



CITY OF HOUSTON

Public Works and Engineering
Department

Interoffice

Correspondence

To: Iraj Ranjbar, P.E.
Managing Engineer
Engineering Branch
Engineering and Construction
Division

From: Supervising Engineer
Geo-Environmental Branch
Engineering and Construction Division

Date: April 13, 2015

Subject: **FIR RIDGE LIFT STATION RENEWAL &
REPLACEMENT**
204 Fir Ridge
WBS NO. R-000267-0117-3

Attached are two copies of the asbestos survey reports for the subject property, prepared by Environmental Consultants & Management Services, Inc. (ECMS), the City's consultant for the subject project. The consultant's findings and recommendations are summarized below:

ASBESTOS

Findings:

Because of deteriorated structures that hindered ECMS from collecting asbestos samples at the subject property, no asbestos samples were collected.

Recommendations:

- If gaskets are discovered during demolition/renovation activities, they shall be sampled or assumed to be Asbestos Containing Materials (ACM).
- If the materials are assumed to be ACM, the general contractor should coordinate with an abatement contractor to schedule abatement activities.

If you have any questions, please call me at 832-395-2260 or T.C. Nguyen at 832-395-2258.

TCN
kd

MT:TCN:kd


Maher Tanbouz, P.E.

H:\constr\A-ENV-SBI\Environmental\Asbestos_&_Lead\A&L Assessments\2015\ (R-000267-0117-3)_(Fir_Ridge_LS_FN070_at_204_Fir_Ridge).doc

Attachment: Two (2) Asbestos Survey Reports

ec: Daniel R. Menendez, P.E.
Ravi Kaleyatodi, P.E., CPM
Ebi Nassiri, P.E.
MP Mike Pezeshki, P.E.

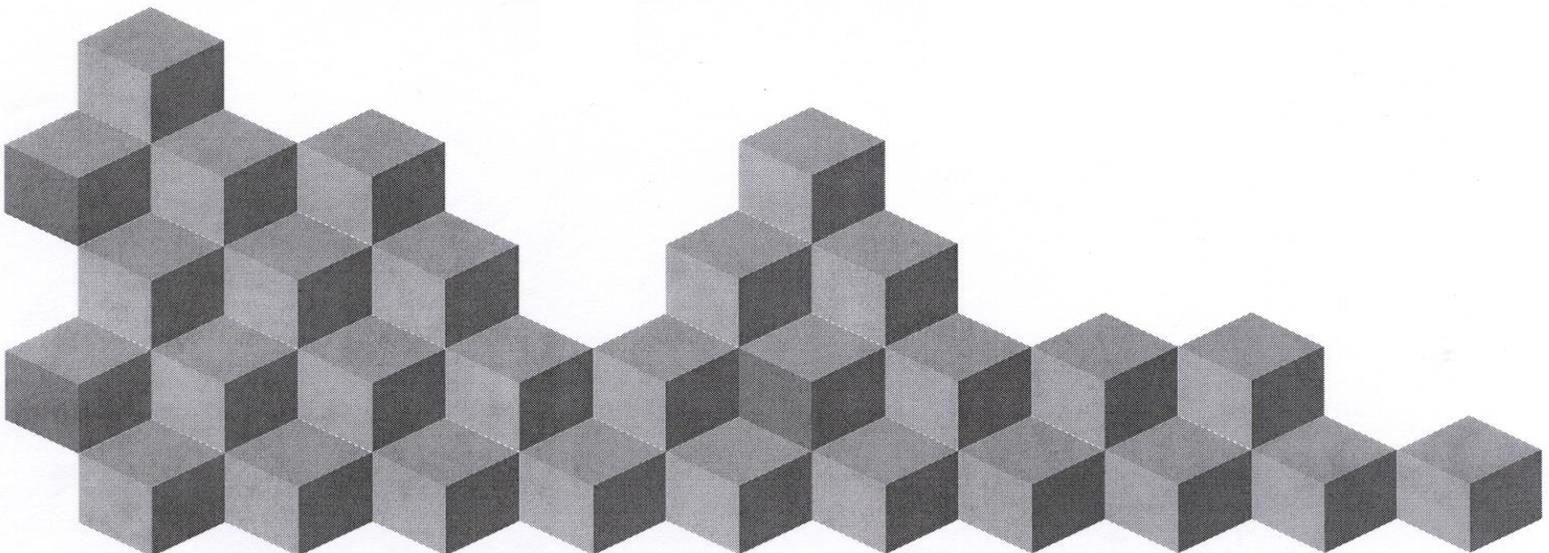
Environmental Consultants & Management Services

Asbestos Survey Report

*Lift Station Renewal and Replacement
Lift Station FN070
204 Fir Ridge Dr.
Huffman, TX*

*WBS No. R-000267-0117-3
Task Number 14-07
ECMS Project Number: 3806 - D*

*Prepared for:
City of Houston
Public Works and Engineering Department
Engineering & Construction Division
Geo-Environmental Services Branch
611 Walker-14th Floor, Houston, Texas 77002*



ASBESTOS SURVEY REPORT

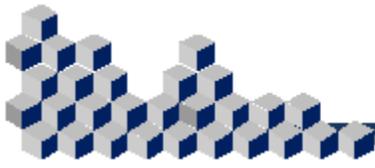
Lift Station FN070
204 Fir Ridge Dr.
Huffman, TX

WBS No: R-000267-0117-3
Task Number 14-07
ECMS Project Number: 3806-D

Prepared for:

City of Houston
Public Works & Engineering Department
Engineering & Construction Division
Geo-Environmental Services Branch
611 Walker -14th Floor
Houston, Texas 77002

October 13, 2014



ECMS, Inc.

Engineering Management, Construction Support & Environmental Services

October 13, 2014

Public Works & Engineering Department
Engineering & Construction Division
Geo-Environmental Services Branch
611 Walker Street, 14th Floor
Houston, Texas 77002

Re:Comprehensive Asbestos Survey
Lift Station FN070
204 Fir Ridge Dr.
Huffman, TX

WBS No: R-000267-0117-3
Task Number: 14-07
ECMS Project Number: 3806-D

Environmental Consulting & Management Services, Inc. (ECMS) is pleased to present the results of the asbestos survey conducted at the above referenced facility.

This report includes the results of our findings from visual reconnaissance, sampling and laboratory analysis. An assessment of the information was made to arrive at the conclusions stated and the recommendations presented.

We appreciate the opportunity to be of service to you and look forward to working on future assignments. Should you have any questions concerning this report or if we can assist you with any other matter, please feel free to contact us. ECMS personnel are available for your assistance around the clock.

Sincerely,
Environmental Consulting & Management Services, Inc. (ECMS)

Tyrone P. Dorian, P.E., P.G.

Tyrone P. Dorian, P.E., P.G.
Individual Asbestos Consultant #10-5313

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Qualifications and Limitations

Our professional services have been performed, our findings obtained and our recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This warranty is in lieu of all other warranties either expressed or implied. This company is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploration and laboratory test data presented in this report.

The conclusions and recommendations describe only the conditions present at the time of our assessment, in areas that were observed. Opinions and recommendations presented herein apply to facility conditions existing at the time of our investigation and those reasonably foreseeable.

This report is prepared for the sole and exclusive use of the City of Houston, its contractors or agents. It is designed to aid the building owner, architect, construction manager, general contractor, and potential abatement contractor in locating Asbestos-Containing Materials (ACM).

Reasonable efforts were made to obtain representative samples of building materials and have those materials analyzed for asbestos content. Should suspect materials be discovered during building renovation/demolition that have not been addressed, samples of the materials should be collected and analyzed for asbestos content prior to renovation and/or demolition.

Notification to the Texas Department of State Health Services (DSHS) must be given prior to any renovations or demolition activities.

Executive Summary

Environmental Consultants & Management Services, Inc. (ECMS) conducted asbestos surveys on September 8, 2014, at Lift Station FN070 located at 204 Fir Ridge Dr. Huffman, TX. The lift station is an isolated below grade cast-in-place cylindrical concrete structure and approximately 8' below grade. The interior of the structure contains a pump system with distribution piping, valves, sump pump (below grade) and electrical control panels (above grade). Paint deterioration was noted on painted equipment including, pumps, pump stands, piping, pipe fittings, and pipe valves. Entry into the lift station was through an extremely small personnel hatch via deteriorated metal stairs.

Site inspection and bulk sample collections were conducted using standard protocols specified by the Texas Asbestos Health Protection Act (TAHPA). All accessible area of the facility was sampled. Inaccessible materials (drop gaskets, equipment gaskets, and buried piping) are assumed to be asbestos materials until tested.

J3 Laboratory Inc. is a State of Texas Licensed Asbestos Laboratory {PCM, PLM, TEM) and NVLAP and ELLAP Accredited and performed all asbestos analyses.

Asbestos Summary

Findings:

Due to the deteriorated stairwell access to below grade of the manway at the site, ECMS was unable to access areas to be sampled.

Recommendations:

Based on the field investigations and site observation, there were no samples collected at this site. However, if piping/valve/flanges gaskets are uncovered during routine maintenance activities or future demolition/renovation activities, those materials should be tested or assumed to be ACM and abated.

ASBESTOS SURVEY

Environmental Consulting & Management Services, Inc. (ECMS) has completed a comprehensive asbestos evaluation at the Lift Station FN070 located at 204 Fir Ridge Dr. Huffman, TX. The site is herein referred to as the "facility".

Scope of Services

This investigation was pursued to determine the presence, location, and condition of Asbestos-Containing Materials (ACM) at the referenced facility. Site inspection and the attempt to collect bulk samples were conducted using standard protocols for sampling and analysis specified by the Texas Asbestos Health Protection Act (TAHPA). All accessible areas of the facility were evaluated and no suspect materials sampled. Inaccessible materials are assumed to be asbestos-containing materials until available for testing (drop gaskets, equipment gaskets, and underground piping). No site records were available for use during the inspection.

Tyrone P. Dorian, an EPA-accredited/TDH-Licensed Asbestos Inspector with ECMS performed the facility inspection on September 8, 2014. The samples were collected in a manner that reduced potential for fiber and dust release and exposure using standard methods. All samples were deposited into secure containers and labeled for transport to the J3 in Houston, Texas. J3 Laboratory is a State Licensed Asbestos Laboratory (PCM, PLM, TEM) and NVLAP Accredited.

Only materials accessible at the time of the survey were inspected. Underground components and equipment were not accessible.

The inspection consisted of the following:

- Attempts to sample suspect Asbestos-Containing Materials (ACMs).
- Quantifying and qualifying ACM.
- Locating ACM samples on computer generated maps.
- Preparing an inspection report.

Facility Description

The facility primarily is a below grade cast-in-place cylindrical concrete manway structure approximately 3.5' in diameter. The lift system consists of a mechanically operated below grade pump system with distribution piping, valves, sump pump and electrical control panels that serve in transferring waste water to a nearby waste treatment plant (3 – 5 miles from subject facility) for processing. Paint and rust deterioration was noted on equipment including, piping, pipe fittings, and pipe valves and stairs below grade. Entry into the lift station was through a personnel hatch via metal stairs. Operating panels and monitors are at surface level and the lift movement system is subsurface. The entire operating system is totally open access with no perimeter fencing. This waste lift station serves 3 – 5 homes immediately east of Lake Houston. All the service homes are at the Lake Houston waterway. A primary list station is located approximately ¼ miles southeast from targeted site.

Sampling Techniques and Laboratory Methods

This section details the sampling and laboratory methods used in the asbestos survey to quantify and assess the condition of the confirmed ACM.

Survey Methods

This section addresses the criteria necessary for identifying, evaluating and assessing suspect Asbestos Containing Materials (ACMs).

- a. **Homogeneous Areas:** Prior to collecting bulk samples of suspect ACM, distinct homogeneous sampling areas and specific sampling sites were defined based on building construction dates. A homogeneous sample area can be defined as a material that is similar in appearance, color, and generally having the same episode of installation as surrounding "like" material. Attempts were made in all cases to obtain representative samples of like materials, as this is the most cost-effective method for determination of ACM. It should be assumed by the building owner, contractor, and the abatement contractors that the composition of like materials in a single homogeneous area is the same. Homogeneous areas sampled as part of this survey include materials which have been identified by ECMS as ACM and have been classified as friable (material containing more than one-percent asbestos that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure) or non-friable (material containing more than one-percent asbestos that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure). Friable materials are more likely to become airborne, thereby increasing the potential for health hazards.
- b. **Hazard Assessment:** According to AHERA (December 30, 1986), verified friable or assumed ACM uncovered in an inspection or re-inspection of a facility shall be accessed in view of past, present, or future likelihood of disturbance and may include the following:
 1. Location of material present.
 2. Condition of material: type of damage, severity of damage, and the extent or spread of damage.
 3. Accessibility of the materials.
 4. Potential for disturbance of the material.
 5. Known or suspected causes of damage (i.e., air erosion, vandalism, service or repair, vibration, and water).
 6. Preventive measures which might eliminate the likelihood of undamaged ACM from becoming significantly damaged.
 7. Actions to be taken to protect human health.

The above hazard assessment factors will be discussed according to classifications of verified ACM. The ACM is usually examined and prioritized according to hazard categories based on condition, location, potential for damage and potential for fiber release. The asbestos hazard categories as defined by the City of Houston are presented in Table I as follows:

Table 1: HAZARD CATEGORY AND RESPONSE ACTION	
Hazard Category	Response Action
C-1: Asbestos Present	Serious health hazard, as defined by EPA, abatement should be a top priority
C-2: Asbestos Present	Health hazard, as defined by EPA, abatement should be planned
C-3: Asbestos Present	No action necessary unless renovation, remodeling, or demolition is planned
B-1: Asbestos Present	Contains 1% asbestos, or less, not regulated by TDH
B-2: Asbestos Present	Adequately enclosed
B-3: Asbestos Present	Adequately encapsulated
A: No asbestos found	N/A
A-1: Asbestos Abated	Once identified asbestos containing materials have been abated

- c. Field Methods: All accessible areas of the facility were identified for the presence of suspect ACM. Based on visual surveillance, no suspect materials were collected at the facility at the time of our site visit.

Hazard Assessment Results

The exact hazard ratings as defined by the City of Houston Hazard Category and Response Action (Table 1) are referenced in Table 2.

TABLE 2: SUSPECT ACM ANALYTICAL RESULTS LS 237

Homogenous Area No.	Material	Location	Type*	Damaged*	Hazard Risk*	Asbestos Content (ND= None Detected)
No samples collected at this site.						

Findings and Recommendations

Findings

ECMS has completed an asbestos survey at the Fir Ridge FN070 Lift Station located at 204 Fir Ridge Dr. Huffman, TX. The scope of services was to inspect the facility for the presence of asbestos-containing materials. Only materials accessible at the time of the survey were inspected. Underground components and equipment were accessible. No samples collected at this site.

Recommendations

Based on the field investigations and site observation, there were no samples collected at this site. However, if piping/valve/flanges gaskets are uncovered during routine maintenance activities or future demolition/renovation activities, those materials should be tested or assumed to be ACM and abated.

CHECK LIST FOR ASBESTOS SURVEYS

NAME OF THE FACILITY: **FN070 Lift Station**
FACILITY ADDRESS: **204 Fir Ridge Dr. Huffman, TX**
DATE OF THE SURVEY: **09/8/2014**
CONSULTANT: **ECMS, Inc.**

INSPECTOR (S) NAME: **Tyrone P. Dorian**

Note: Items/information listed below must be included in the report. Use this checklist 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 survey reports 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 inspectors TDH license
4. ✓ Name and address of the facility
5. N/A Statement of building records were used in the inspection and if not, why?
6. N/A Date of construction and last renovation (if any) of the building.
7. ✓ Cover letter (in report) certain 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. N/A List of measures taken to prevent potential fiber release form locations where samples were extracted
11. ✓ Drawings and/or 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. N/A Copy of the laboratory analysis results of the bulk samples.
15. N/A Statement (by the laboratory) regarding Quality Assurance and Quality Control performed.
16. N/A 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. N/A Statement...if repeat analysis using point counting PLM was done as required by the city for the samples that show less than 5% asbestos.
21. N/A Photographs of all Materials proven to be ACM are included.
22. N/A All asbestos containing materials are classified as Friable or Non-Friable.
23. N/A Recommendations are made for all Asbestos Containing Materials.
24. N/A Reasonably accurate quantities of ACM's are estimated and given in the report.
25. N/A Cost estimations are given for abatement.
26. N/A Operation and Maintenance Plans are recommended.

APPENDIX A
FACILITY LOCATION MAP



FIR RIDGE LS FN070

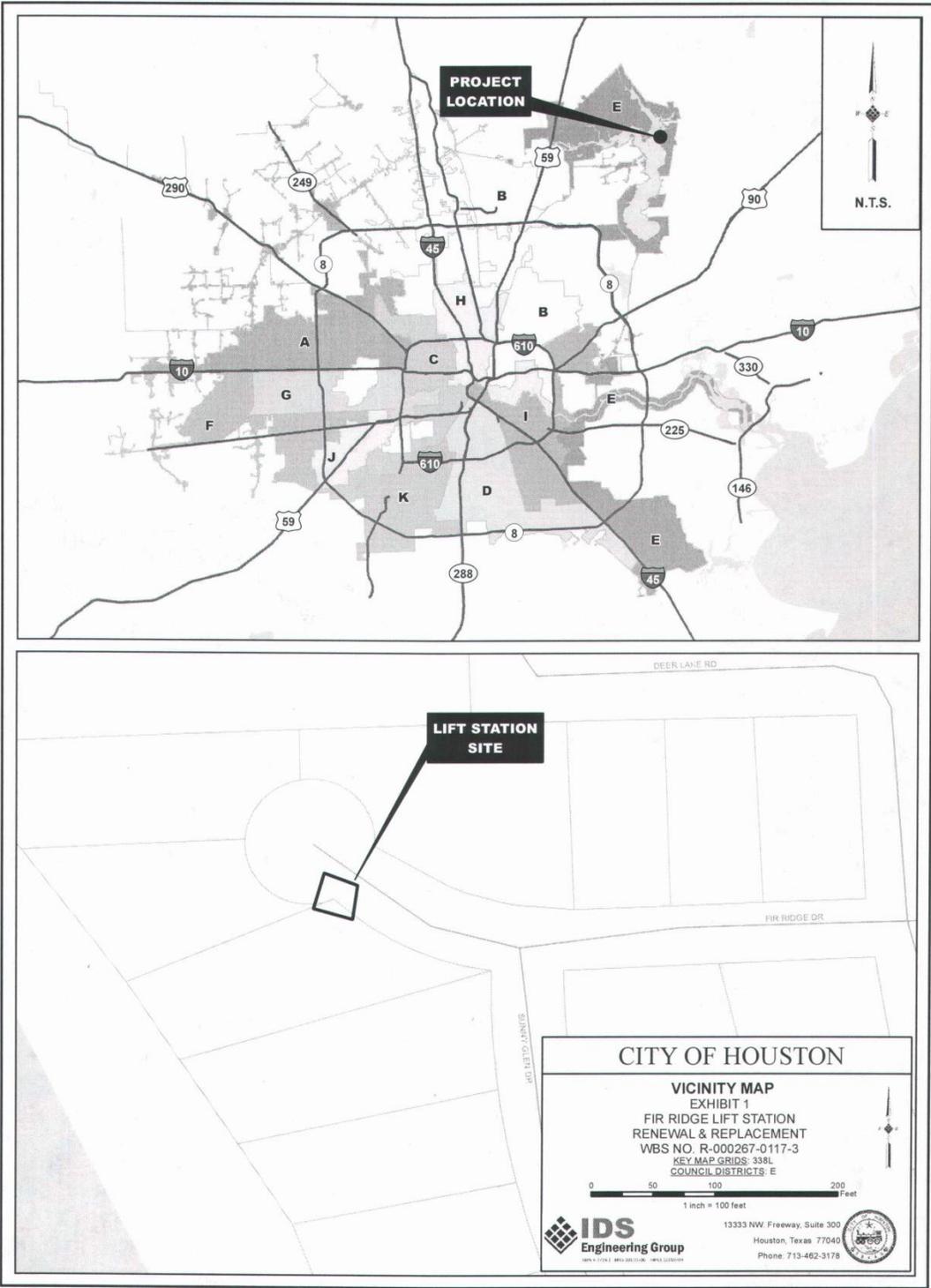
204 FIR RIDGE

IN CASE OF EMERGENCY
PLEASE CALL

7 281-358-2828

713-641-9956

IDS Engineering Group \\houside01\Projects\000\0057-072-00_LS_VicLoc\Map\Fir Ridge\EX1-FirRidge_Loc\Mc_8_5x11.mxd Plotted: 9/16/2013 at 10:05:39 AM by bavant



Project Location 204 Fir ridge

APPENDIX B
SITE PHOTOGRAPHS



Manway access



Manway access



Four homes in the area that lift station FN070 serviced



Four homes in the area that lift station FN070 serviced



Open manway to below grade pump area



Pump system below grade



Pump system below grade- different view



Metering instrument device

APPENDIX C

ASBESTOS ANALYTICAL RESULTS

No samples collected at the site.

APPENDIX D

LICENSE AND CERTIFICATION



TEXAS DEPARTMENT OF STATE HEALTH SERVICES

ENVIRONMENTAL CONSULTANT AND MANAGEMENT SERVICES

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 that reads "David Lahey, M.D.".

DAVID LAKEY, M.D.
COMMISSIONER OF HEALTH

License Number: 100476

Expiration Date: 1/11/2016

Control Number: 96664

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE





www.natectx.com

Tyrone P. Dorian
Name

NPDR92113-7388
Certification #

Asbestos Project Designer Refresher
Approved Course

9/21/2013 9/21/2014 TX 10168136
Course Date Expiration Date DL#




www.natectx.com

Tyrone Dorian
Name

NR091913-7388
Certification #

Air Monitoring Technician Refresher
Approved Course

9/19/2013 9/19/2014 TX 10168136
Course Date Expiration Date DL#




www.natectx.com

Tyrone P. Dorian
Name

NMPR92213-7388
Certification #

Asbestos Management Planner Refresher
Approved Course

9/22/2013 9/22/2014 TX 10168136
Course Date Expiration Date DL#




www.natectx.com

Tyrone P. Dorian
Name

NIR091913-7388
Certification #

Asbestos Inspector Refresher
Approved Course

9/19/2013 9/19/2014 TX 10168136
Course Date Expiration Date DL#

