



Technology Serving People, Inc. • Environmental Health & Engineering Services

**Asbestos and Lead Survey
Northwest WWTP Improvements
5423 Mangum Road
Houston, Texas**

**Outline Agreement No. 4600008770
WBS No. R-000265-0095-4
Task No. 13-14**

Prepared for:

**The City of Houston Public Works
and Engineering Department
611 Walker, 14th Floor
Houston, Texas 77251-1562**

Inspected:

January 5, 2014

Prepared By:

**Technology Serving People, Inc.
2511 Willowick, Suite 229
Houston, Texas 77027**

Submitted By:

A handwritten signature in black ink, appearing to read 'Bruce D. Peters', written over a horizontal line.

**Bruce D. Peters
Asbestos Consultant TDSHS No. 10-5336**

A handwritten signature in blue ink, appearing to read 'Michael E. Solomon', written over a horizontal line.

**Michael E. Solomon
Lead Inspector TDSHS No. 2060695**

January 20, 2014

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EXECUTIVE SUMMARY

Technology Serving People, Inc. (TSP) conducted an asbestos and lead survey on January 5, 2014 at the Northwest Waste Water Treatment Plant, 5423 Mangum Road, Houston, Texas. The survey was limited to the areas noted on plans supplied by the City of Houston Public Works and Engineering Department. (Attached in report). The facility has fencing and is secured by locked entry. There was no information available on the construction date of the facility. Site inspection and bulk material sample collections were conducted using standard protocols specified by the Texas Asbestos Protection Act (TAHPA), Texas Environmental Lead Reduction Rules (TELRR), and National Emissions Standards for Hazardous Air Pollutants (NESHAP).

A & B Environmental Services, Inc. of Houston, Texas, a State of Texas Licensed Asbestos Laboratory (PCM, PLM, and NVLAP Accredited) and Accredited NELAP Lead Laboratory, performed all asbestos and lead analyses.

ASBESTOS SUMMARY

Findings:

Twelve (12) bulk samples were collected at planned renovation locations throughout the facility. Materials samples included flange and valve gaskets, black canvas vibration damper, ceiling plaster from Maintenance Building restrooms and sheetrock and joint compounds from the Maintenance Building and Administration Building. Three (3) of the five gaskets sampled were determined to be asbestos-containing materials with a 20-60% chrysotile content. No other asbestos-containing materials were determined to be present. The Chemical Building and the Bio-trickling Filters were inspected and found to have no suspect materials, as all piping was PVC type. There were no duct mastics observed in the Maintenance and Administration Buildings and no abatement is required to access and remove ducts. None of the condenser units had suspect pipe insulations and there are no abatement requirements for removal.

Recommendations:

Non-rubber compressed gaskets shall be considered to be asbestos-containing and abated prior to or during renovation/demolition activities required. Break pipe flanges; abate non-rubber compressed gaskets by standard wet methods, bag asbestos waste, and dispose of as asbestos containing waste. The General Contractor should coordinate with an abatement contractor to schedule abatement activities. Contractor may opt to cut out flanges and have an abatement contractor dispose of them intact.

The quantity of the potential asbestos containing material is not expected to meet reportable limits for this NESHAP facility and no notifications are required. We estimate 100-150 flange gaskets to be disturbed during the planned renovations.

Cost:

\$50/ flange gasket, therefore total estimated cost is \$5,000 - \$7,500.

LEAD SUMMARY

Findings:

Fifteen (15) paint chip samples were taken of painted materials and equipment. Results indicated lead contents over 600 mg/Kg, considered lead based paints, were detected in only two of the paint samples. These were the sluice gate lift sample at 76,692 mg/Kg and scum separator gate activator at 7,159 mg/Kg.

Recommendations

Recycle all metal components.

OSHA Requirements: The U.S. Occupational Safety and Health Administration (OSHA) does not specify a minimum lead concentration in its lead standard. Rather, it requires all employers to determine an exposure level and provide prescribed training, personal protective equipment, medical surveillance, and record keeping. *The ways and means of the contractor will determine requirements.*

All paint which has a detectable level of lead is considered a lead-containing paint by OSHA and should be handled in the following ways:

1. Notify any contractor cutting, abrading or disturbing lead containing paint that the paint contains the listed concentrations of lead.
2. Metal components should be dismantled by unfastening bolts where possible. Cutting, abrading or welding on painted metal components should be discouraged.
3. Disposal of painted metal components should be through a metal recycling company that accepts metal with lead paint.
4. Demolished concrete structures with lead-containing paint should be tested by the TCLP method, as required by the U.S. Environmental Protection Agency (EPA), to characterize the waste for disposal.

Cost:

No lead abatement costs associated with this water treatment plant is anticipated.

**Asbestos Survey
Northwest Waste Water Treatment Plant Improvements
5423 Mangum Road, Houston, Texas**

Technology Serving People, Inc. (TSP) conducted an asbestos survey on January 5, 2014 at the Northwest Waste Water Treatment Plant, 5423 Mangum Road, Houston, Texas. The survey was limited to the areas noted on plans supplied by the City of Houston Public Works and Engineering Department. (Attached in report). The facility has fencing and is secured by locked entry. There was no information available on the construction date of the facility. Site inspection and bulk material sample collections were conducted using standard protocols specified by the Texas Asbestos Protection Act (TAHPA), and National Emissions Standards for Hazardous Air Pollutants (NESHAP).

A & B Environmental Services, Inc. of Houston, Texas, a State of Texas Licensed Asbestos Laboratory (PCM, PLM, and NVLAP Accredited) performed all asbestos analyses.

ASBESTOS SUMMARY

Findings:

Twelve (12) bulk samples were collected at planned renovation locations throughout the facility. Materials samples included flange and valve gaskets, black canvas vibration damper, ceiling plaster from Maintenance Building restrooms and sheetrock and joint compounds from the Maintenance Building and Administration Building. Three (3) of the five gaskets sampled were determined to be asbestos-containing materials with a 20-60% chrysotile content. No other asbestos-containing materials were determined to be present. The Chemical Building and the Bio-trickling Filters were inspected and found to have no suspect materials, as all piping was PVC type. There were no duct mastics observed in the Maintenance and Administration Buildings and no abatement is required to access and remove ducts. None of the condenser units had suspect pipe insulations and there are no abatement requirements for removal.

Recommendations:

Non-rubber compressed gaskets shall be considered to be asbestos-containing and abated prior to or during renovation/demolition activities required. Break pipe flanges; abate non-rubber compressed gaskets by standard wet methods, bag asbestos waste, and dispose of as asbestos containing waste. The General Contractor should coordinate with an abatement contractor to schedule abatement activities. Contractor may opt to cut out flanges and have an abatement contractor dispose of them intact.

The quantity of the potential asbestos containing material is not expected to meet reportable limits for this NESHAP facility and no notifications are required. We estimate 100-150 flange gaskets to be disturbed during the planned renovations.

Cost:

\$50/ flange gasket, therefore total estimated cost is \$5,000 - \$7,500.

**Lead Survey
Northwest Waste Water Treatment Plant Improvements
5423 Mangum Road, Houston, Texas**

Technology Serving People, Inc. (TSP) conducted an asbestos and lead survey on January 5, 2014 at the Northwest Waste Water Treatment Plant, 5423 Mangum Road, Houston, Texas. The survey was limited to the areas noted on plans supplied by the City of Houston Public Works and Engineering Department. (Attached in report). The facility has fencing and is secured by locked entry. There was no information available on the construction date of the facility. Site inspection and bulk material sample collections were conducted using standard protocols specified by the Texas Environmental Lead Reduction Rules (TELRR).

A & B Environmental Services, Inc. of Houston, Texas, an Accredited NELAP Lead Laboratory, performed all lead analyses.

Findings:

Fifteen (15) paint chip samples were taken of painted materials and equipment. Results indicated lead contents over 600 mg/Kg, considered lead based paints, were detected in only two of the paint samples. These were the sluice gate lift sample at 76,692 mg/Kg and scum separator gate activator at 7,159 mg/Kg.

Recommendations

Recycle all metal components.

OSHA Requirements: The U.S. Occupational Safety and Health Administration (OSHA) does not specify a minimum lead concentration in its lead standard. Rather, it requires all employers to determine an exposure level and provide prescribed training, personal protective equipment, medical surveillance, and record keeping. *The ways and means of the contractor will determine requirements.*

All paint which has a detectable level of lead is considered a lead-containing paint by OSHA and should be handled in the following ways:

1. Notify any contractor cutting, abrading or disturbing lead containing paint that the paint contains the listed concentrations of lead.
2. Metal components should be dismantled by unfastening bolts where possible. Cutting, abrading or welding on painted metal components should be discouraged.
3. Disposal of painted metal components should be through a metal recycling company that accepts metal with lead paint.
4. Demolished concrete structures with lead-containing paint should be tested by the TCLP method, as required by the U.S. Environmental Protection Agency (EPA), to characterize the waste for disposal.

Cost:

No lead abatement costs associated with this water treatment plant is anticipated.

LABORATORY ANALYSIS REPORT



A & B Environmental Services, Inc.
10100 East Freeway, Suite 100
Houston, Texas 77029

A&B Job ID: 14010118

Report Date : 1/9/2014

Total No of Pages : 6

NVLAP Lab Code : 101793-0 TDSHS LICENCE # : 30-0080

ProjectName : Northwest WWTP, 5423 Mangum

Client :	TSP Inc.	P.O.#. :	
Contact :	Bruce Peters	Sample Collected By :	Bruce Peters
Address :	2511 Willowick #229	Date Received :	01/06/2014
	Houston, Texas	Sample Received By :	AHall

Analysis by EPA Method 600/R-93/116 or 40 CFR, Part 763, Subpart F as appropriate. Components of non-homogenous or layered materials are analyzed separately and reported individually if asbestos is found in one or more layers or components. Analysis of vinyl floor tile and other resinously bound materials using these methods may yield false negative results. The Client may consider confirmation of negative results on these materials by TEM analysis. Fiber quantification is based on calibrated visual estimation. State regulations prohibit classifying asbestos containing materials as having 1% or less unless verified by point count. The Client should consider additional quantification by point count for friable materials containing 1-3% asbestos. These results pertain only to the items tested. This report may not be reproduced, except in full, without the written permission of A & B Environmental. The report must not be used by the Client to claim product endorsement by NVLAP or any agency of the U.S. Government. All samples are assumed to be in acceptable condition unless otherwise noted.

A & B Labs has analyzed the following samples . . .

Your Sample ID	Asbestos Detected	Result	A&B Job Sample ID
NW-01	Yes	Chrysotile 41-60%	14010118.01.A
NW-02	No		14010118.02.A
NW-03	Yes	Chrysotile 41-60%	14010118.03.A
NW-04	Yes	Chrysotile 41-60%	14010118.04.A
NW-05	No		14010118.05.A
NW-06	No		14010118.06.A
NW-07	No		14010118.07.A
NW-08	No		14010118.08.A
NW-09	No		14010118.09.A
NW-10	No		14010118.10.A
NW-11	No		14010118.11.A
NW-12	No		14010118.12.A

Thank you for choosing A & B Labs.

Approved By: *Alisha Hughes*
Alisha Hughes
Title: Project Manager

Analyst: *[Signature]*

TEST REPORT FOR BULK ASBESTOS BY PLM



A&B Job ID 14010118

Date : 01/09/2014

Client Name: TSP Inc.
 Project Northwest WWTP, 5423 Mangum
 Name:

Date Received: 01/06/2014
 Date Analyzed: 01/07/2014
 Analyst Initial: HA

<i>A&B Sample ID</i> <i>Client Sample ID</i>	<i>Sample Description</i>	<i>Asbestos Detected</i>	<i>Asbestos Fibers</i>	<i>Other Fibers</i>	<i>Non - Fibrous Material</i>
14010118.01 14010118.01.A NW-01 Layer % of Total :100%	Gasket Fibrous/Granular Homogeneous Black/Brown/Gray	Yes	Chrysotile 41-60%	Cellulose 1-10%	Binder Glue Minri Frags Paint
14010118.02 14010118.02.A NW-02 Layer % of Total :100%	Gasket Granular/Vinyl Homogeneous Black/Brown/Silver/White	No		Cellulose 1-10%	Binder Glue Paint Vinyl
14010118.03 14010118.03.A NW-03 Layer % of Total :100%	Gasket Fibrous/Granular Homogeneous Black/Gray	Yes	Chrysotile 21-40%	Cellulose 1-10% Synthetic 11-50%	Binder Glue Minri Frags Paint
14010118.04 14010118.04.A NW-04 Layer % of Total :100%	Gasket Fibrous/Granular Homogeneous Black/Gray	Yes	Chrysotile 41-60%		Binder Glue Minri Frags Paint
14010118.05 14010118.05.A NW-05 Layer % of Total :100%	Gasket Fibrous/Granular/Vinyl Homogeneous Green	No		Cellulose 11-50%	Binder Glue Minri Frags Vinyl
14010118.06 14010118.06.A NW-06 Layer % of Total :100%	Dampner Fibrous/Granular/Vinyl Homogeneous Black	No		Cellulose 1-10% GlassFibers 11-50%	Binder Glue Minri Frags Vinyl
14010118.07 14010118.07.A NW-07 Layer % of Total :100%	Wall Texture / Joint Compound Fibrous/Granular Homogeneous Brown/Tan/Yellow	No		Cellulose 11-50%	Binder Carbonate Minri Frags Paint

TEST REPORT FOR BULK ASBESTOS BY PLM



A&B Job ID 14010118

Date : 01/09/2014

Client Name: TSP Inc.
 Project Northwest WWTP, 5423 Mangum
 Name:

Date Received: 01/06/2014
 Date Analyzed: 01/07/2014
 Analyst Initial: HA

<i>A&B Sample ID</i> <i>Client Sample ID</i>	<i>Sample Description</i>	<i>Asbestos Detected</i>	<i>Asbestos Fibers</i>	<i>Other Fibers</i>	<i>Non - Fibrous Material</i>
14010118.08 14010118.08.A NW-08 Layer % of Total :100%	Plaster Granular Homogeneous Tan/White	No		Cellulose 1-10%	Binder Carbonate Paint Silica
14010118.09 14010118.09.A NW-09 Layer % of Total :100%	Plaster Granular Homogeneous Tan/White	No		Cellulose 1-10%	Binder Carbonate Paint Silica
14010118.10 14010118.10.A NW-10 Layer % of Total :100%	Plaster Granular Homogeneous Tan/White	No		Cellulose 1-10%	Binder Carbonate Paint Silica
14010118.11 14010118.11.A NW-11 Layer % of Total :100%	Ceiling Texture / J.Compound Fibrous/Granular Homogeneous Brown/White/Yellow	No		Cellulose 11-50%	Binder Carbonate Minrl Frags Paint
14010118.12 14010118.12.A NW-12 Layer % of Total :100%	Texture / J.Compound Fibrous/Granular Homogeneous Brown/Tan/Yellow	No		Cellulose 11-50%	Binder Carbonate Minrl Frags Paint



Sample Condition Checklist

A&B JobID : 14010118	Date Received : 01/06/2014	Time Received : 2:10PM																										
Client Name : TSP Inc.																												
Temperature : 21.0°C	Sample pH : n/a																											
Thermometer ID : 102002320	pH Paper ID : n/a																											
Check Points																												
1.	Cooler seal present and signed.	Yes	No	N/A																								
2.	Sample(s) in a cooler.		X																									
3.	If yes, ice in cooler.			X																								
4.	Sample(s) received with chain-of-custody.	X																										
5.	C-O-C signed and dated.	X																										
6.	Sample(s) received with signed sample custody seal.		X																									
7.	Sample containers arrived intact. (If no comment).	X																										
8.	<table style="width: 100%; border: none;"> <tr> <td style="border: none;">Matrix</td> <td style="border: none;">Water</td> <td style="border: none;">Soil</td> <td style="border: none;">Liquid</td> <td style="border: none;">Sludge</td> <td style="border: none;">Solid</td> <td style="border: none;">Cassette</td> <td style="border: none;">Tube</td> <td style="border: none;">Bulk</td> <td style="border: none;">Badge</td> <td style="border: none;">Food</td> <td style="border: none;">Other</td> </tr> <tr> <td style="border: none;">:</td> <td style="border: none; text-align: center;"><input type="checkbox"/></td> <td style="border: none; text-align: center;"><input checked="" type="checkbox"/></td> <td style="border: none; text-align: center;"><input type="checkbox"/></td> <td style="border: none; text-align: center;"><input type="checkbox"/></td> <td style="border: none; text-align: center;"><input type="checkbox"/></td> </tr> </table>	Matrix	Water	Soil	Liquid	Sludge	Solid	Cassette	Tube	Bulk	Badge	Food	Other	:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									
Matrix	Water	Soil	Liquid	Sludge	Solid	Cassette	Tube	Bulk	Badge	Food	Other																	
:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																	
9.	Sample(s) were received in appropriate container(s).	X																										
10.	Sample(s) were received with proper preservative			X																								
11.	All samples were logged or labeled.	X																										
12.	Sample ID labels match C-O-C ID's	X																										
13.	Bottle count on C-O-C matches bottles found.	X																										
14.	Sample volume is sufficient for analyzes requested.	X																										
15.	Samples were received within the hold time.	X																										
16.	VOA vials completely filled.			X																								
17.	Sample accepted.	X																										
Comments : Include actions taken to resolve discrepancies/problem:																												

Received by : AHall

Check in by/date : AHall / 01/06/2014



Asbestos Bulk Sample Chain-of-Custody

A&B Job ID: 19010118

TAT (Check one): Immediate (2-4 hour) _____
 Rush (24 hour) _____
 Regular (3-5 working days)

Report to: TECHNOLOGY SERVICES GROUP
 Company: _____
 Address: 2511 WILLOWICK #229
HOUSTON TEXAS
 Contact: BRUCE PETERS
 Phone: (713) 781-9089
 Fax: (713) 781-9094
 Email: eric@broog@cautline.net

Invoice to: _____
 Company: S&B
 Address: _____
 Contact: _____
 Phone: _____
 Fax: _____
 Email: _____
 PO#: _____

Project Name / #: Northwest WWTP, 5423 Mangum
 Sampler's Name: Bruce Peters Sampler's Company: TSP, Inc.

Client Sample #	A&B Sx ID	Type	Location
NW-01	01A	Compressed Flange Gasket	Aeration #1
NW-02	02A	Black Rubber Flange Gasket	Aeration #1
NW-03	03A	Flange Gasket	@ Valve, A10
NW-04	04A	Gasket	Plug Valve, Clarifier 4
NW-05	05A	Flange Gasket	Mixer, Scum Separator Unit
NW-06	06A	Black Vibration Damper	Maintenance BLDG
NW-07	07A	Sheetrock Joint Compound	Ceiling Maintenance Bldg L R
NW-08	08A	Plaster	Ceiling, Men's Restroom, Maintenance
NW-09	09A	Plaster	Ceiling, Ladies Restroom, Maintenance
NW-10	10A	Plaster	Ceiling, Men's Restroom, Maintenance

Client Sample # is required. A&B Sx ID is assigned by the lab. Type and location are optional.

Method of Shipment: Hand Delivered

Relinquished by:	Date	Time	Received by:	Date	Time
<u>Bruce Peters</u>	<u>11/6/14</u>	<u>2:10pm</u>	<u>Adall</u>	<u>11/6/14</u>	<u>14:10</u>

21.0°C
 102002320
 #

Project Name/Number: Northwest W/WTP, 5423 Mangum

	Sample #	Lab ID #	Type	Location
13	NW-11	11A	Sheetrock/Joint Compound	Ceiling, Admin Elect Rm
14	NW-12	12A	Sheetrock/Joint Compound	AHU Rm Admin
15				
16				
17				
18				
19				
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26				
27				
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30				
31				
32				
33				
34				
35				

Laboratory Analysis Report

Total Number of Pages: 8

Job ID : 14010117



10100 Elbert Road, Suite 100, Houston, TX 77036 | Tel: 281-462-1100 | Fax: 281-462-1101

Client Project Name :
Northwest WWTP, 5423 Mangum

Report To : Client Name: TSP Inc.
Attn: Bruce Peters
Client Address: 2511 Willowick #229
City, State, Zip: Houston, Texas,

P.O.#.:
Sample Collected By: Michael Solomon
Date Collected: 01/06/14

A&B Labs has analyzed the following samples...

Client Sample ID	Matrix	A&B Sample ID
NW-Pb-01	Paint Chips	14010117.01
NW-Pb-02	Paint Chips	14010117.02
NW-Pb-03	Paint Chips	14010117.03
NW-Pb-04	Paint Chips	14010117.04
NW-Pb-05	Paint Chips	14010117.05
NW-Pb-06	Paint Chips	14010117.06
NW-Pb-07	Paint Chips	14010117.07
NW-Pb-08	Paint Chips	14010117.08
NW-Pb-09	Paint Chips	14010117.09
NW-Pb-10	Paint Chips	14010117.10
NW-Pb-11	Paint Chips	14010117.11
NW-Pb-12	Paint Chips	14010117.12
NW-Pb-13	Paint Chips	14010117.13
NW-Pb-14	Paint Chips	14010117.14
NW-Pb-15	Paint Chips	14010117.15

Aishna Hughes

Released by: Aishna Hughes
Title: Project Manager
Date: 1/9/2014



This Laboratory is NELAP (T104704213-13-8) accredited. Effective: 04/01/2013; Expires: 03/31/2014
Scope: Non-Potable Water, Drinking Water, Air, Solid, Hazardous Waste

I am the laboratory manager, or his/her designee, and I am responsible for the release of this data package. This laboratory data package has been reviewed and is complete and technically compliant with the requirements of the methods used, except where noted in the attached exception reports. I affirm, to the best of my knowledge that all problems/anomalies observed by this laboratory (and if applicable, any and all laboratories subcontracted through this laboratory) that might affect the quality of the data, have been identified in the Laboratory Review Checklist, and that no information or data have been knowingly withheld that would affect the quality of the data.

This report cannot be reproduced, except in full, without prior written permission of A&B Labs. Results shown relate only to the items tested. Samples are assumed to be in acceptable condition unless otherwise noted. Blank correction is not made unless otherwise noted. Air concentrations reported are based on field sampling information provided by client. Soil samples are reported on a wet weight basis unless otherwise noted. Uncertainty estimates are available on request.

Date Received : 01/06/2014 14:11



Job ID : 14010117

Date : 1/9/2014

CLIENT Name : TSP Inc.

PROJECT Name : Northwest WWTP, 5423 Mangum

ATTN : Bruce Peters

Method	ClientSampleID Parameter	Result	Units	Matrix	D.F	Rpt Limit	Reg Limit	Collection Date/Time	Analysis Date/Time	Analyst	SampleID	Q
SW-846 6010C	Lead	BRL	mg/Kg	Paint Chips	11	110		01/06/14	01/08/14 23:13	GG	14010117.01	
	Total Metals											
NW-Pb-02												
SW-846 6010C	Lead	160	mg/Kg	Paint Chips	12	120		01/06/14	01/08/14 23:35	GG	14010117.02	
	Total Metals											
NW-Pb-03												
SW-846 6010C	Lead	157	mg/Kg	Paint Chips	11	110		01/06/14	01/08/14 23:17	GG	14010117.03	
	Total Metals											
NW-Pb-04												
SW-846 6010C	Lead	409	mg/Kg	Paint Chips	13	130		01/06/14	01/08/14 23:39	GG	14010117.04	
	Total Metals											
NW-Pb-05												
SW-846 6010C	Lead	76692	mg/Kg	Paint Chips	180	1800		01/06/14	01/09/14 15:41	GG	14010117.05	
	Total Metals											
NW-Pb-06												
SW-846 6010C	Lead	219	mg/Kg	Paint Chips	8	80		01/06/14	01/08/14 23:22	GG	14010117.06	
	Total Metals											
NW-Pb-07												
SW-846 6010C	Lead	BRL	mg/Kg	Paint Chips	9	90		01/06/14	01/08/14 23:30	GG	14010117.07	
	Total Metals											
NW-Pb-08												
SW-846 6010C	Lead	BRL	mg/Kg	Paint Chips	10	100		01/06/14	01/08/14 23:58	GG	14010117.08	
	Total Metals											
NW-Pb-09												
SW-846 6010C	Lead	BRL	mg/Kg	Paint Chips	10	100		01/06/14	01/09/14 00:17	GG	14010117.09	
	Total Metals											
NW-Pb-10												
SW-846 6010C	Lead	BRL	mg/Kg	Paint Chips	29	290		01/06/14	01/09/14 00:21	GG	14010117.10	
	Total Metals											
NW-Pb-11												
SW-846 6010C	Lead	BRL	mg/Kg	Paint Chips	10	100		01/06/14	01/09/14 00:25	GG	14010117.11	
	Total Metals											
NW-Pb-12												



Job ID : 14010117

Date : 1/9/2014

CLIENT Name : TSP Inc.

PROJECT Name : Northwest WWTP, 5423 Mangum

ATTN : Bruce Peters

Method	ClientSampleID Parameter	Result	Units	Matrix	D.F	Rpt Limit	Reg Limit	Collection Date/Time	Analysis Date/Time	Analyst	SampleID	Q
SW-846 6010C	Lead	BRL	mg/Kg	Paint Chips	17	170		01/06/14	01/09/14 00:29	GG	14010117.12	
	NW-Pb-12 Total Metals											
SW-846 6010C	Lead	231	mg/Kg	Paint Chips	14	140		01/06/14	01/09/14 00:33	GG	14010117.13	
	NW-Pb-13 Total Metals											
SW-846 6010C	Lead	7159	mg/Kg	Paint Chips	11	110		01/06/14	01/09/14 00:38	GG	14010117.14	E4
	NW-Pb-14 Total Metals											
SW-846 6010C	Lead	BRL	mg/Kg	Paint Chips	10	100		01/06/14	01/09/14 00:57	GG	14010117.15	
	NW-Pb-15 Total Metals											



LABORATORY QUALITY CONTROL CERTIFICATE

A&B Job ID : 14010117

Date : 1/9/2014

QCType: Duplicate

Parameter	Method	QC Sapi Result	Sample Result	RPD	RPD CLimits	QC Batch ID	QC Sample ID	Qual
Lead	SW-846 6010C	1104.1	1194.7848	7.89	20	Qb14010906	14010209.01	
Lead	SW-846 6010C	28.1	28.4151	1.19	20	Qb14010904	14010117.15	

QCType: LCS and LCSD

Parameter	Method	Spike Added	LCS Result	LCS Rec %	LCSD Result	LCSD Rec %	RPD	% RPD CLimits	% Rec CLimits	QC Batch ID	Qual
Lead	SW-846 6010C	7418	6384.7	86.1	6578.9	88.7	3	20	70-130	Qb14010906	
Lead	SW-846 6010C	7418	8402.7	113	7115.0	95.9	16.6	20	70-130	Qb14010904	

QCType: Method Blank

Parameter	Method	CAS #	Result	Units	D.F.	Rot Limit	QC Batch ID	Qual
Lead	SW-846 6010C	7439-92-1	BRL	mg/Kg	1	10	Qb14010904	
Lead	SW-846 6010C	7439-92-1	BRL	mg/Kg	1	10	Qb14010906	

LABORATORY TERM AND QUALIFIER DEFINITION REPORT



Job ID : 14010117

Date: 1/9/2014

General Term Definition

Back-Wt	Back Weight	Post-Wt	Post Weight
BRL	Below Reporting Limit	ppm	parts per million
cfu	colony-forming units	Pre-Wt	Previous Weight
Conc.	Concentration	Q	Qualifier
D.F.	Dilution Factor	RegLimit	Regulatory Limit
Front-Wt	Front Weight	RPD	Relative Percent Difference
LCS	Laboratory Check Standard	RptLimit	Reporting Limit
LCSD	Laboratory Check Standard Duplicate	SDL	Sample Detection Limit
MS	Matrix Spike	surr	Surrogate
MSD	Matrix Spike Duplicate	T	Time
MW	Molecular Weight	TNTC	Too numerous to count

Qualifier Definition

E4 Concentration Estimated. Analyte exceeded calibration range, but within linear range.



Sample Condition Checklist

A&B JobID : 14010117	Date Received : 01/06/2014	Time Received : 2:11PM																										
Client Name : TSP Inc.																												
Temperature : 21.0°C	Sample pH : n/a																											
Thermometer ID : 102002320	pH Paper ID : n/a																											
Check Points																												
1.	Cooler seal present and signed.	Yes	No	N/A																								
2.	Sample(s) in a cooler.		X																									
3.	If yes, ice in cooler.			X																								
4.	Sample(s) received with chain-of-custody.	X																										
5.	C-O-C signed and dated.	X																										
6.	Sample(s) received with signed sample custody seal.		X																									
7.	Sample containers arrived intact. (If no comment).	X																										
8.	<table style="width: 100%; border: none;"> <tr> <td style="border: none;">Matrix</td> <td style="border: none;">Water</td> <td style="border: none;">Soil</td> <td style="border: none;">Liquid</td> <td style="border: none;">Sludge</td> <td style="border: none;">Solid</td> <td style="border: none;">Cassette</td> <td style="border: none;">Tube</td> <td style="border: none;">Bulk</td> <td style="border: none;">Badge</td> <td style="border: none;">Food</td> <td style="border: none;">Other</td> </tr> <tr> <td style="border: none;">:</td> <td style="border: none; text-align: center;"><input type="checkbox"/></td> <td style="border: none; text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	Matrix	Water	Soil	Liquid	Sludge	Solid	Cassette	Tube	Bulk	Badge	Food	Other	:	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
Matrix	Water	Soil	Liquid	Sludge	Solid	Cassette	Tube	Bulk	Badge	Food	Other																	
:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																	
9.	Sample(s) were received in appropriate container(s).	X																										
10.	Sample(s) were received with proper preservative			X																								
11.	All samples were logged or labeled.	X																										
12.	Sample ID labels match C-O-C ID's	X																										
13.	Bottle count on C-O-C matches bottles found.	X																										
14.	Sample volume is sufficient for analyses requested.	X																										
15.	Samples were received within the hold time.	X																										
16.	VOA vials completely filled.			X																								
17.	Sample accepted.	X																										
Comments : Include actions taken to resolve discrepancies/problem:																												
Other=Paint Chips.																												

Received by : **AHall**

Check in by/date : **AHall / 01/06/2014**

A & B Labs
 10100 East Freeway, Suite 100
 Houston, TX 77029
 713-453-0060 Fax 713-453-0091



Paint Chips

Sample Chain-of-Custody

Lead

A&B Job ID:

1700117

TAT (Check one):

Immediate (2-4 hour) _____

Rush (24 hour) _____

Regular (3-5 working days)

Report to:

TECHNOLOGY SOLUTIONS

Invoice to:

SAW

Company:

Company:

Address:

2511 WILLOWICK #229

Address:

HOUSTON TEXAS

Contact:

SAUL PETERS

Contact:

Phone:

(713) 781-9009

Phone:

Fax:

(713) 781-9094

Fax:

Email:

eric@broog@earthlink.net

Email:

PO#:

Project Name / #:

Northwest WWTP, 5423 Mangum

Sampler's Name:

Michael Solomon

Sampler's Company:

TSP, Inc.

Client Sample #	A&B Sx ID	Type	Location
NW-Pb-01	01A	Silver/Red Paint	Handrails, Aeration Basin
NW-Pb-02	02A	Silver/Black Paint	Valve/Fittings, Aeration Basin
NW-Pb-03	03A	Silver/Black Paint	4" Piping, Aeration Basin
NW-Pb-04	04A	Red Paint	Guard Rails, Aeration Basin
NW-Pb-05	05A	Silver/Red Paint	Sluice Gate Lifts, Aeration Basin
NW-Pb-06	06A	Silver Paint	Valve/Fittings, Clarifier 7
NW-Pb-07	07A	Silver/Black Paint	Piping @ Air Distribution, Clarifier 7
NW-Pb-08	08A	Blue Paint	Plug Valve, Clarifier 4
NW-Pb-09	09A	Silver Paint	Piping, Clarifier 4
NW-Pb-10	10A	Silver Paint	Butterfly Valve, Clarifier 4

Client Sample # is required. A&B Sx ID is assigned by the lab. Type and location are optional.

Method of Shipment:

Hand Delivered

Relinquished by:

[Signature]

Date

1/6/14

Time

2:11pm

Received by:

[Signature]

Date:

1/6/14

Time

11:11

21.0°C
 102002370
 #

Paint Chip Lead

Project Name/Number: Northwest WWTP, 5423 Mangum

	Sample #	Lab ID #	Type	Location
13	NW-Pb-11	11A	Silver/Red Paint	Gate Activator, Aeration Basin 6
14	NW-Pb-12	12A	Silver/Red Paint	Gate Activator, Aeration Basin 6
15	NW-Pb-13	13A	Red/Gray Paint	Hoist, Scum Separator
16	NW-Pb-14	14A	Gray/Red Paint	Gate Activator, Scum Separator
17	NW-Pb-15	15A	Gray Paint	Mixer, Scum Separator
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				

MEMORANDUM

DATE: December 16, 2013

TO: Bill Zed, P.E.

FROM: Robert Thornber, P.E.

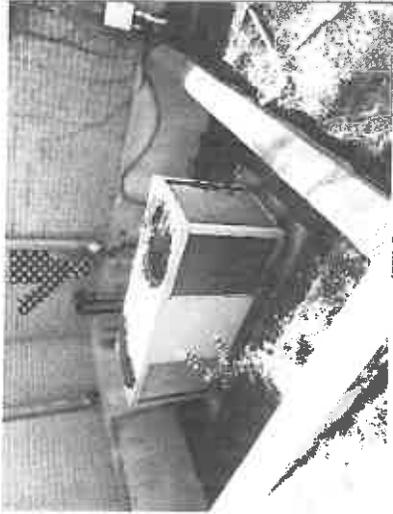
RE: Lead and Asbestos Survey Request – WBS No R-000265-0095-3 NW WWTP

Please find attached a description of the proposed demolition work for the Northwest Wastewater Treatment Plant (WWTP). The treatment plant is located at 5423 Mangum Road, Houston, Texas: Key Map No. 451C. The proposed demolition activities are associated with modification to the existing heating, ventilation, and air conditioning (HVAC) in the Administration and Maintenance Buildings; Aeration Piping Systems, Sluice Gates; Clarifiers 2, 3, 4, 5, 6, and 7 Drain Plug Valves, Scum Separation System, Odor Control Water Panels, Non-Potable Water Piping, Guardrail and Handrail, and Chemical Building Foundation Improvements.

Specifically the demolition will include:

- Air Cooled Condensing Units, Air Handling Units, and associated piping and ductwork inside the Administration and Maintenance Buildings.
- Air Piping in Aeration Basins 1-5 and Influent Channels 1-6. All lateral piping (1" tubes and 4" drops), 4" butterfly valves, tubes, spargers, hardware, and anchor bolts.
- Sluice Gate removal including frame, stem, handwheel, gear box, shaft support plate, and mechanical hardware.
- Clarifiers 2, 3, 4, 5, 6, and 7 drain plug valves, RAS pump piping, butterfly valves, and associated hardware.
- Removal of vertical mixer, scum pumps, piping, valves, and associated accessories from the scum accumulation box.
- Odor Control Water Panels and Non-Potable Water Piping to the Odor Control System.
- Guardrail and Handrail on Aeration Basins 1-3, including fittings, brackets, and flanges.
- Chemical Building Foundation Improvements including demolition of concrete beams, columns, tank pad, and splash pad.
- Ancillary Electrical Systems

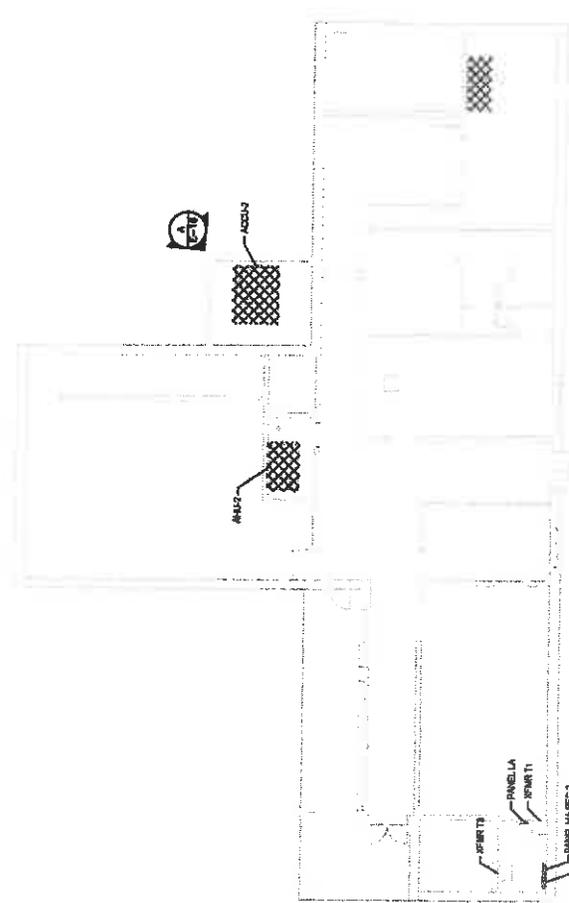
- NOTES
- 1 COORDINATE WITH HVAC CONTRACTOR TO DISCONNECT, POWER AND CONTROL WIRING.
 - 2 RECONNECT AND REUSE WIRE AND CONDUIT BACK TO SOURCE.



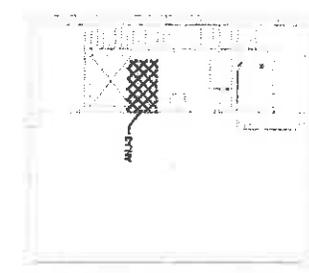
ACCU-2
DEMOLITION
PHOTOGRAPH A



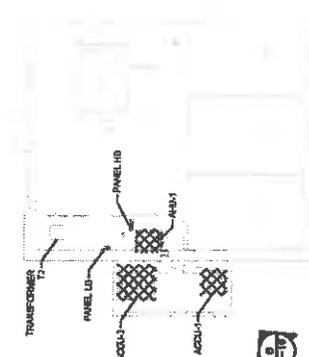
ACCU-3
DEMOLITION
PHOTOGRAPH B



FIRST FLOOR - MAINTENANCE BUILDING
HVAC DEMOLITION
PLAN
1/8" = 1'-0" (A)



SECOND FLOOR - ADMINISTRATION BUILDING
HVAC DEMOLITION
PLAN
1/8" = 1'-0" (B)

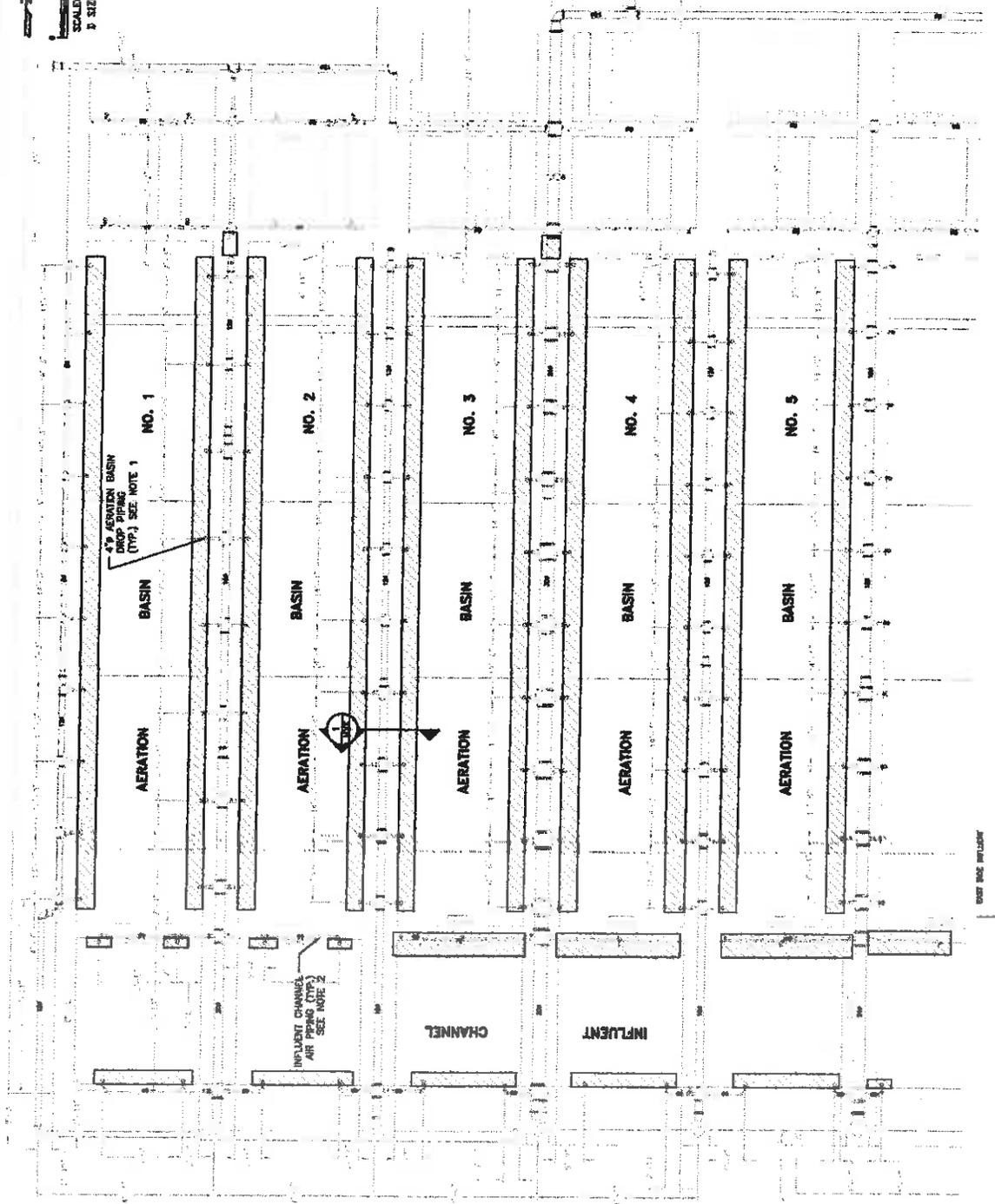


FIRST FLOOR - ADMINISTRATION BUILDING
HVAC DEMOLITION
PLAN
1/8" = 1'-0" (B)

GAI Guyton & Associates, Inc. Mechanical Engineering 1200 West Loop West, Suite 100 Houston, Texas 77027 Tel: 713-861-1234 Fax: 713-861-1235	PARSONS 2200 SOUTH BAY SUITE 300 HOUSTON, TEXAS 77057 PH: 713-871-7000 FAX: 713-871-7000 WWW.PARSONS.COM
	CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING NORTHWEST WWTP IMPROVEMENTS ELECTRICAL ADMIN. & MAINT. BUILDINGS HVAC DEMOLITION PLAN
FILE NO. 000000 DRAWING NO. 000000 SHEET NO. 000000 SHEET TITLE SHEET NO. OF	

NOTES:

1. REMOVE 4" BUTTERFLY VALVE AND ALL DROP AND LATERAL PIPING, TUBES AND SPARGERS. REMOVE ALL AIR PIPING CONNECTED TO THE SPOOL FLANGE CURRENTLY CONNECTED TO THE 4" BUTTERFLY VALVE. REMOVE ALL SUPPORTS AND ANY MECHANICAL HARDWARE CONNECTED TO THE DROP PIPING. CUT PIPE SUPPORT FRAME ANCHOR BOLTS FLUSH WITH CONCRETE.
2. REMOVE ALL 4" VERTICAL AND DROP PIPING, 1" AIR TUBES AND SPARGERS. REMOVE ALL PIPING AND SUPPORT FRAME ANCHOR BOLTS FLUSH WITH WALL.
3. AIR LINES ARE ACTIVE AND PRESSURIZED. REMOVE ALL AIR LINES WITH MPOU PHASING PLAN SPT M-12 AND M-13.



DO NOT SCALE INFLUENT

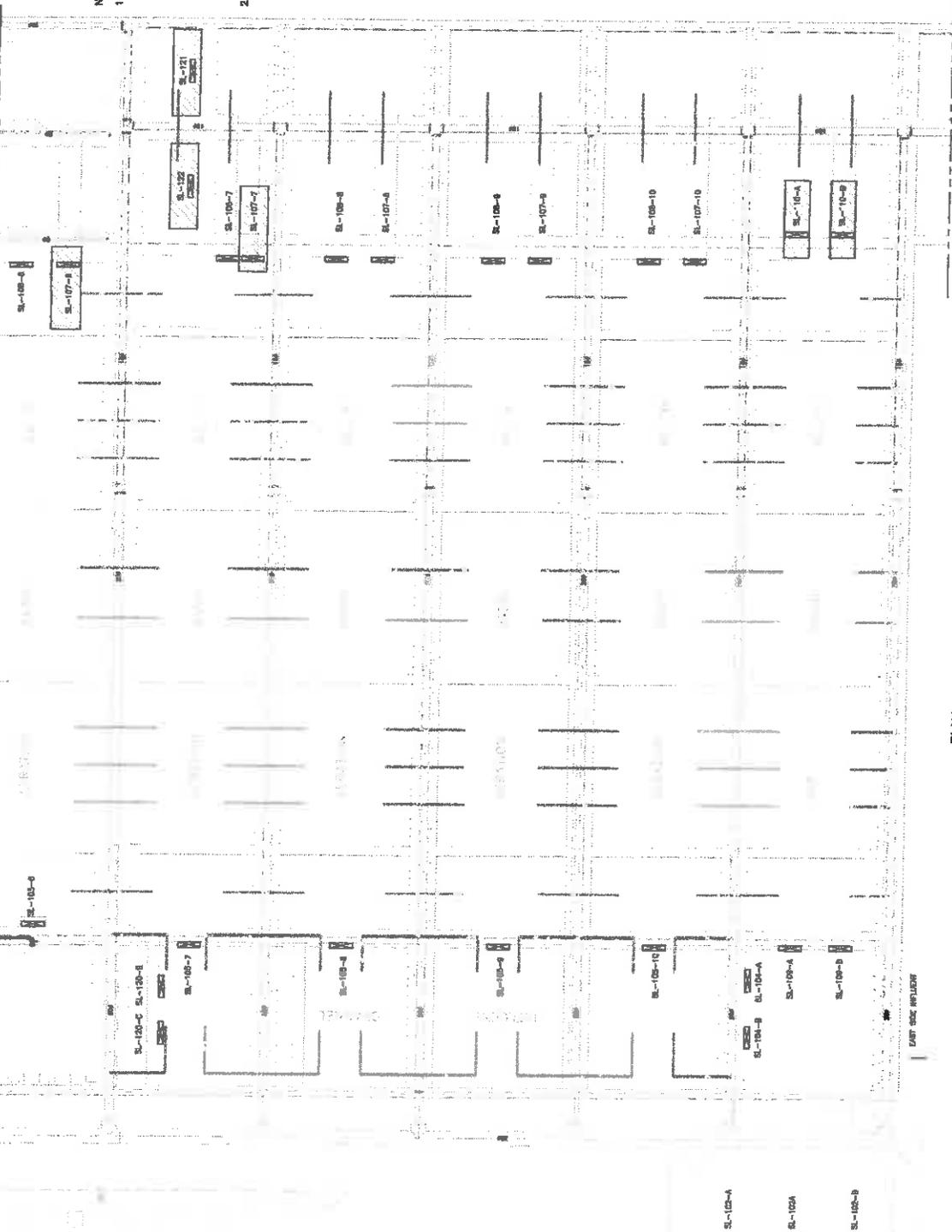
PLAN
SCALE: 1" = 10'

PARSONS
 2500 WEST LOOP SOUTH
 HOUSTON, TEXAS 77027
 TEL. 713.971-7000
 FAX 713.971-7000
 WWW.PARSONS.COM
 PROJECT NO. 100000000
 SHEET NO. 100000000

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
NORTHWEST WWTP
 IMPROVEMENTS
 AERATION
 AIR PIPING DEMOLITION PLAN

DATE	NO. 100000000
BY	10/10/10
CHECKED	10/10/10
SCALE	1" = 10'
DATE	10/10/10
CITY OF HOUSTON PW	
REV. DATE	10/10/10
SHEET NO.	100000000
OF	100000000

GATE DEMOLITION PLAN SEE SHEET M-30



- NOTES:
1. REMOVE GATE, FRAME, STEM, HANDBHEEL, GEAR BOX, SHAFT SUPPORT PLATE AND OTHER MECHANICAL HARDWARE. REMOVE FRAME INCLUDING BOLTS EXISTING FRAME INCLUDING BOLTS FLUSH TO THE WALL. CUT STEEL SUPPORT PLATE SHAFT BOLTS REMOVE GEAR BOX INCLUDING SUPPORT FLUSH TO THE TOP SLAB OF THE CONCRETE. GROUT SEAL AROUND CUT ANCHOR BOLTS.
 2. CONTRACTOR TO FOLLOW AN APPROVED CONSTRUCTION SEQUENCE BEFORE REPLACEMENT OF GATES IN USE. REFER TO THE CONSTRUCTION PLAN OPERATIONS (MOP) FOR CONSTRUCTION SEQUENCE. COORDINATION SHTS M-12 AND M-13.

LEGEND:

DEMOLITION



PARSONS
 2500 WESTHOPE BOULEVARD, SUITE 100 SOUTH
 HOUSTON, TEXAS 77067
 PHONE: 713.671.2000
 FAX: 713.671.2000
 WWW.PARSONS.COM
 PROJECT NO. 04-000000-01
 SHEET NO. M-30

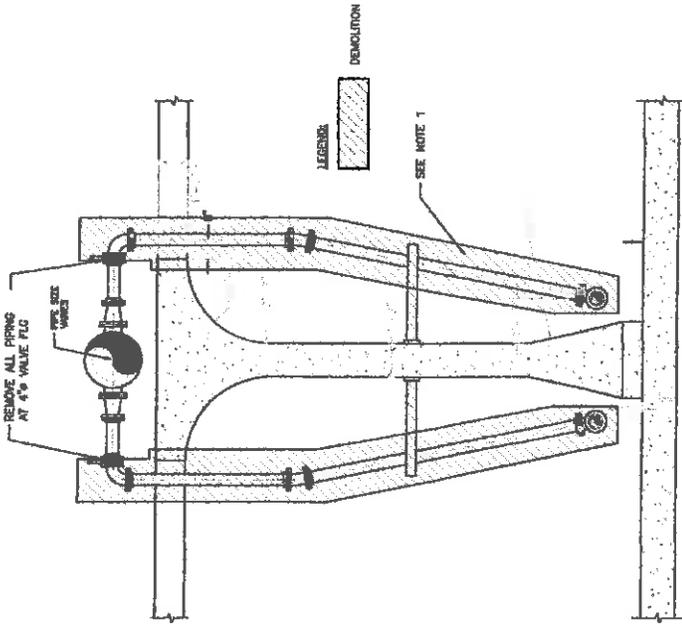
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
NORTHWEST WWTP IMPROVEMENTS
 AERATION BASINS
 GATE DEMOLITION PLAN 2 OF 2

FILE NO. 040000
 SHEET NO. M-30 OF 30
 DRAWING SCALE
 DATE: 04/28/2013
 CITY OF HOUSTON, TX
 SHEET NO. M-30 OF 30

PLAN
 SCALE: 1" = 10'

NOTES:

1. DEMOLITION INCLUDES REMOVAL OF VALVES, DROPS, RELATED FITTINGS, FLOOR AND WALL ANCHORS AND DIFFUSERS AS SHOWN.
2. SEE MOPO PHASING PLAN SHT M-12 AND M-13 FOR VALVE PLACEMENT



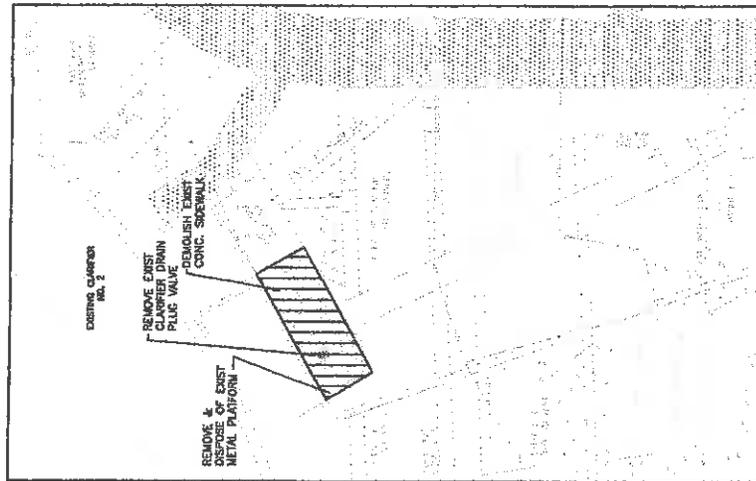
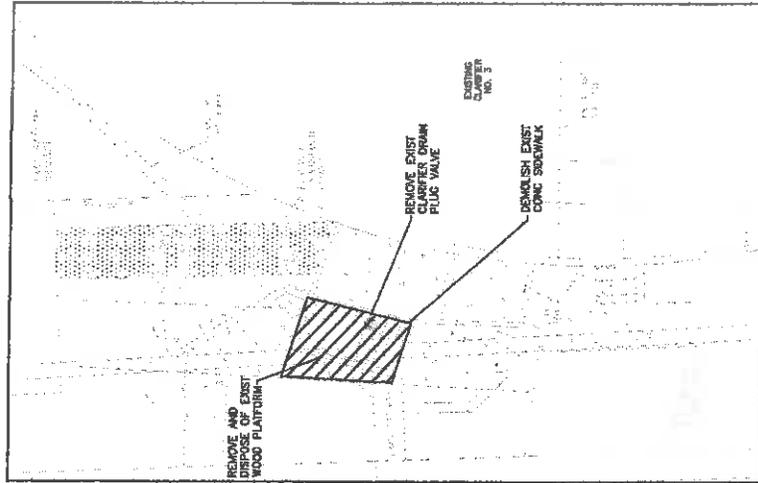
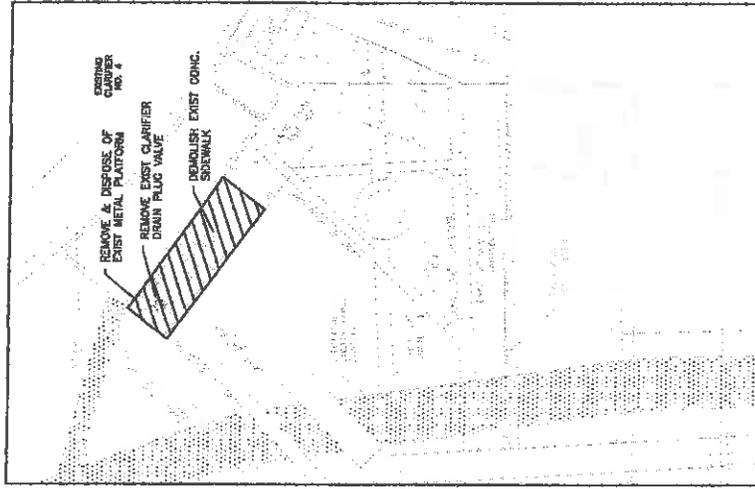
EXISTING AIR PIPING (TYP.) SECTION
 1/2" = 1'-0"
 1
 M-12

<p>PARSONS 2200 WEST 17TH STREET HOUSTON, TEXAS 77056 TEL: 713 871-7000 WWW.PARSONS.COM PROJECT NO. 10000000000000000000 SHEET NO. 01</p>	<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND STREETS NORTHWEST WWTP IMPROVEMENTS AERATION PIPING DEMOLITION SECTION AND DETAILS</p>
<p>FILE NO. 10000000000000000000 SHEET NO. 01 OF 01 DRAWING SCALE SHEET SIZE CITY OF HOUSTON SHEET NO. 01</p>	<p>DATE: 01/15/2013 DRAWN BY: J. SMITH CHECKED BY: J. SMITH APPROVED BY: J. SMITH</p>



NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF HOUSTON'S REGULATIONS AND RESTRICTIONS. PARSONS WILL DETERMINE EXISTING LINES, AND LOCATIONS SHALL BE SHOWN ON THE PLAN. UNLESS OTHERWISE NOTED, ALL LOCATIONS SHALL BE AS SHOWN ON THE PLAN. UNLESS OTHERWISE NOTED, ALL LOCATIONS SHALL BE AS SHOWN ON THE PLAN.
2. ALL LOCATIONS SHALL BE AS SHOWN ON THE PLAN. UNLESS OTHERWISE NOTED, ALL LOCATIONS SHALL BE AS SHOWN ON THE PLAN.
3. ALL LOCATIONS SHALL BE AS SHOWN ON THE PLAN. UNLESS OTHERWISE NOTED, ALL LOCATIONS SHALL BE AS SHOWN ON THE PLAN.
4. ALL LOCATIONS SHALL BE AS SHOWN ON THE PLAN. UNLESS OTHERWISE NOTED, ALL LOCATIONS SHALL BE AS SHOWN ON THE PLAN.
5. ALL LOCATIONS SHALL BE AS SHOWN ON THE PLAN. UNLESS OTHERWISE NOTED, ALL LOCATIONS SHALL BE AS SHOWN ON THE PLAN.



ENLARGED PLAN FOR CLARIFIER NO. 4
DRAIN VALVE REPLACEMENT

ENLARGED PLAN FOR CLARIFIER NO. 3
DRAIN VALVE REPLACEMENT

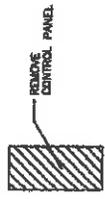
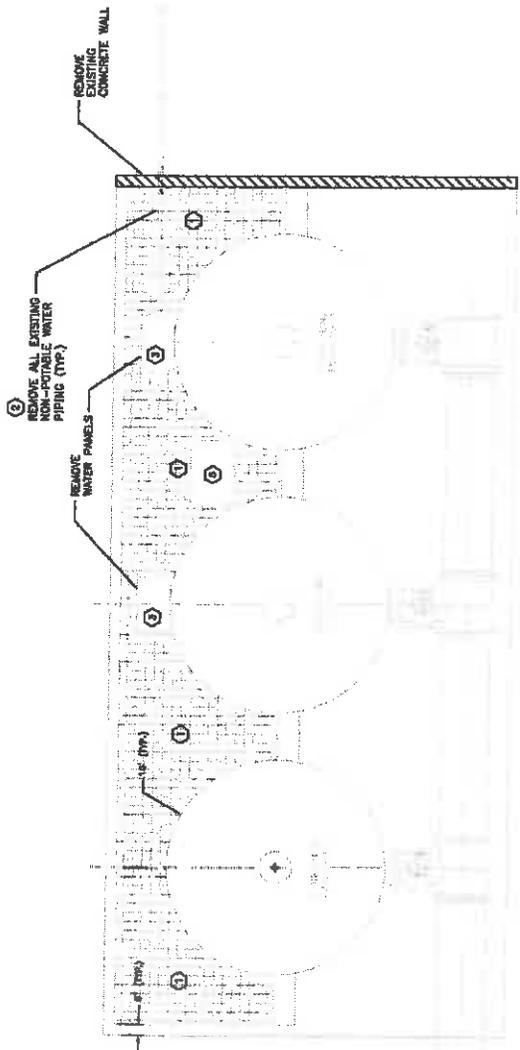
ENLARGED PLAN FOR CLARIFIER NO. 2
DRAIN VALVE REPLACEMENT



PARSONS
2300 WEST 20TH STREET, SUITE 2000
HOUSTON, TEXAS 77057
TEL: 713.871.7000
FAX: 713.871.7001
WWW.PARSONS.COM

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
NORTHWEST WWTP
IMPROVEMENTS
CLARIFIERS 2,3&4 DRAIN
VALVE DEMOLITION PLAN

FILE NO.	100880
PROJECT NO.	10-002-200-2000-2
DRAWING SCALE	1/4" = 1'-0"
CITY OF HOUSTON (IN)	FILE 100, 75
SHEET NO.	09



- NOTES:
- 1 REMOVE EXISTING PIPE ORTING.
 - 2 REMOVE EXISTING PIPES PIPING AND ORIGIN PIPING TO VESSEL.
 - 3 REMOVE EXISTING WATER PANELS, CUT AND CAP ALL ELECTRICAL CONDUITS.
 - 4 LOCALLY FLAG ORAINS.
 - 5 REMOVE INTRUSIVE BARS AND TURN OVER TO OWNER FOR FURTHER DISPOSITION.

PLAN
SCALE 1/8" = 1'-0"

PARSONS
2200 WEST LOOP SOUTH
SUITE 2200
HOUSTON, TEXAS 77058
PH: 713.971-7000
FAX: 713.971-7000
WWW.PARSONS.COM

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND CONSTRUCTION
NORTHWEST WWTP
IMPROVEMENTS
BIOTRICKLING FILTER
DEMOLITION PLAN

FILE NO.	000000
PROJECT NO.	000000
DATE	00/00/00
BY	000000
CHECKED BY	000000
DATE	00/00/00
SCALE	00' = 1'-0"
PROJECT NO.	000000
DATE	00/00/00



**Northwest Waste Water Treatment Plant,
5423 Mangum, Houston, Texas**



**Compressed Flange Gasket, Sample #NW-01,
Aeration Basin #1,
41%-60% Chrysotile Asbestos**



**Black Rubber Flange Gasket, Sample # NW-02,
Aeration Basin #1, No Asbestos Detected**



**Flange Gasket, Sample # NW-03, @ Valve Air
Piping, Aeration Basin, 21%-40% Chrysotile
Asbestos**



**Gasket, Sample # NW-04, Plug Valve, Clarifier #4,
41%-60% Chrysotile Asbestos**



**Flange Gasket, Sample # NW-05, Mixer, Scum
Separator Unit, No Asbestos Detected**



**Black Vibration Dampner, Sample # NW-06,
Maintenance Building, No Asbestos Detected**



**Sheetrock/Joint Compound, Sample # NW-07,
Ceiling, Lunch Room, Maintenance Building, No
Asbestos Detected**



**Plaster, Sample #NW-08, Ceiling, Men's Restroom,
Maintenance Building, No Asbestos Detected**



**Plaster, Sample #NW-09, Ceiling, Ladies Restroom,
Maintenance Building, No Asbestos Detected**



**Plaster, Sample # NW-10, Ceiling, Men's Restroom,
Maintenance Building, No Asbestos Detected**



**Sheetrock/Joint Compound, Sample # NW-11,
Ceiling, Adminstration Building Electrical Room,
No Asbestos Detected**



**Sheetrock/Joint Compound, Sample # NW-12, AHU
Room, Administration Building,
No Asbestos Detected**



**Northwest Waste Water Treatment Plant,
5423 Mangum, Houston, Texas**



**Silver/Red Paint on Handrails, Aeration Basin,
Sample #NW-Pb-01, Below Reporting Limit (BRL)**



**Silver/Black Paint on Valve/Fitting, Aeration
Basin, Sample #NW-Pb-02, (160 mg/Kg)**



**Silver/Black Paint on 4" Piping, Aeration Basin,
Sample #NW-Pb-03, (157 mg/Kg)**



**Red Paint on Guard Rails, Aeration Basin,
Sample #NW-Pb-04, (409 mg/Kg)**



**Silver/Red Paint on Sluice Gate Lifts, Aeration Basin,
Sample #NW-Pb-05, (76,692 mg/Kg)**



**Silver Paint on Valve/Fitting, Clarifier #7,
Sample #NW-Pb-06, (219 mg/Kg)**



**Silver/Black Paint on Piping @ Air Distribution,
Clarifier #7, Sample #NW-Pb-07, (BRL)**



**Blue Paint on Plug Valve, Clarifier #4,
Sample #NW-Pb-08, (BRL)**



**Silver Paint on Piping, Clarifier #4,
Sample #NW-Pb-09, (BRL)**



**Silver Paint on Butterfly Valve, Clarifier #4,
Sample #NW-Pb-10, (BRL)**



**Silver/Red Paint on Gate Activator, Aeration
Basin #6, Sample #NW-Pb-11, (BRL)**



Silver/Red Paint on Gate Activator, Aeration Basin #6, Sample #NW-Pb-12, (BRL)



Red/Gray Paint on Hoist, Scum Separator, Sample #NW-Pb-13, (231 mg/Kg)



Gray/Red Paint on Gate Activator, Scum Separator, Sample #NW-Pb-14, (7,159 mg/Kg)



Gray Paint on Mixer, Scum Separator, Sample #NW-Pb-15, (BRL)



TEXAS DEPARTMENT OF STATE HEALTH SERVICES
TECHNOLOGY SERVING PEOPLE INC

is certified to perform as a

Asbestos Consultant Agency

in the State of Texas within the purview of Texas Occupations Code, chapter 1954, so long as this license is not suspended or revoked and is renewed according to the rules adopted by the Texas Board of Health.

A handwritten signature in cursive script, appearing to read "David Lahey MD".

DAVID LAKEY, M.D.
COMMISSIONER OF HEALTH

License Number: 100035

Control Number: 96582

Expiration Date: 2/3/2015

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

TEXAS DEPARTMENT OF STATE HEALTH SERVICES

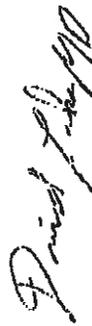
Be it known that

TECHNOLOGY SERVING PEOPLE INC

is certified to perform as a

Lead Firm

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1955 and Title 25, Texas Administrative Code, Chapter 295 relating to Texas Environmental Lead Reduction, as long as this license is not suspended or revoked.



David L. Lakey, M.D.
Commissioner of Health

License Number: 2110316

Control Number 6435

Expiration Date: 3/30/2014

(Void After Expiration Date)



**Texas Department of
State Health Services**

Asbestos Inspector

MICHAEL E SOLOMON

License No. 602465

Control No. 97412

Expiration Date: 9/16/2015



**Texas Department of
State Health Services**

Asbestos Individual Consultant

BRUCE D PETERS

License No. 105336

Control No. 96363

Expiration Date: 7/31/2014



Department of State Health Services certifies that

MICHAEL E SOLOMON

is certified as a

Lead Inspector

Certification No: 2000093

Control No: 6244

Expires: 10/18/2015


David L. Lahey, M.D.
Commissioner of Health



TEXAS DEPARTMENT OF STATE HEALTH SERVICES

A & B ENVIRONMENTAL SERVICES INC

is certified to perform as a

Asbestos Laboratory
PCM, PLM

in the State of Texas within the purview of Texas Occupations Code, chapter 1954, so long as this license is not suspended or revoked and is renewed according to the rules adopted by the Texas Board of Health.

A handwritten signature in cursive script, appearing to read "David Lakey MD".

DAVID LAKEY, M.D.
COMMISSIONER OF HEALTH

License Number: 300080

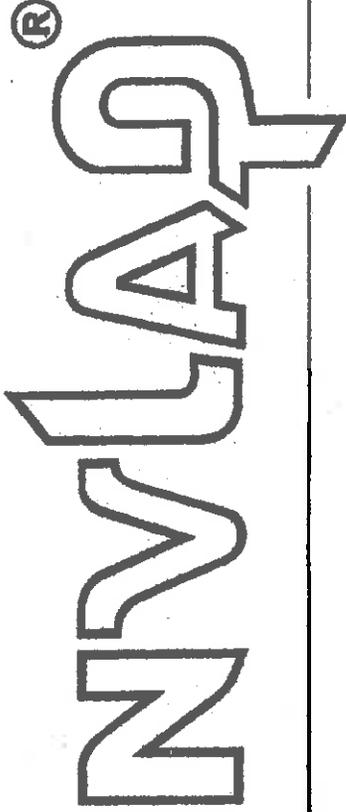
Control Number: 95814

Expiration Date: 5/18/2014

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101793-0

A & B Environmental Services, Inc.
Houston, TX

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2014-01-01 through 2014-12-31

Effective dates



A handwritten signature in black ink, appearing to read "W. R. Wild".

For the National Institute of Standards and Technology



**National Voluntary
Laboratory Accreditation Program**



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

A & B Environmental Services, Inc.
 10100 I-10 East, Suite 100
 Houston, TX 77029
 Ms. Rita Wells
 Phone: 713-453-6060 Fax: 713-453-6091
 E-Mail: rwells@ablabs.com
 URL: <http://www.ABLABS.com>

BULK ASBESTOS FIBER ANALYSIS (PLM)

NVLAP LAB CODE 101793-0

<i>NVLAP Code</i>	<i>Designation / Description</i>
18/A01	EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

2014-01-01 through 2014-12-31

Effective dates

For the National Institute of Standards and Technology

**Asbestos Hazards Characterization (AHC) List
Northwest Waste Water Treatment Plant Improvements
5423 Mangum Road, Houston, Texas**

<u>Material</u>	<u>Asbestos Content</u>	<u>AHC</u>
NW-01 (Flange Gasket Aeration Basin 1 Piping)	41-60% Chrysotile	C3- Asbestos Present
NW-02 (Flange Gasket Aeration Basin 1 Piping)	ND	A- No Asbestos Found
NW-03 (Flange Gasket Aeration Basin)	21-40% Chrysotile	C3- Asbestos Present
NW-04 (Plug Valve Flange Gasket Clarifier 4)	41-60% Chrysotile	C3- Asbestos Present
NW-05 (Mixer Gasket Scum Separator)	ND	A- No Asbestos Found
NW-06 (Black Canvas Vibration Damper Cloth Maint. Bldg.)	ND	A- No Asbestos Found
NW-07 (Sheetrock & Joint Compound Maintenance Bldg.)	ND	A- No Asbestos Found
NW-08 (Plaster Ceiling Maintenance Bldg. Mens RR's)	ND	A- No Asbestos Found
NW-09 (Plaster Ceiling Maintenance Bldg. Womens RR's)	ND	A- No Asbestos Found
NW-10 (Plaster Ceiling Maintenance Bldg. Mens RR's)	ND	A- No Asbestos Found
NW-11 (Sheetrock & Joint Compound Admin. Bldg.)	ND	A- No Asbestos Found
NW-12 (Sheetrock & Joint Compound Admin. Bldg.)	ND	A- No Asbestos Found

**Lead Hazards Characterization (LHC) List
Northwest Waste Water Treatment Plant Improvements
5423 Mangum Road, Houston, Texas**

<u>Material</u>	<u>Lead Content</u>	<u>LHC</u>
NW-Pb-01 (Silver/Red Handrails Aeration Basin)	< 110 mg/Kg (BRL)	A-Allowable Lead Level
NW-Pb-02 (Silver/Black Valve Fitting Aeration Basin)	160 mg/Kg	A-Allowable Lead Level
NW-Pb-03 (Silver/Black 4" Piping Aeration Basin)	157 mg/Kg	A-Allowable Lead Level
NW-Pb-04 (Red Guard Rails Aeration Basin)	409 mg/Kg	A-Allowable Lead Level
NW-Pb-05 (Silver/Red Sluice Gate Lift Aeration Basin)	76,692 mg/Kg	C2- Lead Present
NW-Pb-06 (Silver Valve Fitting Clarifier 7)	219 mg/Kg	A-Allowable Lead Level
NW-Pb-07 (Silver/Black Aeration Piping Clarifier 7)	< 100 mg/Kg (BRL)	A-Allowable Lead Level
NW-Pb-08 (Blue Plug Valve Clarifier 4)	< 100 mg/Kg (BRL)	A-Allowable Lead Level
NW-Pb-09 (Silver Piping Clarifier 4)	< 100 mg/Kg (BRL)	A-Allowable Lead Level
NW-Pb-10 (Silver Paint Butterfly Valve Clarifier 4)	< 100 mg/Kg (BRL)	A-Allowable Lead Level
NW-Pb-11 (Silver/Red Gate Activator Aeration Basin 6)	< 100 mg/Kg (BRL)	A-Allowable Lead Level
NW-Pb-12 (Silver/Red Gate Activator Aeration Basin 6)	< 100 mg/Kg (BRL)	A-Allowable Lead Level
NW-Pb-13 (Red/Gray Scum Separator Hoist)	231 mg/Kg	A-Allowable Lead Level
NW-Pb-14 (Gray/Red Gate Activator Scum Separator)	7,159 mg/Kg	C2- Lead Present
NW-Pb-15 (Gray Paint Mixer Scum Separator)	< 100 mg/Kg (BRL)	A-Allowable Lead Level

CHECK LIST FOR ASBESTOS SURVEYS

NAME OF THE FACILITY: NORTHWEST WWTP
 FACILITY ADDRESS: 5423 Magnolia
 DATE OF SURVEY: 1/5/14 CONSULTANT: TECHNOLOGY SERVING PEOPLE, Inc.
 INSPECTOR(S) NAME: BRUCE PETERS

Note: Items/information listed below must be included in the report. Use this check list to ensure completeness of your report. Mark "X" or "check" in front of the information included in the report. Submit completed check list with the report. If a facility is surveyed for asbestos and lead, the surveys shall be segregated in one binder or preferably two separate reports.

1. Date and Contract number of the survey.
2. Scope of work.
3. Copy of the Inspector(s) TDH License.
4. Name and Address of the building.
5. Statement...if building records were used in the inspection and if not, Why?
6. Date of construction and last renovation (if any) of the building.
7. Cover letter (in report) contain executive summary or executive summary begin the report format.
8. List of areas that were not inspected. Explain.
9. Procedures and protocols used to collect bulk samples.
10. List of measures taken to prevent potential fiber release from locations where samples were extracted.
11. Drawings and photographs with sample locations marked to facilitate future location of materials sampled.
12. Statement...if an accredited (NVLAP) laboratory was used for Sample Analysis.
13. Copy of the Laboratory accreditation certificate.
14. Copy of the laboratory analysis results of the bulk samples.
15. Statement (by the laboratory) regarding Quality Assurance and Quality Control performed.
16. Copy of the chain of custody form for the bulk samples.
17. List of materials assumed to be containing asbestos.
18. City of Houston Asbestos Hazard Categorization (AHC) list and categorization of all the samples according to the AHC list included in the report.
19. Condition of the building structure such as deterioration, structural problems, or other damages.

If Asbestos Present:

20. NA Statement...if repeat analysis using point counting with PLM was done as required by the city for

ASBESTOS CHECKLIST

21. Photographs of all Materials proven to be ACM are included.
23. All asbestos containing materials are classified as Friable or Non-Friable.
24. Recommendations are made for all Asbestos Containing Materials.
25. Reasonably accurate quantities of ACM's are estimated and given in the report.
26. Cost estimations are given for abatement.
27. MA Operation and Maintenance Plans are recommended.

Signed: Bruce Peter

Name: Bruce PETERS

Title: ASBESTOS CONSULTANT

CHECK LIST FOR LEAD SURVEYS

NAME OF THE FACILITY: NORTHWEST WWTP

FACILITY ADDRESS: 5423 Mangum

DATE OF THE SURVEY: 1/5/14 CONSULTANT: TECHNOLOGY SERVING PEOPLE, INC.

INSPECTOR(S) NAME: MIKE SOROMON

Note: Items/information listed below must be included in the report. Use this check list to ensure completeness of your report. Mark "X" or "check" in front of the information included in the report. Submit completed check list with the report. If a facility is surveyed for lead and asbestos, the survey reports shall be segregated in one binder or preferably two separate reports.

1. NA Statement... if "HUD Guidelines for Evaluation and Control of Lead Based Paint in Housing" or any other criteria was followed for the survey.
2. Date and Contract number of the survey.
3. Scope of the work.
4. Copy of the Inspector (s) TDH Certificate.
5. Name and Address of the building.
6. Statement... if building records were used in the inspection, and if not, Why?
7. Cover letter (in report) containing executive summary or executive summary at the beginning of the report format.
8. Date of construction and last renovation (if any) of the building.
9. List of areas that were not inspected. Explain.
10. Condition of the building structure such as deterioration, structural problems or other damages.
11. List of components assumed to have lead based paint or coating, if any.
12. City of Houston Lead Hazard Categorization (LHC) list and categorization of all the samples according to the LHC list included in the report.

XRF Analyzer Used:

1. NA Performance Characteristics Sheet (PCS) for the XRF equipment/s used.
2. NA Calibration Check Test Results (Form 7.2, HUD Guidelines, or equivalent).
3. NA Statement...if HUD Guidelines were followed for Calibration Check Test of the XRF equipment and replacement XRF equipment, if used.
4. NA Installation date and type of source for XRF equipment and replacement equipment, if used.
5. NA Drawings and photographs with XRF reading locations marked to facilitate future location of XRF readings.

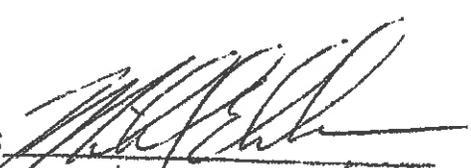
Samples Taken For Laboratory Analysis:

1. Procedures and protocols used to collect paint chip samples.

19. Copy of the chain of custody form for samples.
20. Statement ...if an accredited (NLLAP/ELLAP) laboratory was used for Sample Analysis.
21. Copy of the Laboratory accreditation certificate.
22. Copy of the laboratory analysis results of the paint chip samples and other PbCMs.
23. Statement (by the laboratory) regarding Quality Assurance and Quality Control performed.
24. Drawings and photographs with sample locations marked to facilitate future location of coating materials sampled.

If Lead Found:

25. Photographs of all component areas proven to have lead.
26. Recommendations for all components proven to have lead based paint or coatings.
27. NA Recommendations for Operation and Maintenance Plans.
28. NA Estimated quantities of Lead Containing Materials.
29. NA Cost estimations for abatement.

Signed: 

Name: Michael E. Solomon

Title: Lead Inspector