000 pounds per square foot***.

We recommend a minimum width of 24 inches for continuous footings and 36 inches for individual footings, even though the soil bearing pressure may not be fully developed in all cases. We recommend that the bottom of footings be at least 18 inches below the lowest adjacent finished grade. The foundations should be constructed in accordance with the local building codes and good standard practice.

It is our opinion that the floor slab system may be constructed as a slab on grade. We recommend that a vapor barrier be placed between the soil and concrete.

Foundation Settlement

Shallow foundations designed, supported, and constructed in accordance with the recommendations of this report are estimated to sustain a maximum total settlement of less than approximately one inch. Differential settlement between adjacent foundations should be approximately one-half of the total settlement. Distortions that occur along the slab due to differential settlement should not be more than 1 in 500.

Floor Slab

It is our opinion that the floor slab systems may be constructed as a slab on grade. We recommend that the procedures described under the "Site Preparation" section of this report be used to prepare the floor slab subgrades. We recommend that a vapor barrier be placed between the soil and concrete. A modulus of subgrade reaction of 200 pci may be utilized for design.

Site Preparation

All construction debris, grass, weeds, and root zones should be stripped and removed from the construction area to a lateral distance of at least 5 feet beyond the proposed exterior building limits. A representative of NE shall observe the excavation and compaction operations on a full time basis to verify the engineering intent is accomplished.

The stripped surface should then be undercut to a depth of 3 feet below the bottom of the wall foundation level (approximately 4 feet below existing grade). The soil can be stockpiled for use as backfill. Once the site has been undercut, the soil should be wetted and compacted with 20 overlapping passes (10 in each direction) with a large self propelled vibratory compactor (Dynapac CA250 or similar) until a density equivalent to at least 98 percent of the modified Proctor maximum dry density (ASTM D-1557) is achieved to a depth of at least 12 inches below the compacted surface. When this has been satisfied the stockpiled backfill may be placed in 12 inch loose lifts and compacted in the same manner described above. Where vibrations are a concern, as in close proximity to existing structures, a walk behind tamper may be used to achieve the above discussed compaction requirements, however backfill material should be placed in no greater than 6-inch loose lifts.

Any additional new fill material required to attain finished floor grade shall be a suitable, free-draining material, defined as that which meets the requirements of ASTM D-2487 Unified Classifications GW, GP, GP-GM or SW, or as approved by NE, containing no more than 2 percent organic matter and with no debris.

This fill material shall be placed in lifts not exceeding 12-inches in loose thickness, with each lift compacted to a least 98 percent of maximum density as determined by AASHTO T-180 and ASTM D-1557.

Following site and building pad preparation as discussed above, the foundation area should be excavated and the footings formed. The bottom of foundation excavations should be compacted after excavation to develop a minimum density requirement of 98 percent of the maximum modified Proctor dry density, for a minimum depth of one (1) foot below the bottom of the footing depth, as determined by field density compaction tests. The floor slab area should also be compacted in the same manner.

Pump Station

We anticipate as much as twenty feet or more of soil excavation to achieve the proposed base of the pump station. It is obvious that such excavation will bottom below the groundwater table, discussions should be held with us, design team, contractor and other interested parties to provide details concerning the excavation operations. We note that dewatering issues, if needed, are beyond the scope of our services and will be the responsibility of others. The borings performed for this project encountered soils that are suitable for support of the pump station. It is our opinion that the weight of the excavated soil will somewhat compensate the pump station foundation loads; therefore, we anticipate the foundations will be subjected to short term settlements of less than one inch. The design of the wet well will need to consider hydrostatic (including buoyant) forces since the water table was encountered at approximately six feet below the existing ground surface (subject to variations as noted) at the time of the field work.

If during excavation unusual or unforeseen soils are encountered, we should be notified immediately in writing to evaluate the condition. Discussions should be held with interested parties to determine the suitability of any potential deleterious material.

Below Grade Walls

The walls of the pump station below the existing grade should be designed to resist earth pressures from granular backfill, surcharge loads and unbalanced hydrostatic forces. Assume that the wall will not translate or rotate sufficiently to mobilize the “active” earth pressure condition, therefore, assume the “at rest” condition will prevail. A K_o of 0.5 can be used for design.

The walls should be designed to sustain water with a pressure head at the appropriate design flood elevation. Slab or other load carrying element loads must be included in the design of the walls.

Backfill below on grade walls should be approved sand fill and should be placed in loose pumps not exceeding 12 inches in thickness and should be compacted to minimum dry density between 92% and 95% of the maximum modified Proctor dry density. Overcompaction in these areas should be avoided.

TABLE OF TYPICAL SOIL PARAMETERS

	SOIL UNIT WEIGHT (PCF)		ANGLE OF INTERNAL FRICTION (DEGREES)	EARTH PRESSURE COEFFICIENT	
	SATURATED	SUB-MERGED		ACTIVE (Ka)	PASSIVE (Kp)
Loose Sand	115	53	30	0.33	3.0
Medium Dense to Dense Sand	120	58	32	0.31	3.25

We note that the values in the table are based on visual classification and if more exact values are needed, specific laboratory testing should be performed. The depths of the soils were not included since the depths of each strata varies. Also, appropriate factors of safety should be applied by the design engineer depending on the application. We are available to assist in the design process if needed.

Proposed Connections

Based on the borings performed for this project, it is our opinion that the proposed connections may be supported on the existing in place soils using conventional installation and compaction techniques. It appears the excavated soils may be used for pipe bedding and general backfill. During the excavation process, any questionable soils, boulders, or other unforeseen conditions encountered should be evaluated by a representative of Nutting Engineers.

Special Note: During excavation, zones of hard to very hard limestone/sandstone may be encountered which may not have been shown in the test borings. If these zones are encountered we should be notified in order to further evaluate subsurface conditions. Based on the borings performed for this project, it appears that an unsupported vertical cut is not considered stable or safe during construction. An unsupported excavation may cause the collapse of the sidewalls when workmen are in the excavations. An excavation collapse can also damage the formwork and/or steel for the proposed structure as it is being constructed. Therefore, in our opinion and following the current regulations established by OSHA for excavations, cut slopes are required. If slopes cannot be maintained, or are not practical, then the excavation must be cased or shored. Shoring procedures should conform to those presented in the Occupational Safety and Health Administration (OSHA) standards.



Dewatering

The groundwater was encountered at depths of four and a half feet below the existing ground surface. As stated previously, others shall be responsible for the design, permitting, maintenance, and other factors related to dewatering and groundwater control, if needed. We note that during construction, if foundation compaction is needed then the groundwater level should be maintained at least two feet below the bottom of the excavations so that adequate compaction and density tests can be performed. If this is not feasible, our office should be contacted for additional consultation.

Trench Excavations

Excavations of five feet or more will need to be sloped or shored in accordance with State of Florida and OSHA recommendations. It is our opinion that if the excavation remains dry, temporary side slopes of 3 horizontal to 1 vertical may be used for this project. Where existing utilities, roadways or other obstructions prevent sloping the soils, shoring will be required. Where temporary shoring will be required, the soil parameter table should be used for earth pressure determinations.

GENERAL INFORMATION

Our client for this geotechnical evaluation was:

Hazen Sawyer
4000 Hollywood Blvd, #750N
North Tower
Hollywood, Florida 33021

The contents of this report are for the exclusive use of the client, the client's design & construction team and governmental authorities for this specific project exclusively. Information conveyed in this report shall not be used or relied upon by other parties or for other projects without the expressed written consent of NE. This report discusses geotechnical considerations for this site based upon observed conditions and our understanding of proposed construction for foundation support. Environmental issues including (but not limited to), soil and/or groundwater contamination, methane are beyond our scope of service for this project. As such, this report shall not be used or relied upon for evaluation of environmental issues.

Prior to initiating compaction operations, we recommend that representative samples of the structural fill material to be used and acceptable in-place soils be collected and tested to determine their compaction and classification characteristics. The maximum dry density, optimum moisture content, gradation and plasticity characteristics should be determined. These tests are needed for compaction quality control of the structural fill and existing soils, and to determine if the fill material is acceptable.



If conditions are encountered which are not consistent with the findings presented in this report, or if proposed construction is moved from the location investigated, this office shall be notified in writing immediately so that the condition or change can be evaluated and appropriate action taken.

The vibratory compaction equipment may cause vibrations that could be felt by persons within nearby buildings and could potentially induce structural settlements. Additionally, preexisting settlements may exist within these structures that could be construed to have been caused or worsened by the proposed vibratory compaction after the fact. Pre- and post conditions surveys of these structures along with the vibration monitoring during vibratory compaction could be performed to better evaluate this concern. The contractor should exercise due care during the performance of the vibratory compaction work with due consideration of potential impacts on existing structures. If potential vibrations and impacts are not considered tolerable, then alternate foundation modification techniques should be considered and the Geotechnical Engineer notified in writing immediately.

NE shall bear no liability for the implementation of recommended inspection and testing services as described in this report if implemented by others. NE has no ability to verify the completeness, accuracy or proper technique of such procedures if performed by others.

Excavations of five feet or more in depth should be sloped or shored in accordance with OSHA and State of Florida requirements.

The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein, have been presented after being prepared in accordance with general accepted professional practice in the field of foundation engineering, soil mechanics and engineering geology. No other warranties are implied or expressed.

We appreciate the opportunity to provide these services for you and look forward to completing this and other projects with you. If we can be of any further assistance with the design or construction services, or if you need additional information, please feel free to contact us at your convenience.

Sincerely,
NUTTING ENGINEERS OF FLORIDA, INC.

 6/12/13
Paul C. Catledge, P.E. #68448
Senior Engineer

Attachments: Boring Location Plan
 Test Boring Logs (1-8)
 Exfiltration Test Results
 Soil Classification Criteria
 Limitations of Liability



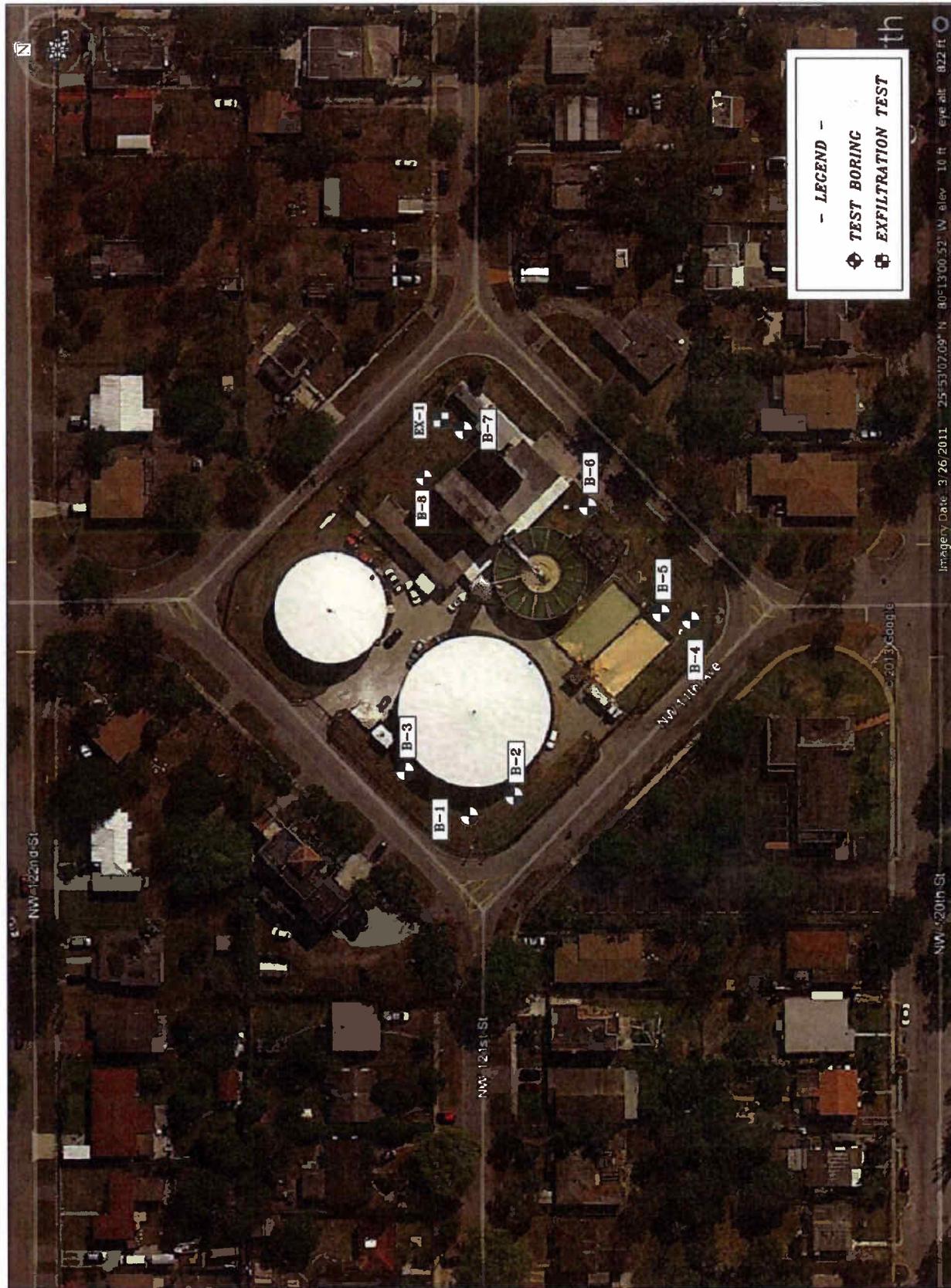


FIGURE 1

NOT TO SCALE

APPROXIMATE TEST LOCATIONS

NORTH MIAMI WINSON WATER TREATMENT PLANT
 12100 NW 11TH AVE.
 NORTH MIAMI, FLORIDA



1310 Neptune Drive
 Boynton Beach, FL 33426
 Telephone: 561-736-4900
 Fax: 561-737-9975

BORING NUMBER B-1

PAGE 1 OF 1

PROJECT NUMBER 110.2

CLIENT Hazen and Sawyer, P.C.

PROJECT NAME North Miami Winson WTP Rehabilitation

PROJECT LOCATION 12100 NW 11th Avenue, North Miami, FL

DATE STARTED 4/29/13 COMPLETED 4/29/13 SURFACE ELEVATION REFERENCE Same as road crown

DRILLING METHOD Standard Penetration Boring GROUND WATER LEVELS:

LOGGED BY D. Tyson CHECKED BY C. Gworek AT TIME OF DRILLING 10.0 ft/0.0 ft

APPROXIMATE LOCATION OF BORING As located on site plan

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value	▲ SPT N VALUE ▲			
						10	20	30	40
						PL MC LL ----- ----- ----- 20 40 60 80			
						<input type="checkbox"/> FINES CONTENT (%) <input type="checkbox"/> 20 40 60 80			
0		Gray quartz fine SAND, some limestone fragments	AU 1						
		Tan quartz medium SAND and LIMESTONE FRAGMENTS	AU 2						
5			SS 3	3-4-4-4	8	▲			
		Lt. tan quartz fine SAND	SS 4	4-4-3-3	7	▲			
			SS 5	4-4-2-2	6	▲			
10	▽	Lt. brown quartz fine SAND	SS 6	2-3					
			SS 7	3-4-5	9	▲			
15									
		Tan quartz fine SAND	SS 8	6-8-10	18	▲			
20									
			SS 9	7-9-14	23		▲		
25									
			SS 10	7-10-16	26			▲	
30		Bottom of hole at 30.0 feet.							

TEST NUTTING BOREHOLE 2-110.2 HAZEN AND SAWYER, P.C. - NORTH MIAMI WINSON WTP REHABILITATION.GPJ GINT US.GDT 5/8/13



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BORING NUMBER B-2

PAGE 1 OF 1

PROJECT NUMBER 110.2

CLIENT Hazen and Sawyer, P.C.

PROJECT NAME North Miami Winson WTP Rehabilitation

PROJECT LOCATION 12100 NW 11th Avenue, North Miami, FL

DATE STARTED 4/29/13 COMPLETED 4/29/13 SURFACE ELEVATION REFERENCE Same as road crown

DRILLING METHOD Standard Penetration Boring GROUND WATER LEVELS:

LOGGED BY D. Tyson CHECKED BY C. Gworek AT TIME OF DRILLING 10.0 ft/0.0 ft

APPROXIMATE LOCATION OF BORING As located on site plan

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value	▲ SPT N VALUE ▲			
						10	20	30	40
						PL MC LL ┌───┬───┬───┬───┐ 20 40 60 80			
						<input type="checkbox"/> FINES CONTENT (%) <input type="checkbox"/> 20 40 60 80			
0		Gray quartz fine SAND, some limestone fragments	AU 1						
		Tan quartz fine SAND and LIMESTONE FRAGMENTS	AU 2						
5			SS 3	3-3-3-3	6	▲			
		Lt. tan quartz fine SAND, some limestone	SS 4	4-4-4-5	8	▲			
		Tan quartz fine SAND	SS 5	6-6-3-4	9	▲			
10	▽		SS 6	4-4					
		Brown quartz fine SAND							
			SS 7	3-4-5	9	▲			
15									
		Tan quartz fine SAND	SS 8	6-6-7	13	▲			
20									
			SS 9	6-7-8	15	▲			
25									
			SS 10	6-7-8	15	▲			
30		Bottom of hole at 30.0 feet.							

TEST NUTTING BOREHOLE 2-1102 HAZEN AND SAWYER, P.C. - NORTH MIAMI WINSON WTP REHABILITATION GPJ GINT US.GDT 5/8/13



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BORING NUMBER B-3

PAGE 1 OF 1

PROJECT NUMBER 110.2

CLIENT Hazen and Sawyer, P.C.

PROJECT NAME North Miami Winson WTP Rehabilitation

PROJECT LOCATION 12100 NW 11th Avenue, North Miami, FL

DATE STARTED 4/29/13 COMPLETED 4/29/13 SURFACE ELEVATION REFERENCE Same as road crown

DRILLING METHOD Standard Penetration Boring GROUND WATER LEVELS:

LOGGED BY D. Tyson CHECKED BY C. Gworek ▽ AT TIME OF DRILLING 10.0 ft/0.0 ft

APPROXIMATE LOCATION OF BORING As located on site plan

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value	▲ SPT N VALUE ▲			
						10	20	30	40
						PL MC LL ┌───┬───┬───┬───┐ 20 40 60 80			
						<input type="checkbox"/> FINES CONTENT (%) <input type="checkbox"/> 20 40 60 80			
0		Gray quartz fine SAND, some limestone fragments	AU 1						
		Lt. brown quartz fine SAND, trace limestone fragments	AU 2						
5		Lt. tan quartz fine SAND	SS 3	2-3-3-3	6	▲			
			SS 4	3-4-3-4	7	▲			
			SS 5	3-3-4-5	7	▲			
10	▽	Lt. brown quartz fine SAND	SS 6	3-2-3-2	5	▲			
			SS 7	5-7-8	15	▲			
15		Tan quartz fine SAND	SS 8	7-7-8	15	▲			
20		Lt. tan quartz fine SAND	SS 9	8-10-11	21	▲			
25			SS 10	9-11-12	23	▲			
30		Bottom of hole at 30.0 feet.							

TEST NUTTING BOREHOLE 2-1102 HAZEN AND SAWYER, P.C. - NORTH MIAMI WINSON WTP REHABILITATION GPJ_GINT US_GDT_5/8/13



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BORING NUMBER B-4

PAGE 1 OF 1

PROJECT NUMBER 110.2

CLIENT Hazen and Sawyer, P.C.

PROJECT NAME North Miami Winson WTP Rehabilitation

PROJECT LOCATION 12100 NW 11th Avenue, North Miami, FL

DATE STARTED 4/29/13 COMPLETED 4/29/13 SURFACE ELEVATION REFERENCE Same as road crown

DRILLING METHOD Standard Penetration Boring GROUND WATER LEVELS:

LOGGED BY D. Tyson CHECKED BY C. Gworek ∇ AT TIME OF DRILLING 10.0 ft 0.0 ft

APPROXIMATE LOCATION OF BORING As located on site plan

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value	▲ SPT N VALUE ▲					
						10	20	30	40		
						PL	MC	LL			
						20	40	60	80		
						□ FINES CONTENT (%) □					
						20	40	60	80		
0		Gray quartz fine SAND, some limestone fragments Tan quartz medium SAND and LIMESTONE	AU 1								
			AU 2								
5		Lt. tan quartz fine SAND	SS 3	4-5-6-7	11						
			SS 4	7-5-4-4	9						
			SS 5	4-4-4-5	8						
10		∇	Lt. brown quartz fine SAND	SS 6	2-2-3-4	5					
				SS 7	5-6-8	14					
			Tan quartz fine SAND	SS 8	7-9-12	21					
				SS 9	7-8-10	18					
25				SS 10	6-9-13	22					
30		Bottom of hole at 30.0 feet.									

TEST NUTTING BOREHOLE 2-110.2 HAZEN AND SAWYER, P.C. - NORTH MIAMI WINSON WTP REHABILITATION.GPJ GINT U.S.GDT 5/8/13



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BORING NUMBER B-5

PAGE 1 OF 1

CLIENT Hazen and Sawyer, P.C.

PROJECT NUMBER 110.2

PROJECT NAME North Miami Winson WTP Rehabilitation

PROJECT LOCATION 12100 NW 11th Avenue, North Miami, FL

DATE STARTED 5/1/13

COMPLETED 5/1/13

SURFACE ELEVATION REFERENCE Same as road crown

DRILLING METHOD Standard Penetration Boring

GROUND WATER LEVELS:

LOGGED BY D. Tyson

CHECKED BY C. Gworek

▽ AT TIME OF DRILLING 10.0 ft 0.0 ft

APPROXIMATE LOCATION OF BORING As located on site plan

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value	▲ SPT N VALUE ▲			
						10	20	30	40
						PL MC LL ----- ----- ----- 20 40 60 80			
						<input type="checkbox"/> FINES CONTENT (%) <input type="checkbox"/> 20 40 60 80			
0		Gray quartz fine SAND, some limestone fragments Tan quartz medium SAND and LIMESTONE	AU 1						
			AU 2						
5			SS 3	3-3-3-3	6	▲			
		Lt. tan quartz fine SAND	SS 4	2-3-3-4	6	▲			
			SS 5	3-3-3-4	6	▲			
10	▽		SS 6	3-4-4-4	8	▲			
			SS 7	4-5-7	12	▲			
15									
		Tan quartz fine SAND	SS 8	6-8-8	16	▲			
20									
			SS 9	7-7-7	14	▲			
25									
			SS 10	7-8-8	16	▲			
30		Bottom of hole at 30.0 feet.							

TEST NUTTING BOREHOLE 2-110.2 HAZEN AND SAWYER, P.C. - NORTH MIAMI WINSON WTP REHABILITATION.GPJ GINT US.GDT 5/8/13



1310 Neptune Drive
 Boynton Beach, FL 33426
 Telephone: 561-736-4900
 Fax: 561-737-9975

BORING NUMBER B-6

PAGE 1 OF 1

PROJECT NUMBER 110.2
 CLIENT Hazen and Sawyer, P.C. PROJECT NAME North Miami Winson WTP Rehabilitation
 PROJECT LOCATION 12100 NW 11th Avenue, North Miami, FL

DATE STARTED 5/1/13 COMPLETED 5/1/13 SURFACE ELEVATION REFERENCE Same as road crown
 DRILLING METHOD Standard Penetration Boring GROUND WATER LEVELS:
 LOGGED BY D. Tyson CHECKED BY C. Gworek ▽ AT TIME OF DRILLING 10.0 ft 0.0 ft
 APPROXIMATE LOCATION OF BORING As located on site plan

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value	▲ SPT N VALUE ▲			
						10	20	30	40
						PL MC LL ----- ----- ----- 20 40 60 80			
						<input type="checkbox"/> FINES CONTENT (%) <input type="checkbox"/> 20 40 60 80			
0		Gray quartz fine SAND, some limestone fragments Tan quartz medium SAND and LIMESTONE	AU 1						
		Lt. tan quartz fine SAND	AU 2						
5		Tan quartz medium SAND and LIMESTONE	SS 3	3-3-3-3	6				
		Lt. tan quartz fine SAND	SS 4	3-4-4-5	8				
			SS 5	5-6-7-8	13				
10	▽	Lt. brown quartz fine SAND	SS 6	5-5-5-6	10				
			SS 7	7-10-14	24				
15		Bottom of hole at 15.0 feet.							

TEST NUTTING BOREHOLE 2-110.2 HAZEN AND SAWYER, P.C. - NORTH MIAMI WINSON WTP REHABILITATION GPJ GINT US GDT 5/8/13



1310 Neptune Drive
 Boynton Beach, FL 33426
 Telephone: 561-736-4900
 Fax: 561-737-9975

BORING NUMBER B-7

PAGE 1 OF 1

PROJECT NUMBER 110.2

CLIENT Hazen and Sawyer, P.C.

PROJECT NAME North Miami Winson WTP Rehabilitation

PROJECT LOCATION 12100 NW 11th Avenue, North Miami, FL

DATE STARTED 5/2/13 COMPLETED 5/2/13 SURFACE ELEVATION REFERENCE Same as road crown

DRILLING METHOD Standard Penetration Boring GROUND WATER LEVELS:

LOGGED BY R. Dowatsky CHECKED BY C. Gworek ∇ AT TIME OF DRILLING 9.5 ft/0.0 ft

APPROXIMATE LOCATION OF BORING As located on site plan

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value	▲ SPT N VALUE ▲			
						10	20	30	40
						PL MC LL ----- ----- ----- 20 40 60 80			
						<input type="checkbox"/> FINES CONTENT (%) <input type="checkbox"/> 20 40 60 80			
0		Gray to brown quartz fine SAND, trace limestone fragments	AU 1						
		Lt. gray to white quartz fine SAND	AU 2						
5		Lt. brown quartz fine SAND	AU 3						
		Lt. gray quartz fine SAND	SS 4	3-3-3-4	6	▲			
10	∇	Lt. brown quartz fine SAND	SS 5	4-4-3-3	7	▲			
			SS 6	3-3-4-3	7	▲			
15			SS 7	7-9-10	19		▲		
20		Tan quartz fine SAND	SS 8	5-6-7	13		▲		
25			SS 9	6-8-8	16		▲		
30		Lt. gray quartz fine SAND	SS 10	7-8-8	16		▲		
		Bottom of hole at 30.0 feet.							

TEST NUTTING BOREHOLE 2-110.2 HAZEN AND SAWYER, P.C. - NORTH MIAMI WINSON WTP REHABILITATION GPJ GINT US GDT 5/8/13



1310 Neptune Drive
 Boynton Beach, FL 33426
 Telephone: 561-736-4900
 Fax: 561-737-9975

BORING NUMBER B-8

PAGE 1 OF 1

PROJECT NUMBER 110.2

CLIENT Hazen and Sawyer, P.C.

PROJECT NAME North Miami Winson WTP Rehabilitation

PROJECT LOCATION 12100 NW 11th Avenue, North Miami, FL

DATE STARTED 5/2/13 COMPLETED 5/2/13

SURFACE ELEVATION REFERENCE Same as road crown

DRILLING METHOD Standard Penetration Boring

GROUND WATER LEVELS:

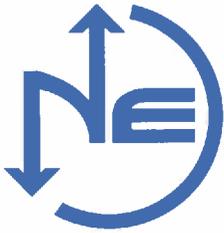
LOGGED BY R. Dowatsky CHECKED BY C. Gworek

AT TIME OF DRILLING 9.5 ft.0.0 ft

APPROXIMATE LOCATION OF BORING As located on site plan

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	Blows	N-Value	▲ SPT N VALUE ▲			
						10	20	30	40
						PL ----- MC ----- LL 20 40 60 80			
						<input type="checkbox"/> FINES CONTENT (%) <input type="checkbox"/> 20 40 60 80			
0		Brown to gray quartz fine SAND, some limestone fragments	AU 1						
		Lt. brown quartz fine SAND	AU 2						
		Lt. brown quartz fine SAND, some limestone fragments	AU 3						
5		Brown quartz fine SAND	AU 3						
		Brown slightly silty quartz fine SAND	AU 3						
		Lt. brown quartz fine SAND	SS 4	4-4-5-5	9				▲
10	▽		SS 5	4-4-4-4	8				▲
			SS 6	4-3-3-4	6				▲
15			SS 7	4-6-6-5/0"	12				>>▲
20		Tan quartz fine SAND	SS 8	5-6-6-8/0"	12				>>▲
25			SS 9	6-7-6-7/0"	13				>>▲
30		Lt. gray quartz fine SAND	SS 10	6-7-8-8/0"	15				>>▲
		Bottom of hole at 30.0 feet.							

TEST NUTTING BOREHOLE 2-110.2 HAZEN AND SAWYER, P.C. - NORTH MIAMI WINSON WTP REHABILITATION.GPJ_GINT US.GDT 5/8/13



Nutting Engineers

of Florida Inc. | Established 1967
Your Project is Our Commitment

2051 N.W. 112th Avenue, Suite 126
Miami, Florida 33172
305-557-3083
Toll Free: 877-NUTTING (688-8464)
Fax: 305-824-8827
Broward 954-941-8700
Palm Beach 561-736-4900
St. Lucie 772-408-1050
www.nuttingengineers.com

Geotechnical and Construction Materials | Engineering, Testing and Inspections | Environmental Services

Exfiltration Test

Client:	Hazen and Sawyer, P. C.	Order #:	110.2
Project:	North Miami Winson WTP Rehabilitation	Report #:	1
Location:	12100 NW 11th Avenue, North Miami, FL	Date:	5/2/2013
Test:	Usual Open Hole Exfiltration Test		
Surface Elevation:	Approx. Same as Road Crown	Water table from ground surface:	9.5'
Casing Diameter:	6"		
Tube Depth:	15'		

Test Location: As located on site plan

Material Description:

0-2'	Gray to brown quartz medium SAND, trace limestone fragments
2'-4.5'	Lt. gray to white quartz fine SAND
4.5'-8'	Lt. brown quartz fine SAND
8'-15'	White quartz medium SAND

One Minute Increme	Pumping Rate in Gal/Min
1	45+
2	45+
3	45+
4	45+
5	45+
6	45+
7	45+
8	45+
9	45+
10	45+

$K = 5.57 \times 10^{-2} \text{ cfs/ft}^2\text{ft.head}$

OFFICES

Palm Beach
Miami-Dade
St. Lucie

SOIL AND ROCK CLASSIFICATION CRITERIA

SAND/SILT

N-VALUE (bpf)	RELATIVE DENSITY
0 – 4	Very Loose
5 – 10	Loose
11 – 29	Medium
30 – 49	Dense
>50	Very dense
100	Refusal

CLAY/SILTY CLAY

N-VALUE (bpf)	UNCONFINED COMP. STRENGTH (tsf)	CONSISTENCY
<2	<0.25	v. Soft
2 – 4	0.25 – 0.50	Soft
5 – 8	0.50 – 1.00	Medium
9 – 15	1.00 – 2.00	Soft
16 – 30	2.00 – 4.00	v. Stiff
>30	>4.00	Hard

ROCK

N-VALUE (bpf)	RELATIVE HARDNESS	ROCK CHARACTERISTICS
$N \geq 100$	Hard to v. hard	Local rock formations vary in hardness from soft to very hard within short vertical and horizontal distances and often contain vertical solution holes of 3 to 36 inch diameter to varying depths and horizontal solution features. Rock may be brittle to split spoon impact, but more resistant to excavation.
$25 \leq N \leq 100$	Medium hard to hard	
$5 \leq N \leq 25$	Soft to medium hard	

PARTICLE SIZE

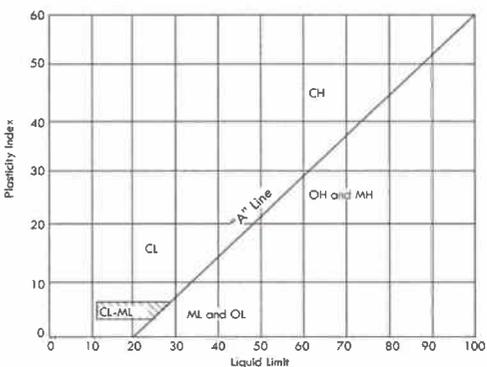
Boulder	>12 in.
Cobble	3 to 12 in.
Gravel	4.76 mm to 3 in.
Sand	0.074 mm to 4.76 mm
Silt	0.005 mm to 0.074 mm
Clay	<0.005 mm

DESCRIPTION MODIFIERS

0 – 5%	Slight trace
6 – 10%	Trace
11 – 20%	Little
21 – 35%	Some
>35%	And

Major Divisions	Group Symbols	Typical names	Laboratory classification criteria	
Coarse-grained soils (More than half of material is larger than No. 200 sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_z = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3 Not meeting all gradation requirements for GW Atterberg limits below "A" line or P.I. less than 4 Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols. $C_u = \frac{D_{60}}{D_{10}}$ greater than 6; $C_z = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3 Not meeting all gradation requirements for SW Atterberg limits below "A" line or P.I. less than 4 Limits plotting in hatched zone with P.I. between 4 and 7 are borderline cases requiring use of dual system. Atterberg limits above "A" line with P.I. more than 7
		Poorly graded gravels, gravel-sand mixtures, little or no fines	GP	
		Gravels with fines (Appreciable amount of fines)	GW ^d u	
		Clayey gravels, gravel-sand-clay mixtures	GC	
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	SW	
		Poorly graded sands, gravelly sands, little or no fines	SP	
		Sands with fines (Appreciable amount of fines)	SM ^d u	
		Silty sands, sand-silt mixtures		
		Clayey sands, sand-clay mixtures	SC	
Fine-grained soils (More than half of material is smaller than No. 200 sieve size)	Silt and clays (Liquid limit less than 50)	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	ML	
		Inorganic clays of low to medium plasticity, gravelly clays, sandy, clays, silty clays, lean clays	CL	
		Organic silts and organic silty clays of low plasticity	OL	
	Silt and clays (Liquid limit greater than 50)	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	MH	
		Inorganic clays or high plasticity, fat clays	CH	
		Organic clays of medium to high plasticity, organic silts	OH	
	Highly organic soils	PT	Peat and other highly organic soils	

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:
 Less than five percent.....GW, GP, SW, SP
 More than 12 percent.....GM, GC, SM, SC
 5 to 12 percent.....borderline cases requiring dual systems**



LIMITATIONS OF LIABILITY

WARRANTY

We warrant that the services performed by Nutting Engineers of Florida, Inc. are conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession in our area currently practicing under similar conditions at the time our services were performed. **No other warranties, expressed or implied, are made.** While the services of Nutting Engineers of Florida, Inc. are a valuable and integral part of the design and construction teams, we do not warrant, guarantee or insure the quality, completeness, or satisfactory performance of designs, construction plans, specifications we have not prepared, nor the ultimate performance of building site materials or assembly/construction.

SUBSURFACE EXPLORATION

Subsurface exploration is normally accomplished by test borings; test pits are sometimes employed. The method of determining the boring location and the surface elevation at the boring is noted in the report. This information is represented in the soil boring logs and/or a drawing. The location and elevation of the borings should be considered accurate only to the degree inherent with the method used and may be approximate.

The soil boring log includes sampling information, description of the materials recovered, approximate depths of boundaries between soil and rock strata as encountered and immediate depth to water data. The log represents conditions recorded specifically at the location where and when the boring was made. Site conditions may vary through time as will subsurface conditions. The boundaries between different soil strata as encountered are indicated at specific depths; however, these depths are in fact approximate and dependent upon the frequency of sampling, nature and consistency of the respective strata. Substantial variation between soil borings may commonly exist in subsurface conditions. Water level readings are made at the time and under conditions stated on the boring logs. Water levels change with time, precipitation, canal level, local well drawdown and other factors. Water level data provided on soil boring logs shall not be relied upon for groundwater based design or construction considerations.

LABORATORY AND FIELD TESTS

Tests are performed in *general* accordance with specific ASTM Standards unless otherwise indicated. All criteria included in a given ASTM Standard are not always required and performed. Each test boring report indicates the measurements and data developed at each specific test location.

ANALYSIS AND RECOMMENDATIONS

The geotechnical report is prepared primarily to aid in the design of site work and structural foundations. Although the information in the report is expected to be sufficient for these purposes, it shall not be utilized to determine the cost of construction nor to stand alone as a construction specification. Contractors shall verify subsurface conditions as may be appropriate prior to undertaking subsurface work.

Report recommendations are based primarily on data from test borings made at the locations shown on the test boring reports. Soil variations commonly exist between boring locations. Such variations may not become evident until construction. Test pits sometimes provide valuable supplemental information that derived from soil borings. If variations are then noted, the geotechnical engineer shall be contacted in writing immediately so that field conditions can be examined and recommendations revised if necessary.

The geotechnical report states our understanding as to the location, dimensions and structural features proposed for the site. **Any significant changes of the site improvements or site conditions must be communicated in writing to the geotechnical engineer immediately** so that the geotechnical analysis, conclusions, and recommendations can be reviewed and appropriately adjusted as necessary.

CONSTRUCTION OBSERVATION

Construction observation and testing is an important element of geotechnical services. The geotechnical engineer's field representative (G.E.F.R.) is the "owner's representative" observing the work of the contractor, performing tests and reporting data from such tests and observations. **The geotechnical engineer's field representative does not direct the contractor's construction means, methods, operations or personnel.** The G.E.F.R. does not interfere with the relationship between the owner and the contractor and, except as an observer, does not become a substitute owner on site. The G.E.F.R. is responsible for his/her safety, but has no responsibility for the safety of other personnel at the site. The G.E.F.R. is an important member of a team whose responsibility is to observe and test the work being done and report to the owner whether that work is being carried out in general conformance with the plans and specifications. The enclosed report may be relied upon solely by the named client.

Exhibit 2

Lead Report

The attached report is provided for informational purposes. The Owner and the Engineer make no guarantee, either expressed or implied, as to its accuracy or completeness.

Today's Date: 2/25/2013

Project Number: 20130355

Page 1 of 19

Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

5 Structures
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

Project Summary

Pursuant to your request; ARS Environmental, Inc., has performed an X-ray fluorescence (XRF) survey on 2/22/2013 and limited to the above referenced location. The device used to perform the survey: Niton XLp.

The purpose of our inspection was to determine the presence and location of lead based paint on painted surfaces throughout the building.

Inspection procedures and sample collections were conducted in accordance with the US Environmental Protection Agency (EPA) guidelines and in accordance with Chapter 7 of the Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, 1997 Revision.

The results, findings, conclusions, and recommendations expressed in this report are based only on conditions which were observed during inspections. ARS Environmental, Inc. makes no representation or assumptions as to past conditions or future occurrences. It is not within the scope of this survey to remove surface materials to investigate portions of the structure or materials which lay beneath the surface. Our selection of sample locations and frequency is based upon our observations and the assumption that like materials in the same area are homogeneous.

When implementing the response actions, parties responsible for final selection should remember that actions shall be sufficient to protect human health and the environment, but may also be the least burdensome method. Nothing in these recommendations should be construed as prohibiting or discouraging removal.

Housing and Urban Development (HUD) Regulated:

No

Laboratory Results

Based on X-ray fluorescence (XRF) results, lead was detected in the areas sampled. The amount detected was above the regulatory limit.

It has been a pleasure working with you. Please call on us again.

Regards,



Alex Front,
ARS Environmental, Inc.

Today's Date: 2/25/2013	Project Number: 20130355	Page 2 of 19
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Prepared For:	Job Site:
Jorge C. Atoche Hazen And Sawyer 4000 Hollywood Boulevard 750 N, North Tower Hollywood, FL 33021	5 Structures North Miami Water Treatment Plant 12098 North West 11th Avenue North Miami, FL 33168

US EPA Lead Based Paint Activities Certification

United States Environmental Protection Agency

This is to certify that

ARS Environmental, Inc

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226

In the Jurisdiction of:

Florida

This certification is valid from the date of issuance and expires July 8, 2013

FL-73133-1
Certification #
July 8, 2010
Issued On

OCT 22 2010




Jeaneanne M. Gettle, Chief
Pesticides and Toxic Substances Branch

Today's Date: 2/25/2013	Project Number: 20130355	Page 3 of 19
-------------------------	--------------------------	--------------

Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

5 Structures
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

US EPA Lead Based Paint Supervisor Certification

United States Environmental Protection Agency

This is to certify that

Alexander Front

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as a:

Supervisor

In the Jurisdiction of:

Florida

This certification is valid from the date of issuance and expires June 27, 2013

FL-S-3783-2

Certification #

AUG 12 2010

Issued On



A handwritten signature in blue ink, appearing to read "Jeaneanne M. Gettle".

Jeaneanne M. Gettle, Chief

Pesticides and Toxic Substances Branch

Today's Date: 2/25/2013 **Project Number: 20130355** Page 5 of 19

Prepared For: **Jorge C. Atoche**
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site: **5 Structures**
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

Technician Certification

CWD International, Inc. dba

Environmental Training Fund

39235.581CERT/PBIE 900 N.W. 5TH Avenue, Fort Lauderdale, Florida 33311 (954) 524-7208 Processed By:

This is to Certify that
Jeffrey Montalvan


X X X - X X - 7 3 2 5

1551 NE 167 St. , Fort Lauderdale, FL 33162

has successfully completed an English
Lead 24 Hr. Paint Inspector Course

31-May-11 TO 2-Jun-11

Initial courses include an extensive hands-on component.
Complies with Sec. 402 TSCA 15 USC 2682 and Accredited by the IL-DPH, CT-DPH, MO-DOH, PA-DLI, DE-DEH, NY-DOH, VA-DEH, and WI-DOH.

Trainer(s): James F. Stump

TEST SCORE: 86 % Training Address: 900 Northwest Fifth Ave., Fort Lauderdale, FL 33311

Passed the hands-on assessment & completed the course exam on: **2-Jun-11** James F. Stump, Training Manager

This Certificate Expires:

OSHA DATE: 1-Jun-12		1-Jun-14
SUNSET DATE: 1-Jun-14	0 6 / 0 1 / 1 4	GA-PreAudit
INTERIM DATE: 29-Nov-11		

USEPA's actual expiration date will appear on individual's license. See individual state rules for actual state expiration date.

Seagull

To Authenticate Certificate:
www.seagulltraining.com
1-800-966-9933

UNDER CIVIL AND CRIMINAL PENALTIES OF LAW FOR MAKING OR SUBMITTING OF FALSE OR FRAUDULENT STATEMENTS OR REPRESENTATIONS (18 U.S.C. 1001 AND 18 U.S.C. 1015), I CERTIFY THAT THIS TRAINING COURSE'S WRITING APPLICABLE REQUIREMENTS OF TITLE 40, PART 40.100, STANDARDS CONTROL ACT, 40 CFR PART 40.100, AND 40 CFR PART 40.101, APPLIED FEDERAL, STATE, AND LOCAL REGULATIONS AND STANDARDS.

Certificate Number.....  1 4 9 0 8 0

Course Number **SE1122**



Jeffrey Montalvan
Lead Paint Inspector

Today's Date: 2/25/2013

Project Number: 20130355

Page 6 of 19

Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

5 Structures
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

Technician Niton XRF Certification

Radiation Safety and Operation of Niton XRF Analyzers

This is to certify that

Jeffrey Montalvan

has successfully completed the one day Thermo Fisher Scientific Niton Analyzer Manufacturer's Training Course. The topics of this course include radiation safety, monitoring, device operation, and machine maintenance of the Niton XRF Analyzer.

Course date: April 5, 2012
Location: Tampa, FL
Certificate Number: 17:580038000001F8vaZ

CUSTOMER TRAINING



Sophie Ung
Sophie Ung
Radiation Safety Training Coordinator

J. Blute
James Blute, CHP
Manager of Health and Safety

Part of Thermo Fisher Scientific

Thermo
SCIENTIFIC

A handwritten signature in black ink, appearing to read "Jeffrey Montalvan".

Jeffrey Montalvan
NITON XRF Training

Today's Date: 2/25/2013

Project Number: 20130355

Page 7 of 19

Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

5 Structures
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

XRF Analysis

Sample Number	Description, And Color	Location	Sample Details And Analysis
1	Shutter Calibration		Sample Condition: Calibration Lead / Square Centimeter (cm ²): Calibration Contains Lead: Negative
2	Paint Metal	White Tank Side; A, Floor; First Outside	Sample Condition: Intact Lead / Square Centimeter (cm ²): 1.80 Contains Lead: Positive; Above
	12098 Nw 11ave(tructure-1)		
3	Paint Metal	White Tank Side; B, Floor; First Outside	Sample Condition: Intact Lead / Square Centimeter (cm ²): 4.40 Contains Lead: Positive; Above
	12098 Nw 11ave(tructure-1)		
4	Paint Metal	White Tank Side; C, Floor; First Outside	Sample Condition: Intact Lead / Square Centimeter (cm ²): 10.30 Contains Lead: Positive; Above
	12098 Nw 11ave(tructure-1)		
5	Paint Metal	White Tank Side; D, Floor; First Outside	Sample Condition: Intact Lead / Square Centimeter (cm ²): 3.30 Contains Lead: Positive; Above
	12098 Nw 11ave(tructure-1)		
6	Paint Metal	Blue Pipe Side; B, Floor; First Outside	Sample Condition: Intact Lead / Square Centimeter (cm ²): 1.10 Contains Lead: Positive; Above
	12098 Nw 11ave(tructure-1)		
7	Paint Metal	Blue Pipe Side; B, Floor; First Outside	Sample Condition: Intact Lead / Square Centimeter (cm ²): Below Detection Limit Contains Lead: Negative
	12098 Nw 11ave(tructure-1)		
8	Paint Metal	Blue Pipe Side; A, Floor; First Outside	Sample Condition: Intact Lead / Square Centimeter (cm ²): Below Detection Limit Contains Lead: Negative
	12098 Nw 11ave(tructure-1)		

Today's Date: 2/25/2013

Project Number: 20130355

Page 8 of 19

Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

5 Structures
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

XRF Analysis

Sample Number	Description, And Color	Location	Sample Details And Analysis
9	Paint Metal	White	Tank Side; A, Floor; First Outside
	12098 Nw 11ave(tructure-2)		Sample Condition: Intact Lead / Square Centimeter (cm²): 3.20 Contains Lead: Positive; Above
10	Paint Metal	White	Tank Side; B, Floor; First Outside
	12098 Nw 11ave(tructure-2)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
11	Paint Metal	White	Tank Side; C, Floor; First Outside
	12098 Nw 11ave(tructure-2)		Sample Condition: Intact Lead / Square Centimeter (cm²): 1.80 Contains Lead: Positive; Above
12	Paint Metal	White	Tank Side; D, Floor; First Outside
	12098 Nw 11ave(tructure-2)		Sample Condition: Intact Lead / Square Centimeter (cm²): 1.90 Contains Lead: Positive; Above
13	Paint Metal	Blue	Pipe Side; D, Floor; First Outside
	12098 Nw 11ave(tructure-2)		Sample Condition: Peeling Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
14	Paint Metal	Blue	Pipe Side; C, Floor; First Outside
	12098 Nw 11ave(tructure-2)		Sample Condition: Peeling Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
15	Paint Metal	Blue	Column Side; A, Floor; First Outside
	12098 Nw 11ave(tructure-3)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
16	Paint Metal	Blue	Column Side; B, Floor; First Outside
	12098 Nw 11ave(tructure-3)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative

Today's Date: 2/25/2013

Project Number: 20130355

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Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

5 Structures
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

XRF Analysis

Sample Number	Description, And Color	Location	Sample Details And Analysis
17	Paint Metal	Blue	Column Side; C, Floor; First Outside
	12098 Nw 11ave(tructure-3)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
18	Paint Metal	Blue	Column Side; D, Floor; First Outside
	12098 Nw 11ave(tructure-3)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
19	Paint Metal	Blue	Pipe Side; A, Floor; First Outside
	12098 Nw 11ave(tructure-3)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
20	Paint Metal	White	Tank Side; A, Floor; First Outside
	12098 Nw 11ave(tructure-4)		Sample Condition: Intact Lead / Square Centimeter (cm²): 1.40 Contains Lead: Positive; Above
21	Paint Metal	White	Tank Side; B, Floor; First Outside
	12098 Nw 11ave(tructure-4)		Sample Condition: Intact Lead / Square Centimeter (cm²): 1.50 Contains Lead: Positive; Above
22	Paint Metal	White	Tank Side; C, Floor; First Outside
	12098 Nw 11ave(tructure-4)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
23	Paint Metal	White	Tank Side; C, Floor; First Outside
	12098 Nw 11ave(tructure-4)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
24	Paint Metal	White	Tank Side; C, Floor; First Outside
	12098 Nw 11ave(tructure-4)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative

Today's Date: 2/25/2013

Project Number: 20130355

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Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

5 Structures
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

XRF Analysis

Sample Number	Description, And Color	Location	Sample Details And Analysis
25	Paint Metal	White	Tank Side; D, Floor; First Outside
	12098 Nw 11ave(tructure-4)		Sample Condition: Intact Lead / Square Centimeter (cm²): 1.00 Contains Lead: Positive; Above
26	Paint Metal	Blue	Pipe Side; A, Floor; First Outside
	12098 Nw 11ave(tructure-4)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
27	Paint Metal	Blue	Pipe Side; A, Floor; First Outside
	12098 Nw 11ave(tructure-4)		Sample Condition: Intact Lead / Square Centimeter (cm²): 1.00 Contains Lead: Positive; Above
28	Paint Metal	Blue	Door Side; D, Floor; First Outside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
29	Paint Transite	White	Panel Side; D, Floor; First Outside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
30	Paint Concrete	White	Wall Side; A, Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
31	Paint Concrete	White	Wall Side; C, Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
32	Paint Wood	White	Doorframe Side; C, Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative

Today's Date: 2/25/2013

Project Number: 20130355

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Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

5 Structures
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

XRF Analysis

Sample Number	Description, And Color	Location	Sample Details And Analysis
33	Paint Metal	Blue	Pump Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
34	Paint Metal	Blue	Pump Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
35	Paint Metal	Blue	Pump Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
36	Paint Metal	Blue	Pump Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
37	Paint Metal	Blue	Pump Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
38	Paint Metal	Blue	Pump-vertical Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): 3.00 Contains Lead: Positive; Above
39	Paint Metal	Blue	Pump-vertical Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
40	Paint Metal	Green	Pipe Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Peeling Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative

Today's Date: 2/25/2013

Project Number: 20130355

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Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

5 Structures
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

XRF Analysis

Sample Number	Description, And Color	Location	Sample Details And Analysis
41	Paint Metal	Green	Pipe Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Peeling Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
42	Paint Metal	Blue	Pipe Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
43	Paint Metal	Blue	Pipe Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
44	Paint Metal	Blue	Pipe Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
45	Paint Metal	Yellow	Belt Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
46	Paint Metal	Yellow	Belt Side; , Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
47	Paint Concrete	White	Wall Side; A, Floor; First Outside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): Below Detection Limit Contains Lead: Negative
48	Paint Metal	Green	Column Side; C, Floor; First Inside
	12098 Nw 11ave(tructure-5)		Sample Condition: Intact Lead / Square Centimeter (cm²): 3.20 Contains Lead: Positive; Above

Today's Date: 2/25/2013 **Project Number: 20130355** Page 13 of 19

<p>Prepared For:</p> <hr/> <p>Jorge C. Atoche Hazen And Sawyer 4000 Hollywood Boulevard 750 N, North Tower Hollywood, Fl 33021</p>	<p>Job Site:</p> <hr/> <p>5 Structures North Miami Water Treatment Plant 12098 North West 11th Avenue North Miami, Fl 33168</p>
--	---

XRF Analysis

Sample Number, Description, And Color	Location	Sample Details And Analysis							
49	Paint Metal	Green	Column Side; C, Floor; First Inside						
12098 Nw 11ave(tructure-5)		<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Sample Condition:</td> <td>Intact</td> </tr> <tr> <td>Lead / Square Centimeter (cm²):</td> <td>2.50</td> </tr> <tr> <td>Contains Lead:</td> <td>Positive; Above</td> </tr> </table>		Sample Condition:	Intact	Lead / Square Centimeter (cm ²):	2.50	Contains Lead:	Positive; Above
Sample Condition:	Intact								
Lead / Square Centimeter (cm ²):	2.50								
Contains Lead:	Positive; Above								

Today's Date: 2/25/2013

Project Number: 20130355

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Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

5 Structures
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

Recommendations - XRF Locations Testing Positive but Below the Regulatory Limit

Sample Number And Description

Location

Sample Details And Laboratory Analysis

NONE DETECTED

The above samples are positive for lead below the regulatory limits. Current Federal regulatory standards only apply to properties regulated by the the Department of Housing and Urban Development (HUD). This is not a HUD regulated structure, therefore these recommendations do not apply to this structure.

While there are no Federal Regulatory Standards, the OSHA Lead in Construction Standard (29 CFR 1926.62) shall apply to any construction work including renovation and demolition that may disturb the above referenced surfaces.

In addition to the above considerations, the presence of lead in demolition debris has the potential to impose limitations on where and how the debris may be disposed. The Resource Conservation and Recovery Act (RCRA), Subtitles C and D, require that the waste be analyzed to determine the amount of leachable lead present. The type of test to be performed on the waste is the Toxicity Characteristic Leaching Procedure (TCLP) for lead. The results of this test will determine whether the material must be handled and disposed of as hazardous waste. For structures containing large amounts of lead-containing paint, a significant potential for

Today's Date: 2/25/2013 Project Number: 20130355 Page 15 of 19

Prepared For: Jorge C. Atoche Hazen And Sawyer 4000 Hollywood Boulevard 750 N, North Tower Hollywood, FL 33021	Job Site: 5 Structures North Miami Water Treatment Plant 12098 North West 11th Avenue North Miami, FL 33168
---	---

Recommendations - XRF Sampling Locations Testing Positive and Above Regulatory Limit

Sample Number	Description, And Color	Color	Location	Sample Condition:	Sample Details And Laboratory Analysis
Sample 2	Paint Metal	White	Tank Side; A, Floor; First Outside	Intact	Lead Per Square Centimeter (cm ²): 1.80 Contains Lead: Positive; Above
Sample 3	Paint Metal	White	Tank Side; B, Floor; First Outside	Intact	Lead Per Square Centimeter (cm ²): 4.40 Contains Lead: Positive; Above
Sample 4	Paint Metal	White	Tank Side; C, Floor; First Outside	Intact	Lead Per Square Centimeter (cm ²): 10.30 Contains Lead: Positive; Above
Sample 5	Paint Metal	White	Tank Side; D, Floor; First Outside	Intact	Lead Per Square Centimeter (cm ²): 3.30 Contains Lead: Positive; Above
Sample 6	Paint Metal	Blue	Pipe Side; B, Floor; First Outside	Intact	Lead Per Square Centimeter (cm ²): 1.10 Contains Lead: Positive; Above
Sample 9	Paint Metal	White	Tank Side; A, Floor; First Outside	Intact	Lead Per Square Centimeter (cm ²): 3.20 Contains Lead: Positive; Above

The above samples are positive for lead below the regulatory limits. Current Federal regulatory standards only apply to properties regulated by the the Department of Housing and Urban Development (HUD). This is not a HUD regulated structure, therefore these recommendations do not apply to this structure.

While there are no Federal Regulatory Standards, the OSHA Lead in Construction Standard (29 CFR 1926.62) shall apply to any construction work including renovation and demolition that may disturb the above referenced surfaces.

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10097 Cleary Boulevard • #305 • Plantation, FL 33324 • Phone: 954-227-2402 • Fax: 866-816-5110
www.arsenvironmental.com • sales@arsenvironmental.com

Today's Date: 2/25/2013 Project Number: 20130355 Page 16 of 19

<p>Prepared For:</p> <p>Jorge C. Atoche Hazen And Sawyer 4000 Hollywood Boulevard 750 N, North Tower Hollywood, FL 33021</p>	<p>Job Site:</p> <p>5 Structures North Miami Water Treatment Plant 12098 North West 11th Avenue North Miami, FL 33168</p>
--	---

Recommendations - XRF Sampling Locations Testing Positive and Above Regulatory Limit

Sample Number	Description, And Color	Color	Location	Sample Details And Laboratory Analysis	Analysis Results
Sample 11	Paint Metal	White	Tank Side; C, Floor; First Outside	Sample Condition: Lead Per Square Centimeter (cm²): Contains Lead:	Intact 1.80 Positive; Above
Sample 12	Paint Metal	White	Tank Side; D, Floor; First Outside	Sample Condition: Lead Per Square Centimeter (cm²): Contains Lead:	Intact 1.90 Positive; Above
Sample 20	Paint Metal	White	Tank Side; A, Floor; First Outside	Sample Condition: Lead Per Square Centimeter (cm²): Contains Lead:	Intact 1.40 Positive; Above
Sample 21	Paint Metal	White	Tank Side; B, Floor; First Outside	Sample Condition: Lead Per Square Centimeter (cm²): Contains Lead:	Intact 1.50 Positive; Above
Sample 25	Paint Metal	White	Tank Side; D, Floor; First Outside	Sample Condition: Lead Per Square Centimeter (cm²): Contains Lead:	Intact 1.00 Positive; Above
Sample 27	Paint Metal	Blue	Pipe Side; A, Floor; First Outside	Sample Condition: Lead Per Square Centimeter (cm²): Contains Lead:	Intact 1.00 Positive; Above

The above samples are positive for lead below the regulatory limits. Current Federal regulatory standards only apply to properties regulated by the the Department of Housing and Urban Development (HUD). This is not a HUD regulated structure, therefore these recommendations do not apply to this structure.

While there are no Federal Regulatory Standards, the OSHA Lead in Construction Standard (29 CFR 1926.62) shall apply to any construction work including renovation and demolition that may disturb the above referenced surfaces.

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Today's Date: 2/25/2013 **Project Number: 20130355** Page 17 of 19

Prepared For:	Job Site:
Jorge C. Atoche Hazen And Sawyer 4000 Hollywood Boulevard 750 N, North Tower Hollywood, Fl 33021	5 Structures North Miami Water Treatment Plant 12098 North West 11th Avenue North Miami, Fl 33168

Recommendations - XRF Sampling Locations Testing Positive and Above Regulatory Limit

Sample Number, Description, And Color		Location	Sample Details And Laboratory Analysis							
Sample 38	Paint Metal	Blue	Pump-vertical Side; , Floor; First Inside	<table border="0"> <tr><td>Sample Condition:</td><td>Intact</td></tr> <tr><td>Lead Per Square Centimeter (cm²):</td><td>3.00</td></tr> <tr><td>Contains Lead:</td><td>Positive; Above</td></tr> </table>	Sample Condition:	Intact	Lead Per Square Centimeter (cm²):	3.00	Contains Lead:	Positive; Above
Sample Condition:	Intact									
Lead Per Square Centimeter (cm²):	3.00									
Contains Lead:	Positive; Above									
Sample 48	Paint Metal	Green	Column Side; C, Floor; First Inside	<table border="0"> <tr><td>Sample Condition:</td><td>Intact</td></tr> <tr><td>Lead Per Square Centimeter (cm²):</td><td>3.20</td></tr> <tr><td>Contains Lead:</td><td>Positive; Above</td></tr> </table>	Sample Condition:	Intact	Lead Per Square Centimeter (cm²):	3.20	Contains Lead:	Positive; Above
Sample Condition:	Intact									
Lead Per Square Centimeter (cm²):	3.20									
Contains Lead:	Positive; Above									
Sample 49	Paint Metal	Green	Column Side; C, Floor; First Inside	<table border="0"> <tr><td>Sample Condition:</td><td>Intact</td></tr> <tr><td>Lead Per Square Centimeter (cm²):</td><td>2.50</td></tr> <tr><td>Contains Lead:</td><td>Positive; Above</td></tr> </table>	Sample Condition:	Intact	Lead Per Square Centimeter (cm²):	2.50	Contains Lead:	Positive; Above
Sample Condition:	Intact									
Lead Per Square Centimeter (cm²):	2.50									
Contains Lead:	Positive; Above									

The above samples are positive for lead below the regulatory limits. Current Federal regulatory standards only apply to properties regulated by the the Department of Housing and Urban Development (HUD). This is not a HUD regulated structure, therefore these recommendations do not apply to this structure.

While there are no Federal Regulatory Standards, the OSHA Lead in Construction Standard (29 CFR 1926.62) shall apply to any construction work including renovation and demolition that may disturb the above referenced surfaces.

In addition to the above considerations, the presence of lead in demolition debris has the potential to impose limitations on where and how the debris may be disposed. The Resource Conservation and Recovery Act (RCRA), Subtitles C and D, require that the waste be analyzed to determine the amount of leachable lead present. The type of test to be performed on the waste is the Toxicity Characteristic Leaching Procedure (TCLP) for lead. The results of this test will determine whether the material must be handled and disposed of as hazardous waste. For structures containing large amounts of lead-containing paint, a significant potential for

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Prepared For:	Job Site:
Jorge C. Atoche Hazen And Sawyer 4000 Hollywood Boulevard 750 N, North Tower Hollywood, Fl 33021	5 Structures North Miami Water Treatment Plant 12098 North West 11th Avenue North Miami, Fl 33168

Material Conditions and General Comments

Material Condition	Total Area of Deteriorated Paint on Each Component		
	Type of Building Component(1)	Intact	Far(2)
Exterior components with large surface areas	Entire surface is intact	Less than or equal to 10 Sq. Ft.	More than 10 Sq. Ft.
Interior components with large surface areas (walls, ceilings, floors, doors)	Entire surface is intact	Less than or equal to 2 Sq. Ft.	More than 2 Sq. Ft.
Interior and exterior components with small surface areas (window sills, baseboards, soffits, trim)	Entire surface is intact	Less than or equal to 10% of the total surface area of the component	More than 10% of the total surface area of the component
Notes			
(1) "Building component" in this table refers to each individual component or side of building, not the combined surface area of all similar components in a room (e.g., a wall with one square foot of deteriorated paint is in "fair" condition, even if the other 3 walls in a room have no deteriorated paint).			
(2) Surfaces in "fair" condition should be repaired and/or monitored, but are not considered to be "lead-based paint hazards" as defined in Title X.			
(3) Surfaces in "poor" condition are considered to be "lead-based paint hazards" as defined in Title X and should be addressed through abatement or interim controls.			

General Comments	
1	The condition of this building component is intact.
2	If this component is to be removed or disturbed prior to a total comprehensive abatement project, the lead based paint should be abated (removed or encapsulated) from the component prior to the component being removed or disturbed
3	If there is a substantial change in the condition of this component then the lead based paint should be abated from the surface of the component or the component should be removed and replaced.
4	Laboratory analysis by atomic absorption spectrometry confirmed that this building component is positive and exceeds the regulatory limits on lead, 1.0 mg/cm ² or 5,000 ppm _ HUD definition of lead based paint requiring abatement.
5	Laboratory analysis by atomic absorption spectrometry confirmed that this building component is positive and does not exceeds the regulatory limits on lead, 1.0 mg/cm ² , 5,000 ppm or 0.50% by weight _ HUD definition of lead based paint requiring abatement.
6	Laboratory analysis by atomic absorption spectrometry confirmed that this building component is negative.

Today's Date: 2/25/2013

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Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

5 Structures
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

Regulatory Limits on Lead

The following exposure limits for lead have been promulgated by the various agencies previously mentioned.

Paint

- 600 ppm - Consumer Product Safety Commission
- 1.0 mg/cm² or 5,000 ppm or 0.50% by weight - HUD definition of lead based paint requiring abatement

Dust

- 40 ug/ft² - HUD Clearance Level for Floors
- 250 ug/ft² - HUD Clearance Level for Interior Window Sills
- 800 ug/ft² - HUD Clearance Level for Window Wells

Blood

- 10 Mg/dl - COC threshold for lead poisoning in children
- 30 Mg/dl - OSHA permissible blood lead level
- 50 Mg/dl - OSHA blood lead level requiring medical removal of worker

Soil

- 400 ppm - EPA draft soil screening guidance

Water

- 0.015 milligrams of lead per liter of water (mg/L) or of 15 parts per billion (ppb) - EPA Action Level
- 1.5Mg/m³ - EPA National Ambient Air (Quality Standard)
- 30 Mg/m³ - OSHA Action Level (8 hour time-weighted average)
- 50 Mg/m³ - OSHA Permissible Exposure Limit (PEL) (General Industry)
- 200 Mg/m³ - OSHA Permissible Exposure Limit (Construction Industry)

Hazardous Waste

- 5 ppm analyzed as "leachable" using Toxicity Characteristic Leaching Procedure (TCLP)

Exhibit 3

Asbestos Report

The attached report is provided for informational purposes. The Owner and the Engineer make no guarantee, either expressed or implied, as to its accuracy or completeness.

Today's Date: 2/24/2013

Project Number: 20130355-5

Page 1 of 11

Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, Fl 33021

Job Site:

Structure 5: Hsps Room, Area: 1,150 Sf
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, Fl 33168

Asbestos Survey — Project Summary

Pursuant to your request; ARS Environmental, Inc., has performed an Asbestos Building Survey on 2/22/2013 and limited to the above referenced location.

The **Interior/Exterior/Roof** of the above referenced location was visually inspected to identify building materials that may contain asbestos. Suspect materials were collected and samples sent to laboratory for analysis.

Laboratory Results

Based On The Laboratory Analysis, Asbestos Was Detected In Amounts Greater Than 1% In The Secured Bulk Samples.

It has been a pleasure working with you. Please call on us again.

Regards,



Alex Front,
ARS Environmental, Inc.

Today's Date: 2/24/2013 **Project Number: 20130355-5** Page 2 of 11

Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

Structure 5: Hsps Room, Area: 1,150 Sf
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

Asbestos Survey – Certification

I, Timothy F. Caughey, hereby certify that this asbestos survey was conducted at the above referenced Job Site on 2/22/2013, and performed by Jeffrey Montalvan, accredited by the EPA as AHERA Inspector(s), utilizing the code of the Federal Regulation Standards, 40 CFR, Part 763, Subpart E, Section 763.80-763.99 and the State Asbestos Regulations, Florida Statutes 469.003.

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AC# 5782778

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
ASBESTOS LICENSING UNIT

SEQ# L11092704902

DATE	BATCH NUMBER	LICENSE NBR
09/27/2011	118055585	ZA0000164

The ASBESTOS BUSINESS ORGANIZATION
Named below IS LICENSED
Under the provisions of Chapter 469 FS.
Expiration date: NOV 30, 2013

ARS ENVIRONMENTAL, INC.
TIMOTHY CAUGHEY
10097 CLEARY BOULEVARD
PLANTATION FL 33324

RICK SCOTT
GOVERNOR

KEN LAWSON
SECRETARY

DISPLAY AS REQUIRED BY LAW

Timothy F. Caughey, M.P.H.
Florida Licensed Consultant

Today's Date: 2/24/2013

Project Number: 20130355-5

Page 3 of 11

Prepared For:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Job Site:

Structure 5: Hsps Room, Area: 1,150 Sf
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

Asbestos Survey — Technician Certification

Asbestos Consulting & Training Systems

39858.5073CERT/BIR 900 N.W. 5TH Avenue, Fort Lauderdale, Florida 33311 (954) 524-7208

This is to Certify that
Jeffrey Montalvan

X X X - X X - 7 3 2 5

1551 NE 167 St. Apt. #107S, North Miami Bch., FL

has successfully completed an English
Asbestos Building Inspection Refresher

15-Feb-13 TO 15-Feb-13

Individual above has completed the requisite training for accreditation under TSCA Title II
Meets state requirements of FL49-0001020/CN-0006273 and UT (6.0 core).

NDAAC Provider #451 Trainer(s): James F. Stump
Training Address: 900 NW 5 AV, Fort Lauderdale, FL, 33311

Attended and Satisfactorily Completed Exam with a Passing Score of 70% or Better on: 15-Feb-13

This Certificate Expires:

15-Feb-14 0 2 / 1 5 / 1 4

Processed By:
Seagull
To Authenticate Certificate:
www.seagulltraining.com
1-800-966-9933

UNDER CIVIL AND CRIMINAL PENALTIES OF LAW FOR MAKING OR
SUBMISSION OF FALSE OR GRADULENT REPRESENTATION
REPRESENTATIONS (18 U.S.C. 1001 AND 18 U.S.C. 1011)
CERTIFICATE THIS TRAINING COURSE IS FULLY APPLICABLE
REQUIREMENTS OF TITLE 49 OF THE FEDERAL REGISTER
CONTAINS 49 CFR 191.16 FOR THE COURSE. ALL
APPLICABLE FEDERAL STATUTES AND REGULATIONS ARE
APPLIED.

James F. Stump, Course Sponsor
Certificate Number..... 1 5 6 1 7 7

Course Number SE1307

Jeffrey Montalvan
Certified Asbestos Surveyor
ARS Environmental, Inc.

Today's Date: 2/24/2013

Project Number: 20130355-5

Page 4 of 11

Prepared For:

Job Site:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, Fl 33021

Structure 5: Hsps Room, Area: 1,150 Sf
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, Fl 33168

Asbestos Survey — Bulk Sample Itemization

Sample Number	Material Class / Sample Description / Location	Sample Condition	Physical Damage	Water Damage	Material Contact	Sample Friability	Approximate Size	Positive Stop	Asbestos Detected
Sample 1	Miscellaneous	Good	Yes	None	High	Non-friable	400 Sq. Ft.		Yes
Layer	Transite Panels	H S P S Room South And West Walls							
Sample 2	Miscellaneous	Good	Yes	None	High	Non-friable	Included Above		Yes
Layer	Transite Panels	H S P S Room South And West Walls							
Sample 3	Miscellaneous	Good	Yes	None	High	Non-friable	Included Above		Yes
Layer	Transite Panels	H S P S Room South And West Walls							
Sample 4	Miscellaneous	Good	Yes	None	High	Friable	400 Sq. Ft.		Asbestos Not Detected
Layer	2' X 3' Wall Tiles; Wormlike Design	H S P S Room South And West Walls On Panels							
Sample 5	Miscellaneous	Good	Yes	None	High	Friable	Included Above		Asbestos Not Detected
Layer	2' X 3' Wall Tiles; Wormlike Design	H S P S Room South And West Walls On Panels							
Sample 6	Miscellaneous	Good	Yes	None	High	Friable	Included Above		Asbestos Not Detected
Layer	2' X 3' Wall Tiles; Wormlike Design	H S P S Room South And West Walls On Panels							

The following non-suspect materials were observed during the survey (no samples were taken):

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Project Number: 20130355-5

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Prepared For:

Job Site:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, Fl 33021

Structure 5: Hsps Room, Area: 1,150 Sf
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, Fl 33168

Asbestos Survey — Bulk Sample Itemization

Sample Number	Material Class / Sample Description / Location	Sample Condition	Physical Damage	Water Damage	Material Contact	Sample Friability	Approximate Size	Positive Stop	Asbestos Detected
Sample 7	Miscellaneous	Good	None	None	High	Non-friable	3,024 Sq. Ft.		Asbestos Not Detected
Layer	Concrete Structure	H S P S Room Interior / Exterior Walls							

The following non-suspect materials were observed during the survey (no samples were taken):

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Prepared For:

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Hazen And Sawyer
4000 Hollywood Boulevard
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Job Site:

Structure 5: Hsps Room, Area: 1,150 Sf
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12098 North West 11th Avenue
North Miami, Fl 33168

Friable Asbestos Containing Material

Sample Number	Description / Material Class	Location	Approximate Size	Sample Condition	Physical Damage	Water Damage	Material Contact	Sample Friability	Asbestos Detected
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NONE DETECTED

Recommendations

Friable: any material containing more than one percent asbestos which has been applied on ceilings, walls, structural members, piping, duct work, or any other part of a building, which when dry, may be crumbled, pulverized, or reduced to powder by hand pressure.

The following work practice should be followed whenever demolition/renovation activities involving RACM occur: Notify EPA of intention to demolish/renovate, remove all RACM from a facility being demolished or renovated before any disruptive activity begins or before access to the material is precluded, keep RACM adequately wet before, during, and after removal operations, conduct demolition/renovation activities in a manner which produces no visible emissions to the outside air, and handle and dispose of all RACM in an approved manner.

The above building material is considered friable and must be removed by a Florida Licensed Asbestos Abatement Contractor, prior to any disturbance caused by renovation or demolition.

When implementing the response actions, parties responsible for final selection should remember that actions shall be sufficient to protect human health and the environment, but may also be the least burdensome method. Nothing in these recommendations should be construed as prohibiting or discouraging removal.

In the event that demolition or renovation is deemed necessary, parties shall comply with all applicable laws, ordinances, rules and regulations of Federal, State and Local Governmental Agencies, including any National Emissions Standard Hazardous Air Pollutants (N.E.S.H.A.P.) Notification requirements

Today's Date: 2/24/2013

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Job Site:

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Hollywood, Fl 33021

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North Miami, Fl 33168

Category I - Non-Friable Asbestos Containing Material

Sample Number	Description / Material Class	Location	Approximate Size	Sample Condition	Physical Damage	Water Damage	Material Contact	Sample Friability	Asbestos Detected
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NONE DETECTED

Recommendations

The above referenced Asbestos Contained Building Materials may be left in place if deemed to be in good condition and no repairs or renovations are scheduled which would disturb them. Care should be taken to ensure that the materials not be disturbed during repair, renovation or remodelling activities which could possibly release fibers into the air. To reduce the intrinsic liability to the owners, the ultimate solution may be to have the material removed. However, at the minimum, a formal Operations and Maintenance (O&M) Program is recommended to minimize potential fiber releases, monitor any future deterioration, and to ensure proper record keeping.

Under the FDEP regulations, Category I non-friable asbestos-containing materials may be left in place during demolition under wet conditions. However, OSHA regulations require that disposal of asbestos-containing materials and debris is disposed of in a leak-tight and labeled container. The container may be plastic bags so long as the holding is leak-tight. All materials must be disposed of in a Class I landfill and manifest as Category I Non-Friable Asbestos containing material.

To meet the requirements of a wet demolition, it is the responsibility of the demolition contractor to control any visible emissions by adequately applying water on the structure. Furthermore, the work practices for the demolition of a building containing asbestos must be in regulatory compliance with OSHA 1926.1101. All materials must be kept thoroughly wet or saturated during the demolition to assist in preventing the release of asbestos fibers. A certified asbestos supervisor must perform or supervise the work. If during the demolition process visible emissions are observed, the asbestos-containing materials must then be abated.

The regulations of the Occupational Safety and Health Administration (OSHA) applies to any detectable amount of asbestos in building materials or on facility components. This requirement covers worker training, work practices, and disposal methods. In summary, removing asbestos in a commercial setting requires training, specific work practices, and disposal methods for the asbestos and asbestos-containing debris.

However, if Category I Materials have become friable or are in poor condition, they must be removed before demolition or renovation begins by a Florida Licensed Asbestos Abatement Contractor.

When implementing the response actions, parties responsible for final selection should remember that actions shall be sufficient to protect human health and the environment, but may also be the least burdensome method. Nothing in these recommendations should be construed as prohibiting or discouraging removal.

Today's Date: 2/24/2013	Project Number: 20130355-5	Page 8 of 11
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Prepared For: Jorge C. Atoche Hazen And Sawyer 4000 Hollywood Boulevard 750 N, North Tower Hollywood, Fl 33021	Job Site: Structure 5: Hsps Room, Area: 1,150 Sf North Miami Water Treatment Plant 12098 North West 11th Avenue North Miami, Fl 33168
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Category II - Non-Friable Asbestos Containing Material

Sample Number	Description / Material Class	Location	Approximate Size	Sample Condition	Physical Damage	Water Damage	Material Contact	Sample Friability	Asbestos Detected
Sample 1	Transite Panels	H S P S Room South And West Walls	400 Sq. Ft.	Good	Yes	None	High	Non-friable	Yes
Layer	Miscellaneous								
Sample 2	Transite Panels	H S P S Room South And West Walls	Included Above	Good	Yes	None	High	Non-friable	Yes
Layer	Miscellaneous								
Sample 3	Transite Panels	H S P S Room South And West Walls	Included Above	Good	Yes	None	High	Non-friable	Yes
Layer	Miscellaneous								

Recommendations

The above referenced Asbestos Contained Building Materials may be left in place if deemed to be in good condition & no repairs or renovations are scheduled which would disturb them. Care should be taken to ensure that the materials not be disturbed during repair, renovation or remodeling activities which could possibly release fibers into the air. To reduce the intrinsic liability to the owners, the ultimate solution may be to have the material removed.

The above building materials are considered Category II Non-Friable and are likely to become crushed, crumbled, pulverized or reduced to powder during demolition or renovation therefore must be removed before demolition or renovation begins by a Florida Licensed Asbestos Abatement Contractor.

To meet the requirements of a wet demolition, it is the responsibility of the demolition contractor to control any visible emissions by adequately applying water on the structure. Furthermore, the work practices for the demolition of a building containing asbestos must be in regulatory compliance with OSHA 1926.1101. All materials must be kept thoroughly wet or saturated during the demolition to assist in preventing the release of asbestos fibers. A certified asbestos supervisor must perform or supervise the work. If during the demolition process visible emissions are observed, the asbestos-containing materials must then be abated.

The regulations of the Occupational Safety and Health Administration (OSHA) applies to any detectable amount of asbestos in building materials or on facility components. This requirement covers worker training, work practices, and disposal methods. In summary, removing asbestos in a commercial setting requires training, specific work practices, and disposal methods for the asbestos and asbestos-containing debris.

However, if Category II Materials have become friable or are in poor condition, they must be removed before demolition or renovation begins by a Florida Licensed Asbestos Abatement Contractor.

When implementing the response actions, parties responsible for final selection should remember that actions shall be sufficient to protect human health and the environment, but may also be the least burdensome method. Nothing in these recommendations should be construed as prohibiting or discouraging removal.

General Terms and Conditions

Scope of Work

ARS Environmental's inspections are limited and non-destructive in nature. Any conditions or materials which were not able to be visually observed on the surface, or in easily accessible areas, were not inspected and may differ from those observed. It was not within the scope of this investigation to remove surface materials to investigate portions of the structure or materials which lay beneath the surface. Our selection of sample locations and frequency is based upon our observations and the assumption that like materials in the same area are homogeneous. This inspection report is the result of a diligent search of the facility for Asbestos Containing Building Materials (ACBM). The purpose of this inspection was to identify those materials which may pose a health hazard to occupants of a building and impart future liability to the owners and insurers of the property. However, we do not claim to have identified all of the asbestos containing building materials present in the facility. Materials such as underground pipes, any material inside walls, ceilings, floors, or other enclosed and inaccessible areas were not sampled and are not covered in this report. This report is designed to aid the building owner, architect, construction manager, general contractor, and potential asbestos abatement contractor in locating asbestos containing building materials. Under no circumstances is this report to be utilized as a proposal or a project specification document. This report is based upon conditions and practices observed at the property and information made available to the surveyor. This report does not intend to identify all hazards or unsafe practices, nor to indicate that other hazards or unsafe practices do not exist at the premises. In the event that demolition or renovation is deemed necessary, parties shall comply with all applicable laws, ordinances, rules, and regulations of federal, state, and local governmental agencies, including any National Emissions Standard Hazardous Air Pollutants (NESHAP) notification requirements.

Right of Entry

The client will provide for right of entry to ARS Environmental's personnel in order to complete the above referenced work.

Invoices

ARS Environmental will submit invoices to client upon completion of services.

Ownership of Documents

All reports, field data, field notes, laboratory tests data, calculations, estimates, and any other documents prepared by ARS Environmental as instruments of service shall remain the property of ARS Environmental.

Assumptions and Limitations

The results, findings, conclusions, and recommendations expressed in this report are based only on conditions which were observed during inspections by this report. ARS Environmental makes no representation or assumptions as to past conditions or future occurrences.

Assigns

Neither the client nor ARS Environmental may delegate, assign, sublet or transfer his duties or interest in this agreement without the written consent of the other party.

Roof Cuts

To obtain accurate information in a roof investigation, roof cuts approximately four inch 4" squares, may be deemed necessary. It is the responsibility of our client to make appropriate repairs to these roof cuts, using materials consistent with the roofing system and in accordance with any existing material manufacturer's warranties. A roofing contractor or maintenance personnel selected by our client should be on the roof to make any necessary repairs at the time the samples are being obtained. Although, every attempt will be made to make these repaired areas water tight, ARS Environmental will in no way be responsible for any water damage to the roofing system, building, or it's contents resulting from ARS Environmental temporary repairs.

Disclaimer

If in the course of a renovation or demolition activity, suspect materials become exposed, ALL FURTHER ACTIVITY SHOULD IMMEDIATELY CEASE AND THE STATUS OF THE MATERIAL SHOULD BE DETERMINED BEFORE PROCEEDING.

Today's Date: 2/24/2013

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Prepared For:

Job Site:

Jorge C. Atoche
Hazen And Sawyer
4000 Hollywood Boulevard
750 N, North Tower
Hollywood, FL 33021

Structure 5: Hsps Room, Area: 1,150 Sf
North Miami Water Treatment Plant
12098 North West 11th Avenue
North Miami, FL 33168

Asbestos Survey — Technician Chain of Custody Forms and Field Notes

ARS ENVIRONMENTAL, INC.
CHAIN OF CUSTODY

Page 1 Of 1
PLM Analysis: Asbestos Bulk Samples

Positive Stop Requested
Point Count Requested On Friable Materials That Report Less Than 1% Turnaround Time Requested: Same Day 24 Hour • 48 Hour • 72 Hour

Sampling Date: 2/22/13 Project Location: COMMERCIAL BLDG.

Samples Taken By: S. MONTALVAN 12098 N.W. 11TH AVENUE (STRUCTURE 5: HSPS ROOM),

Project Number: 2013-0355-5 INT EXT ROOF MIAMI, FLA

Sample Layer	Material Class	Sample Description	Sample Location	Approx. Size	Sample Condition	Physical Damage	Water Damage	Material Contact	Sample Friability
1	M	TRANSITE PANELS	SOUTH AND WEST WALLS HSPS ROOM	400'	G	Y	N	H	NF
2	M	" "	" "	IA	↓	↓	↓	↓	↓
3	M	" "	" "	IA	↓	↓	↓	↓	↓
4	M	2X3 WALL TILES - WOODLIKE DESIGN	ON THE PANELS ON THE SOUTH AND WEST SIDE OF HSPS ROOM.	400'	G	Y	N	H	F
5	M	" "	" "	IA	↓	↓	↓	↓	↓
6	M	" "	" "	IA	↓	↓	↓	↓	↓
7	M	CONCRETE STRUCTURE	ON THE FLOORS AND INT/EXT WALLS OF HSPS ROOM	3024'	G	N	N	H	NF

Material Class: S=Surfacing Materials T=Thermal Insulation (TSI) M=Miscellaneous Materials Friability: NF=Category I or Category II Non-Friable Material (Material that, when dry, may not be crumbled, pulverized, or reduced to powder by hand pressure.) F=(Material that may be crumbled, pulverized, or reduced to powder by hand pressure when dry.)

Transferred By: [Signature] Date: 2/22/13 Received By: [Signature] Date: 2/23/13

10097 CLEARY BOULEVARD • #305 • PLANTATION, FL 33324 • TOLL FREE: 877-227-2401 • PHONE: 954-227-2402 • FAX: 866-816-5110

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<p>Prepared For:</p> <p>Jorge C. Atoche Hazen And Sawyer 4000 Hollywood Boulevard 750 N, North Tower Hollywood, Fl 33021</p>	<p>Job Site:</p> <p>Structure 5: Hsps Room, Area: 1,150 Sf North Miami Water Treatment Plant 12098 North West 11th Avenue North Miami, Fl 33168</p>
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Asbestos Survey — Laboratory Results

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Jorge C. Atoche Hazen And Sawyer 4000 Hollywood Boulevard 750 N, North Tower Hollywood, Fl 33021	Structure 5: Hsps Room, Area: 1,150 Sf North Miami Water Treatment Plant 12098 North West 11th Avenue North Miami, Fl 33168	

Laboratory Analysis				
Sample Number	Gross Description	Estimated Asbestos Percentage	Non-asbestos % Fibers	Non-fibrous % Materials
1	Transite	45% Chrysotile	5% Synthetic 10% Cellulose	40%
2	Transite	45% Chrysotile	5% Synthetic 10% Cellulose	40%
3	Transite	45% Chrysotile	5% Synthetic 10% Cellulose	40%
4	Ceiling Tile	No Asbestos Detected	35% Cellulose 20% Glass 10% Synthetic	35%
5	Ceiling Tile	No Asbestos Detected	35% Cellulose 20% Glass 10% Synthetic	35%
6	Ceiling Tile	No Asbestos Detected	35% Cellulose 20% Glass 10% Synthetic	35%
7	Concrete	No Asbestos Detected		100%

Alex Front,
Analyst

10097 Cleary Boulevard • #305 • Plantation, FL 33324 • Phone: 954-227-2602 • Fax: 866-816-5110
www.arsenvironmental.com • sales@arsenvironmental.com

Exhibit 4

Inspection Report for 750,000 Gallon Tank

The attached report is provided for informational purposes. The Owner and the Engineer make no guarantee, either expressed or implied, as to its accuracy or completeness.



***INSPECTION AND CLEANING OF THE 750,000-GALLON
WELDED STEEL WATER STORAGE TANK***

***CITY OF NORTH MIAMI WATER TREATMENT PLANT
NORTH MIAMI, FLORIDA***

FEBRUARY 10, 2009



***INSPECTION AND CLEANING OF THE 750,000-GALLON
WELDED STEEL WATER STORAGE TANK***

***CITY OF NORTH MIAMI WATER TREATMENT PLANT
NORTH MIAMI, FLORIDA***

FEBRUARY 10, 2009

SCOPE:

On February 10, 2009, Underwater Solutions Inc. conducted an inspection of the 750,000-gallon welded steel water storage tank to provide information regarding the overall condition and integrity of this structure and removed the sediment accumulation found on the floor of the structure.

EXTERIOR INSPECTION:

The entire exterior of this water storage tank (and components) was inspected to include walls and coating, manway, ladder, overflow, roof, vent and hatch.

Walls and Coating

The exterior wall surfaces were inspected and found to appear sound while several coating chips, ranging from 1/8" to 3" in diameter, were found throughout approximately 5% of the wall panels and throughout all elevations of the tank.

These coating chips appear to be the result of objects striking these surfaces and cause mild surface corrosion of the exposed steel.

No obvious steel fatigue (pitting) of the steel was witnessed at the time of this inspection.

The remainder of these wall surfaces were found with reduced film thickness of the protective coating. This condition is due to weathering and near expiration, causing the coating to become chalky.

***INSPECTION AND CLEANING OF THE 750,000-GALLON
WELDED STEEL WATER STORAGE TANK
CITY OF NORTH MIAMI WATER TREATMENT PLANT
NORTH MIAMI, FLORIDA
FEBRUARY 10, 2009
PAGE 2***

Manway

One 24" inside diameter manway was inspected penetrating the lowest wall panel located approximately 19" above the ground.

This manway was found securely bolted in place and with no obvious leakage at the time of this inspection.

Ladder

A ladder extends from 8' above the ground up to the roof supported to the tank wall with three sets of welded standoffs.

This entire structure was found in good condition and provides good safe access to the roof at this time.

Overflow

A 12" inside diameter overflow pipe exits the top wall panel located approximately 17" below the roof and wall junction. This pipe extends away from the tank approximately 6" and terminates.

This overflow pipe was found with a screen properly installed and without obstructions at the time of this inspection.

Roof

The roof of this water storage tank was found to appear sound.

The protective coating applied to these roof surfaces has become weathered reducing the film thickness. This coating was found with poor adhesion value, resulting in cracking and blotch rusting shows through the coating on approximately 5% of these surfaces.

Within all areas where the protective coating has cracked, exposure of the underlying steel was found, while no obvious steel fatigue (pitting) was found at the time of this inspection.

Vent

The vent is located within the center of the roof having a 35" inside diameter and stands 8" tall.

***INSPECTION AND CLEANING OF THE 750,000-GALLON
WELDED STEEL WATER STORAGE TANK
CITY OF NORTH MIAMI WATER TREATMENT PLANT
NORTH MIAMI, FLORIDA
FEBRUARY 10, 2009
PAGE 3***

A 39" outside diameter cap and perimeter screening were found securely installed over this vent preventing access to the interior of the tank.

Hatch

One 23-1/2" by 23-1/2" inside diameter hatch provides access to the interior of the tank through the roof.

This hatch was found in good working condition, yet fatigue of the steel exists throughout the entire circumference of the hatch trunk. Heavy surface corrosion was also found on all inner lid surfaces of the hatch.

INTERIOR INSPECTION:

The entire interior of this water storage tank (and components) was inspected to include sediment accumulations, floor, manway, piping, walls and coating, ladder, support columns, overhead, overflow and aesthetic water quality.

Sediment Accumulations

A non-uniform layer of accumulated precipitate was found on all floor surfaces averaging 1/4" in depth.

Upon completing this inspection, all floor surfaces were vacuumed.

Floor

After removing all accumulated precipitate, these poured in place concrete floor surfaces were inspected and found sound.

All floor surfaces are uniform, as no obvious cracks, spall or settlement are seen at this time.

Heavy staining exists throughout all floor surfaces due to the accumulation of precipitate.

Manway

One 24" inside diameter manway was inspected from the interior of the tank penetrating the lowest wall panel located approximately 18" above the floor.

Numerous coating blisters found throughout the circumference of this manway have ruptured, causing moderate surface corrosion of the steel.

***INSPECTION AND CLEANING OF THE 750,000-GALLON
WELDED STEEL WATER STORAGE TANK
CITY OF NORTH MIAMI WATER TREATMENT PLANT
NORTH MIAMI, FLORIDA
FEBRUARY 10, 2009
PAGE 4***

This manway was found securely in place and is free of obvious leakage at this time.

Piping

Five pipes were inspected within this water storage tank.

The first pipe inspected, penetrates the tank wall located approximately 14" above the floor. This pipe has a 15" inside diameter and extends into the tank approximately 10".

Flow was entering the tank through this pipe at the time of this inspection.

The second pipe inspected, penetrates the tank wall located approximately 12" above the floor. This pipe has a 15" inside diameter and extends into the tank 5".

Flow was entering the tank through this pipe at the time of this inspection.

The third pipe inspected, penetrates the wall of an 18" by 18" by 24" deep sump located approximately 8' in from the wall within the floor. This 6" inside diameter pipe was found flush within the wall of the sump.

No flow was detected within this pipe at the time of this inspection.

The fourth pipe inspected, penetrates the wall of a 36" by 36" by 48" deep sump located approximately 20" in from the wall within the floor. This 24" inside diameter pipe was found flush within the wall of the sump.

No flow was detected within this pipe at the time of this inspection.

The fifth pipe inspected, penetrates the tank wall located approximately 32" above the floor. This pipe has a 1" inside diameter and is flush within the wall.

No flow was detected within this pipe at the time of this inspection.

All piping was found without obstructions at the time of this inspection.

Walls and Coating

All interior wall surfaces were inspected beginning at the floor and spiraling the circumference up to the water surface.

***INSPECTION AND CLEANING OF THE 750,000-GALLON
WELDED STEEL WATER STORAGE TANK
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PAGE 5***

These interior wall panels, to include the welds between each panel, were found with sound conditions and without obvious fatigue.

The protective coating applied to these surfaces has expired.

Coating blisters were found throughout approximately 35% of all wall panel surfaces, to include all welds between each panel, due to adhesion loss.

Approximately 25% of these coating blisters have ruptured, exposing the underlying steel resulting in moderate surface corrosion.

No obvious fatigue (pitting) of the steel was witnessed at the time of this inspection.

Moderate staining exists on all wall surfaces beginning at the junction where the roof and wall meet, extending down to the floor.

Ladder

A ladder extends from the floor up to the entry hatch supported to the wall with four sets of bolted standoffs.

This entire structure was found sound and free of obvious failures and provides good access to the roof.

Support Columns

Seven support columns, consisting of two, 5" by 3" channel iron beams welded together, extend from 14" by 14" by 1" tall steel plates up to the "I" beam supports within the overhead.

Each column appears sound while the protective coating has failed throughout all elevations of these columns resulting in exposure of the steel causing moderate surface corrosion.

Overhead

The entire overhead was inspected from the water surface.

These overhead panels, to include all overhead supports, were found to appear very sound while no obvious indications of fatigue were seen at the time of this inspection.

***INSPECTION AND CLEANING OF THE 750,000-GALLON
WELDED STEEL WATER STORAGE TANK
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NORTH MIAMI, FLORIDA
FEBRUARY 10, 2009
PAGE 6***

The protective coating applied to these overhead surfaces, to include all supports, was found to have expired. This condition causes blotch rusting to show through the coating throughout approximately 45% of these surfaces at this time.

Overflow

A 12" inside diameter overflow pipe penetrates the top wall panel located approximately 17" below the roof and wall junction. This pipe extends into the tank approximately 12" through a 90° elbow directing the pipe up, terminating approximately 2" below the roof and wall junction.

This overflow was found without obstructions at the time of this inspection.

Aesthetic Water Quality

The aesthetic water quality within this tank was found to be good.

This condition allowed our visibility during this inspection to be unlimited.

CONCLUSION:

It is the opinion of Underwater Solutions Inc. that this water storage tank appears mostly sound and without leakage at this time, yet requires rehabilitation within the near future.

The exterior walls appear sound and without obvious fatigue (pitting) of the steel at this time.

The protective coating applied to these wall surfaces was found weathered, causing reduced film thickness and chalky coating.

Several coating chips, appearing to be caused by objects striking these surfaces, have exposed the underlying steel resulting in mild surface corrosion.

All roof surfaces were found without obvious fatigue or failure (pitting) of the steel.

The protective coating applied to these roof surfaces was found having poor adhesion value and reduced film thickness caused from weathering, resulting in cracking of the coating and blotch rusting.

All components affixed to this structure were found properly installed and with screening on the vent and overflow properly installed preventing access to the interior of the tank.

**INSPECTION AND CLEANING OF THE 750,000-GALLON
WELDED STEEL WATER STORAGE TANK
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PAGE 7**

The hatch was found with extensive fatigue of the steel throughout circumference of the trunk while heavy corrosion exists on all surfaces of the inner surfaces of the lid.

We recommend repairing the hatch trunk and coating all surfaces of the lid and trunk in an effort to prevent further fatigue and possible further failure.

The protective coating applied to the interior wall, manway, support columns and overhead surfaces was found with poor adhesion value causing adhesion loss and blistering. Numerous coating blisters have ruptured throughout the walls and support columns, resulting in exposure of the underlying steel causing surface corrosion.

We recommend recoating all interior surfaces of the tank using an A.N.S.I. / N.S.F.61 approved coating for use in structures containing potable water and should be done within the near future, as continued exposure of the steel will result in metal fatigue (pitting) and eventually result in failure of the steel.

We recommend all repairs be completed under the guidance, supervision and plans produced by a professional engineer licensed in the state of Florida with specific professional expertise with such work.

All piping within this structure remains securely in place and free of obstructions at this time.

Upon completing this inspection, all floor surfaces were vacuumed.

As always, we recommend re-inspection and cleaning of all water storage facilities in accordance with A.W.W.A. Standards and local guidelines.

UNDERWATER SOLUTIONS INC.
Christopher A. Cole, Project Manager

This report, the conclusions, recommendations and comments prepared by Underwater Solutions Inc. are based upon spot examination from readily accessible parts of the tank. Should latent defects or conditions which vary significantly from those described in the report be discovered at a later date, these should be brought to the attention of a qualified individual at that time. These comments and recommendations should be viewed as information to be used by the Owner in determining the proper course of action and not to replace a complete set of specifications. All repairs should be done in accordance with A.W.W.A. and/or other applicable standards.

CAC/jld



1 *Exterior Wall Surfaces Found With Coating Chips, Exposed Steel And Mild Surface Corrosion*



2 *Exterior Wall Surfaces Found With Coating Chips, Exposed Steel And Mild Surface Corrosion*



3 *Exterior Wall Surfaces Found With Coating Chips, Exposed Steel And Mild Surface Corrosion*



4 *Exterior Wall Surfaces Found With Coating Chips, Exposed Steel And Mild Surface Corrosion*



5 *Exterior Wall Surfaces Found With Coating Chips, Exposed Steel And Mild Surface Corrosion*



6 *Exterior Wall Surfaces Found With Coating Chips, Exposed Steel And Mild Surface Corrosion*