



ADDENDUM NUMBER ONE
to the
PROJECT SPECIFICATIONS and CONTRACT DOCUMENTS
for the
Crystal Lane Realignment Project

DATE OF ADDENDUM: May 20, 2016

TO ALL BIDDERS BIDDING ON THE ABOVE PROJECT:

The following addendum shall be made part of the Contract Documents. All other provisions of the Contract Documents remain unchanged. The Bidder shall acknowledge receipt of this Addendum on page 22 of the Proposal and by signing below and returning this form with the bid package. The contents of this Addendum shall be given full consideration in the preparation of the Bid.

Bid Schedules:

The Bidding Schedules for the Base Bid and Bid Alternate have been revised to include the following:

- Revised quantity for Bid Item 220 Riprap with Filter Fabric, D50 = 6"
- Added Bid Item 505.1.1A1 for Concrete Spillway Inlet and Outlet, MAG 550
- Added Bid Item 615A for Sanitary Sewer Main – 8"DIP, Class 350
- Revised Bid Item 630.4A 12" x 8" Tapping Sleeve, Valve, Box and Cover, COP 340P
- Modified bid schedule forms to include an area for the product name and manufacturer for the WTRM ****This is a mandatory requirement outlined in the Special Provisions on Page 10, paragraph three, under Section A. Woven Turf Reinforcement Mats. Failure to list product name and manufacturer will result in disqualification of the bid.****

Delete: Bidding Schedule- Base Bid (pages 11-14)

Add: Revised Bidding Schedule- Base Bid (pages 11-14) Dated 5/20/16

Delete: Bidding Schedule- Bid Alternate (pages 15-18)

Add: Revised Bidding Schedule- Bid Alternate (pages 15-18) Dated 5/20/16

Two (2) Proposed Staging Areas:

Two (2) proposed staging areas are required with the Bid Documents per the requirement set forth on Page 5 of the Project Specifications. The Proposed Staging Locations form will be

required with the bid submittal. Any bid submittals not containing this form may be deemed unresponsive.

Add: Proposed Staging Locations form.

Special Provisions:

350.5.2 Removal of CMU PRV Building:

Paragraph four references “test reports are located in Appendix A”.

Add: Appendix A “Hazardous Materials Testing Results”

Requests for Information:

Question: There is no bid item for the removal of concrete curbs, apron, and valley gutter.

Clarification: The removal of concrete curbs, apron, and valley gutter are incidental in accordance with Special Provision Section 350 “Removal of Existing Improvements”.

Question: The temporary shoring calls for a structural design. Is one required for the two retaining walls?

Clarification: A structural design is not required for the retaining wall, just the temporary shoring.

- END -

City of Prescott, Public Works Department


Henry Hash, Public Works Director

5-23-16

Acknowledgement: (must be signed and turned in with the bid documents)

Company Name

Signature of Company Official

Date

CRYSTAL LANE REALIGNMENT PROJECT

BASE BID: Revised 5/20/16

Item	Description	Qty	Unit	Unit Cost	Total Amount
100.4	Public Relations Allowance	1	LS	\$ 3,000.00	\$ 3,000.00
105.8	Construction Staking	1	LS		
107.15	Stormwater Pollution Prevention Plan (SWPPP)	1	LS		
109.10	Mobilization	1	LS		
109.11	Contract Allowance	1	LS	\$ 75,000.00	\$ 75,000.00
200.2	By-pass Pumping	1	LS		
215.1	Graded Channel	233	LF		
220	Riprap with Filter Fabric, D50 = 6"	79	CY		
301	Sub-Grade Preparation	1,821	SY		
310	Aggregate Base Course	366	CY		
317.2	Mill Asphalt Pavement - 1.5" Nominal Depth	1,051	SY		
317.2A	Mill Asphalt Pavement - 4" Nominal Depth	1,281	SY		
321	Asphalt Concrete (AC) Pavement, 1.5" - 1/2" Aggregate	1,051	SY		
321A	Asphalt Concrete (AC) Pavement, 2" - 1/2" Aggregate	1,637	SY		
321B	Asphalt Concrete (AC) Pavement, 2" - 3/4" Aggregate	250	SY		
321C	Asphalt Concrete (AC) Pavement, 3" - 3/4" Aggregate	1,387	SY		
329	AC Bituminous Tack Coat, Type SS-1h	0.9	TON		
336	Pavement Matching and Surfacing Replacement	154	SY		
340.4.1	Concrete Curb and Gutter, 6" Type A, COP 220P-1	829	LF		
340.4.1.1	Concrete Single Curb, Type B, MAG 222	227	LF		
340.4.2	Concrete Sidewalk, COP 230P	1,435	SF		
340.4.2.1	Local Street Sidewalk Ramp, COP 231P	2	EA		
340.4.2.1B	Attached Sidewalk Ramp	1	EA		
340.4.3	Concrete Driveway Entrance & 6" Concrete Slab, COP 250P-2	486	SF		
340.4.4	Concrete Valley Gutter, COP 240P-1	571	SF		

CRYSTAL LANE REALIGNMENT PROJECT

BASE BID: Revised 5/20/16

350.5.1	Removal, Backfill, and Compact PRV Vault	1	LS		
350.5.2	Removal, Backfill, and Compact PRV Building	1	LS		
350.6.1	Removal, Disposal, and Backfill of Non-Friable ACP	289	LF		
350.6.2	Removal, Disposal, and Backfill of Friable ACP	289	LF		
350.6.3	Removal, Disposal, and Backfill of Ferrous Pipe	346	LF		
401	Traffic Control Plan	1	LS		
401.2A	Barricades and Storage	1	LS		
401.2B	Message Boards (3)	270	DAYS		
401.2C	Incidental Traffic Related Items	1	LS		
401.3A	Flaggers	100	HR		
401.3B	Off Duty Police Officers	20	HR		
402.2A	Thermoplastic Striping, 18" Stop Bars, White	44	LF		
402.2C	Thermoplastic Striping, Left Turn Arrow, White	2	EA		
402.2D	Thermoplastic Striping, Combination Turn Arrow, White	2	EA		
402.2E	Thermoplastic Striping, 4" Yellow	570	LF		
402.2F	Thermoplastic Striping, 6" White	263	LF		
402.2G	Thermoplastic Striping, 8" White	100	LF		
402.3A	Temporary Striping, Yellow	828	LF		
402.3B	Temporary Striping, White	298	LF		
402.4A	Permanent Striping, 4" Double Yellow	138	LF		
402.4B	Permanent Striping, 4" White	300	LF		
403.1A	Sign Posts, COP 131P	4	EA		
403.1B	Sign Panels	290	SF		
404	3" Sch. 40 PVC Conduit, COP 640P	265	LF		
404.1	#7 Pull Boxes, COP 640P	4	EA		
405	Survey Monuments, Type A, COP 120P	1	EA		

CRYSTAL LANE REALIGNMENT PROJECT

BASE BID: Revised 5/20/16

420	6' Chain Link Fence, 3 - Strand Barb Wire	371	LF		
420.2	Temporary 6' Chain Link Fence	1	LS		
430.3.2	Seeding, Hydraulic	0.95	ACRE		
434	Landscape Restoration	1	LS		
505.1.1A	Junction Structure, 15' x 13' Precast, With Aluminum Access Hatch	1	EA		
505.1.1A1	Concrete Spillway Inlet and Outlet, MAG 550	1	EA		
505.1.1B	Concrete Headwall, U-Shaped	1	EA		
505.1.1.B1	Concrete Headwall, Straight	1	EA		
505.1.1C	Catch Basin MAG Type D with Apron, L = 17'	1	EA		
505.1.1C1	Catch Basin MAG Type D with Apron, L = 10'	1	EA		
505.1.1C2	Catch Basin MAG Type E with Apron - Double	1	EA		
505.1.1C3	Catch Basin MAG Type E with Apron	1	EA		
505.1.1C4	Retaining Wall Area Drain Pipe System	1	LS		
601.2.11	Rock Removal (Trench)	638	CY		
610A	8" DIP, Class 350 Water Main (Fully Restrained)	128	LF		
610B	12" DIP, Class 350 (Fully Restrained)	366	LF		
615	Sanitary Sewer Main - 8" PVC	346	LF		
615A	Sanitary Sewer Main - 8" DIP, Class 350	20	LF		
615.7	4" Private Sanitary Service with Backwater Valve	1	EA		
615.11.1	CCTV Sewer Main	346	LF		
615.11.1A	CCTV Sewer Lateral	1	EA		
618	18" RGRCP, Class V	129	LF		
618A	24" RGRCP, Class V	39	LF		
618B	29" x 45" Reinforced Concrete Elliptical Pipe, Class IV	280	EA		
618.2.1	Parking Lot Drain Pipe System	1	LS		
625	48" Sewer Manhole, COP 420P-1	1	EA		

CRYSTAL LANE REALIGNMENT PROJECT

BASE BID: Revised 5/20/16

625A	48" Sanitary Drop Manhole, COP 426P	1	EA		
625B	Install Internal Sewer Drop at Drop Manhole, COP 426P	1	EA		
626.1	Coat Manholes	1	EA		
630.3	12" Gate Valve, Box and Cover, COP 301P	3	EA		
630.4	8" Tapping Sleeve, Valve, Box and Cover, COP 340P	2	EA		
630.4A	12" x 8" Tapping Sleeve, Valve, Box and Cover, COP 340P	1	EA		
630-6.1	1" Combination Air Valve Assembly, COP 317P	3	EA		
651.2	Removal of Sanitary Sewer	336	LF		
651.2A	Removal of Sanitary Manhole	1	EA		
3135319	Woven Turf Reinforcement Mat	1,184	SY		
323223	Segmental CMU Retaining Wall	372	SF		
Total Base Bid		\$			

TOTAL BID:

Dollars

(Written Words)

Signature of Company Official

Date Signed

Title

Company Name

Phone Number

Address

Fax Number

City/State

Zip Code

**CRYSTAL LANE REALIGNMENT PROJECT
 BID ALTERNATE: Revised 5/20/16**

Highlighted items have different quantities from base bid or were not in the base bid

Item	Description	Qty	Unit	Unit Cost	Total Amount
100.4	Public Relations Allowance	1	LS	\$ 3,000.00	\$ 3,000.00
105.8	Construction Staking	1	LS		
107.15	Stormwater Pollution Prevention Plan (SWPPP)	1	LS		
109.10	Mobilization	1	LS		
109.11	Contract Allowance	1	LS	\$ 75,000.00	\$ 75,000.00
200.2	By-pass Pumping	1	LS		
207	Temporary Shoring	230	LF		
215.1	Graded Channel	233	LF		
220	Riprap with Filter Fabric, D50 = 6"	79	CY		
301	Sub-Grade Preparation	2,474	SY		
310	Aggregate Base Course	511	CY		
317.2	Mill Asphalt Pavement - 1.5" Nominal Depth	1,051	SY		
317.2A	Mill Asphalt Pavement - 4" Nominal Depth	1,281	SY		
321	Asphalt Concrete (AC) Pavement, 1.5" - 1/2" Aggregate	1,051	SY		
321A	Asphalt Concrete (AC) Pavement, 2" - 1/2" Aggregate	2,289	SY		
321B	Asphalt Concrete (AC) Pavement, 2" - 3/4" Aggregate	903	SY		
321C	Asphalt Concrete (AC) Pavement, 3" - 3/4" Aggregate	1,387	SY		
329	AC Bituminous Tack Coat, Type SS-1h	1.1	TON		
336	Pavement Matching and Surfacing Replacement	154	SY		
340.4.1	Concrete Curb and Gutter, 6" Type A, COP 220P-1	829	LF		
340.4.1.1	Concrete Single Curb, Type B, MAG 222	227	LF		
340.4.1.1A	Concrete Curb Wall	273	LF		
340.4.2	Concrete Sidewalk, COP 230P	1,435	SF		
340.4.2.1	Local Street Sidewalk Ramp, COP 231P	2	EA		
340.4.2.1B	Attached Sidewalk Ramp	1	EA		
340.4.3	Concrete Driveway Entrance & 6" Concrete Slab, COP 250P-2	486	SF		

**CRYSTAL LANE REALIGNMENT PROJECT
 BID ALTERNATE: Revised 5/20/16**

340.4.4	Concrete Valley Gutter, COP 240P-1	571	SF		
350.5.1	Removal, Backfill, and Compact PRV Vault	1	LS		
350.5.2	Removal, Backfill, and Compact PRV Building	1	LS		
350.6.1	Removal, Disposal, and Backfill of Non-Friable ACP	289	LF		
350.6.2	Removal, Disposal, and Backfill of Friable ACP	289	LF		
350.6.3	Removal, Disposal, and Backfill of Ferrous Pipe	346	LF		
401	Traffic Control Plan	1	LS		
401.2A	Barricades and Storage	1	LS		
401.2B	Message Boards (3)	360	DAYS		
401.2C	Incidental Traffic Related Items	1	LS		
401.3A	Flaggers	100	HR		
401.3B	Off Duty Police Officers	20	HR		
402.2A	Thermoplastic Striping, 18" Stop Bars, White	44	LF		
402.2B	Thermoplastic Striping, Straight Arrow, White	3	EA		
402.2C	Thermoplastic Striping, Left Turn Arrow, White	2	EA		
402.2D	Thermoplastic Striping, Combination Turn Arrow, White	2	EA		
402.2E	Thermoplastic Striping, 4" Yellow	570	LF		
402.2F	Thermoplastic Striping, 6" White	263	LF		
402.2G	Thermoplastic Striping, 8" White	100	LF		
402.3A	Temporary Striping, Yellow	828	LF		
402.3B	Temporary Striping, White	298	LF		
402.4A	Permanent Striping, 4" Double Yellow	138	LF		
402.4B	Permanent Striping, 4" White	542	LF		
403.1A	Sign Posts, COP 131P	5	EA		
403.1B	Sign Panels	432	SF		
404	3" Sch. 40 PVC Conduit, COP 640P	265	LF		
404.1	#7 Pull Boxes, COP 640P	4	EA		
405	Survey Monuments, Type A, COP 120P	1	EA		

**CRYSTAL LANE REALIGNMENT PROJECT
 BID ALTERNATE: Revised 5/20/16**

420	6' Chain Link Fence, 3 - Strand Barb Wire	185	LF		
420.1	4' Chain Link Fence, 3 - Strand Barb Wire	203	LF		
420.2	Temporary 6' Chain Link Fence	1	LS		
430.3.2	Seeding, Hydraulic	0.95	ACRE		
434	Landscape Restoration	1	LS		
505.1.1A	Junction Structure, 15' x 13' Precast, With Aluminum Access Hatch	1	EA		
505.1.1A1	Concrete Spillway Inlet and Outlet, MAG 550	1	EA		
505.1.1B	Concrete Headwall, U-Shaped	1	EA		
505.1.1.B1	Concrete Headwall, Straight	1	EA		
505.1.1C	Catch Basin MAG Type D with Apron, L = 17'	1	EA		
505.1.1C1	Catch Basin MAG Type D with Apron, L = 10'	1	EA		
505.1.1C2	Catch Basin MAG Type E with Apron - Double	1	EA		
505.1.1C3	Catch Basin MAG Type E with Apron	1	EA		
505.1.1C4	Retaining Wall Area Drain Pipe System	1	LS		
505.1.1.C5	Retaining Wall Catch Basin	1	LS		
601.2.11	Rock Removal (Trench)	638	CY		
610A	8" DIP, Class 350 Water Main (Fully Restrained)	128	LF		
610B	12" DIP, Class 350 (Fully Restrained)	366	LF		
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615A	Sanitary Sewer Main - 8" DIP, Class 350	20	LF		
615.7	4" Private Sanitary Service with Backwater Valve	1	EA		
615.11.1	CCTV Sewer Main	346	LF		
615.11.1A	CCTV Sewer Lateral	1	EA		
618	18" RGRCP, Class V	129	LF		
618A	24" RGRCP, Class V	39	LF		
618B	29" x 45" Reinforced Concrete Elliptical Pipe, Class IV	280	EA		
618.2.1	Parking Lot Drain Pipe System	1	LS		
618.2.1A	Parking Lot Area Drain	1	LS		

CRYSTAL LANE REALIGNMENT PROJECT

BID ALTERNATE: Revised 5/20/16

625	48" Sewer Manhole, COP 420P-1	1	EA		
625A	48" Sanitary Drop Manhole, COP 426P	1	EA		
625B	Install Internal Sewer Drop at Drop Manhole, COP 426P	1	EA		
626.1	Coat Manholes	1	EA		
630.3	12" Gate Valve, Box and Cover, COP 301P	3	EA		
630.4	8" Tapping Sleeve, Valve, Box and Cover, COP 340P	2	EA		
630.4A	12" x 8" Tapping Sleeve, Valve, Box and Cover, COP 340P	1	EA		
630-6.1	1" Combination Air Valve Assembly, COP 317P	3	EA		
651.2	Removal of Sanitary Sewer	336	LF		
651.2A	Removal of Sanitary Manhole	1	EA		
3135319	Woven Turf Reinforcement Mat	1,533	SY		
323219	CMU Retaining Wall	1,981	SF		
323223	Segmental CMU Retaining Wall	372	SF		
Total Base Bid			\$		

TOTAL BID:

Dollars

(Written Words)

Signature of Company Official

Date Signed

Title

Company Name

Phone Number

Address

Fax Number

City/State

Zip Code

PROPOSED STAGING LOCATIONS

PROJECT NAME: _____

BID DATE: _____

CONTRACTOR NAME: _____

Proposed Location No. 1	
General Description:	Parcel No:
	Physical Address:
Legal Owner:	Zoning District:

Proposed Location No. 2	
General Description:	Parcel No:
	Physical Address:
Legal Owner:	Zoning District:

**A map of each location may be attached to this form*

If no staging areas are proposed, please check here and sign below:

No Areas Proposed

By signing below, I ("Contractor") certify that no staging areas are required for the above named project. If necessary staging area(s) are later determined, I understand that any associated costs shall be furnished by the Contractor and will be considered incidental without additional compensation from the City.

Signature of Company Official

Date Signed

APPENDIX A

HAZARDOUS MATERIALS TESTING RESULTS

September 18, 2015

Mr. Jeff Fanning
Project Manager
Civiltec Engineering Inc.
2054 N. Willow Creek Road
Prescott, Arizona 86301



**Subject: Crystal Lane Pump Station
Pumpstation and Vault
6538-6550 Crystal Lane
Prescott, Arizona 86301**

Dear Mr. Jeff Fanning:

Dunn Environmental Services Inc. (Dunn) is pleased to submit the following report for the comprehensive asbestos inspection performed at the subject facility to Civiltec Engineering Inc. This report contains the inspection results, laboratory analysis, and certifications from the inspection on September 1, 2015. This work was conducted in general accordance with Maricopa County and EPA/Asbestos-NESHAP requirements.

Asbestos-containing materials or materials containing trace (<1%) levels of asbestos were not detected in the sampled materials, with the following exceptions:

- **GAS-04 Gasket – 4”, Black, Plastic-Like, with White Fibrous Binder
20% Chrysotile Asbestos, ≈5 Square Feet**

Not all suspect materials were sampled, only materials to be impacted. See Section 4.0 for the list of sampled materials.

If there are any questions please do not hesitate to contact us at (623) 691-6400.

Sincerely,

Roy L. Dunn CIH, CEICC, CMC
General Manager/Senior Scientist



Attachment: Comprehensive Asbestos Bulk Sampling Report



tel: 623.691.6400 • fax: 623.691.6409
13122 S. 178th Ave. • Goodyear, AZ 85338
www.dunnenvironmental.com



COMPREHENSIVE ASBESTOS BULK SAMPLING REPORT

Crystal Lane Pump Station
Pumpstation and Vault
Project Number: A15-00567
Report Date: September 18, 2015

Project Submitted to:

Mr. Jeff Fanning
Project Manager
Civiltec Engineering Inc.
2054 N. Willow Creek Road
Prescott, Arizona 86301

Report Prepared by:

Charles D. Thompson, CSST
Senior Project Manager

Report Reviewed by:

Chris S. Gates, CAC
Director of Operations



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1.0 EXECUTIVE SUMMARY

At the authorization of Civiltec Engineering Inc., Dunn conducted bulk sampling of suspect asbestos-containing materials in the Pumpstation and Vault of the Crystal Lane Pump Station located at 6538-6550 Crystal Lane, Prescott, Arizona 86301, on September 1, 2015.

1.1 Inspector(s)

Sampling was conducted by Mr. Charles D. Thompson, CSST, Senior Project Manager of Dunn. Mr. Thompson holds current Asbestos Hazard Emergency Response Act (AHERA) accreditation as an Asbestos Building Inspector, Project Designer, and CDPH Site Surveillance Technician (CSST). This report was reviewed by Mr. Chris S. Gates, CAC, Director of Operations of Dunn. Mr. Gates holds current AHERA accreditations as an AHERA Asbestos Building Inspector and CDPH Certified Asbestos Consultant (CAC). See Appendix 2 for personnel certifications

1.2 Project Scope of Work

A comprehensive asbestos bulk sampling inspection was conducted on September 1, 2015 due to an upcoming demolition project. The purpose of the comprehensive asbestos bulk sampling inspection was to provide information regarding the presence, location, condition, quantity and National Emissions Standards for Hazardous Air Pollutants (NESHAP) classification of Asbestos-Containing Materials (ACM) as required by Environmental Protection Agency (EPA), Regulation 40 CFR, Part 61, Subpart M, Asbestos-NESHAP. No destructive testing was performed to access obstructed or hidden building materials. These materials, if discovered, should be assumed to contain asbestos until laboratory analysis can be performed.

1.3 Laboratory Analysis

On September 1, 2015 twenty-four (24) samples were collected in the Pumpstation and Vault. All affected materials were sufficiently sampled to satisfy all Federal, state and local requirements. The samples were submitted, with Chain of Custody (COC) documentation, to Aerobiology Laboratories in Phoenix, Arizona, for analysis by Polarized Light Microscopy (PLM) using EPA Method 600/R-93/116 with dispersion staining.

1.4 Asbestos Containing Material Summary

Asbestos-containing materials or materials containing trace (<1%) levels of asbestos were not detected in the sampled materials, with the following exceptions:

- **GAS-04 Gasket – 4”, Black, Plastic-Like, with White Fibrous Binder
20% Chrysotile Asbestos, ≈5 Square Feet**

See Section 4.0 for detailed information on the sampled materials in the bulk sample log. See Section 4.0 for the ACM location diagrams. See Section 4.0 for the sample location diagrams. See Appendix 1 for the laboratory results and chain of custodies. If there are any questions please do not hesitate to contact us at (623) 691-6400.

2.0 BUILDING INFORMATION

Crystal Lane Pump Station is located at 6538-6550 Crystal Lane, Prescott, Arizona 86301, and was unoccupied and non-operational during the time of the inspection.

2.1 Renovation and Abatement History

Construction documents, previous ACM inspection reports, or previous ACM abatement reports were not available for review.

2.2 Limitations of the Scope of Work

The inspection was limited to the renovation area of the Pumpstation and Vault. The scope of the inspection included the interior of the spaces targeting materials affected by the renovation project

3.0 INSPECTION PROCEDURES

Sampling was conducted in accordance with the Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763, Subpart E as directed by Maricopa County NESHAP Regulations.

3.1 Identification of Functional Spaces

Each affected room or *space* was assigned a unique functional space designation. This functional space is the equivalent of but not limited to four walls and a door, e.g. a restroom, closet, or storage area. Each functional space was visually inspected for suspect asbestos-containing materials.

3.2 Identification of Suspect Homogenous Areas

Each suspect ACM was designated as a distinct homogeneous area (HA) and given a homogeneous area number (HA#). A homogeneous area is a single material that is uniform in texture and appearance, installed at one time and for all intents and purposes is the same material regardless of its location in the building. See Section 4.0 for the suspect ACM identified as part of the scope of work.

3.3 Friability and Physical Assessment

The asbestos-containing materials most likely to release asbestos fibers are those that are in a friable state. Friability describes the condition of the asbestos. A friable material is a material that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Friability of each material was determined by touch. A physical assessment of each HA of suspect ACM was conducted to assess the friability and condition of the materials. Friable asbestos-containing material in an area regularly used by or readily accessible to building occupants, including maintenance personnel, has a reasonable likelihood that the material or its covering will eventually become damaged, deteriorated, or delaminated during the course of normal building activities.

Non-friable ACM are those materials that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure. Non-friable ACM pose less risk than friable materials, however non-friable ACM can be rendered friable by actions such as sanding, grinding, cutting or abrading during renovation or demolition activities. The determination of friability was limited to those areas accessible for inspection. See Section 4.0 for detailed information of the sampled HAs.

3.4 Sample Collection

A minimum of 3 samples were collected of each material to satisfy Federal, State and Local requirements. Each sample was assigned a unique sample identification number and the exact sample location was identified and recorded. A total of twenty-four (24) samples were collected in the Pumpstation and Vault. Bulk samples were collected using wet methods as applicable to reduce the potential for fiber release. Upon collection, samples were placed in a sealed, leak-tight

container for laboratory analysis. The samples, with Chain of Custody (COC) documentation were delivered to Aerobiology Laboratories in Phoenix, Arizona. See Section 4.0 for the sample locations.

3.5 Laboratory Analysis

Samples were analyzed by Aerobiology Laboratories using Polarized Light Microscopy (PLM) coupled with dispersion staining as detailed in the EPA's "Interim Method for the Determination of Asbestos in Bulk Samples" EPA/600/R-93/116, July, 1993, as a preferred substitute method to 600/M4-82-020 by EPA recommendation. Aerobiology Laboratories is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk-asbestos sample analysis conducted by the National Institute of Standards and Technology (NIST). The asbestos laboratory reports and COC are included as Appendix 1.

3.6 Additional Analysis

Although it is required by the NESHAP to initially analyze samples using PLM analysis with visual estimation, the EPA has determined that this method can inaccurately estimate the amount of asbestos in a bulk sample, especially at low asbestos concentrations. For this reason, the NESHAP imposes an additional requirement for materials determined by visual estimation to contain a detectable quantity of asbestos at less than or equal to one percent concentrations. The additional requirement is that the facility owner must either (1) have the pertinent samples reanalyzed by point counting, or (2) assume the materials to be ACM and treat them as such. Materials determined by visual estimation to not have a detectable concentration of asbestos, or to have a concentration of one percent asbestos or greater, do not have to be reanalyzed by the point counting method.

Additionally, some vinyl floor tile is known to contain asbestos fibers that may not be detected by PLM analysis. When these materials are identified as negative for asbestos content by PLM analysis, one sample should be analyzed using Transmission Electron Microscopy (TEM) to verify the negative PLM analysis.

3.7 Regulated Building Materials

Thermal System Insulation (TSI) is ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain and that contain more than 1% asbestos. According to the Asbestos National Emission Standard For Hazardous Air Pollutants (NESHAP) 40 CFR 61, subpart M, all demolition and renovation activities that disturb friable ACM or TSI in greater amounts than or equal to 160 square feet, 260 linear feet, or 35 cubic feet are regulated if the facility is one of the following types: commercial, industrial, residential if more than 4 units, and residential if more than two *dwelling* units on the same site, under control of the same owner/operator. Multiple regulatory agencies regulate asbestos disturbance activities.

Federal, state and local requirements include identification, location, classification and quantification of ACM prior to beginning any renovation or demolition activity. Category I non-friable ACM are exclusively asbestos-containing packings, gaskets, resilient floor coverings and asphalt roofing products that contain more than 1% asbestos. Category II non-friable ACM are all other non-friable materials other than Category I non-friable ACM that contain more than 1% asbestos. NESHAP regulations are concerned specifically with **Regulated ACM (RACM)**, *which*

include: all friable ACM; **Category I ACM** that has become friable; **Category I ACM** that will be or has been subject to sanding, grinding, cutting or abrading; and **Category II ACM** that has a high probability of becoming, or has become crumbled, pulverized or reduced to a powder by forces expected to act on the material in the course of renovation or demolition operations.

At the time of this inspection, the identified ACM were assigned NESHAP Classifications based on their existing conditions and the degree of damage that they would, in Dunn's professional opinion, experience during "ordinary" removal/demolition/disposal operations. If "extraordinary" removal/demolition/disposal methods are to be undertaken, Dunn's classifications may not accurately represent an ACM's final condition and additional efforts to fully assess the actual impact of these methods on the materials should be undertaken.

3.8 Regulated Work Practices

The Occupational Safety and Health Administration (OSHA) Asbestos Standard for Construction Industry (29 CFR 1926.1101) regulates workplace exposure to asbestos, and classifies construction and maintenance activities that disturb asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained at or below 0.1 fibers per cubic centimeter of air (0.1 f/cc) as an eight hour time weighted average (TWA) and not exceed 1.0 fibers per cubic centimeter of air (1.0 f/cc) over a 30 minute time period known as an excursion limit (EL). The TWA and EL are known as OSHA's permissible exposure limits (PELs).

Disturbance of materials that contain asbestos at concentrations below the 1% regulatory threshold require the following methods of compliance: wet methods; prompt cleanup in leak-tight containers; and personal air monitoring or a Negative Exposure Assessment (NEA).

Disturbance of materials that contain asbestos at concentrations above the 1% regulatory threshold require trained or certified workers are divided into 4 classes of work.

- **Class I** asbestos work is the most potentially hazardous class of asbestos jobs. This work involves the removal of asbestos-containing TSI and "loosely bound" sprayed-on or troweled-on surfacing materials. Employers must presume that TSI and surfacing material found in pre-1981 construction is ACM. That presumption, however, is rebuttable by bulk sampling.
- **Class II** work includes the removal of any other types of ACM that are not TSI or "loosely bound" surfacing materials. Examples of Class II work include removal of asbestos-containing floor tiles, ceiling tiles, siding, roofing, Transite® panels, and wallboard systems.
- **Class III** asbestos work includes repair and maintenance operations where ACM or presumed ACM (PACM) are disturbed, and all waste generated from the activity must fit within a single standard 60"x60" waste bag.
- **Class IV** work includes custodial activities where employees clean up asbestos-containing waste and debris produced by construction, maintenance, or repair activities. This work involves cleaning dust-contaminated surfaces, High Efficiency Particulate Air (HEPA) vacuuming contaminated carpets, mopping floors, and cleaning up ACM or PACM from thermal system insulation or surfacing material.

A regulated area is a *marked-off* site where employees work with or clean up asbestos, including any adjoining areas where debris and waste from asbestos work accumulates or where airborne concentrations of asbestos exceed, or can possibly exceed, the PEL. **Any asbestos hazards should be immediately contained within a *marked-off*, regulated area. Access to personnel and non-certified workers should be restricted, and if applicable, the HVAC system should be isolated, locked-out, and tagged-out.** Employers must maintain employee records for asbestos workers concerning objective data, exposure monitoring, and medical surveillance.

4.0 FINDINGS

Asbestos-containing materials or materials containing trace (<1%) levels of asbestos were not detected in the sampled materials, with the following exceptions:

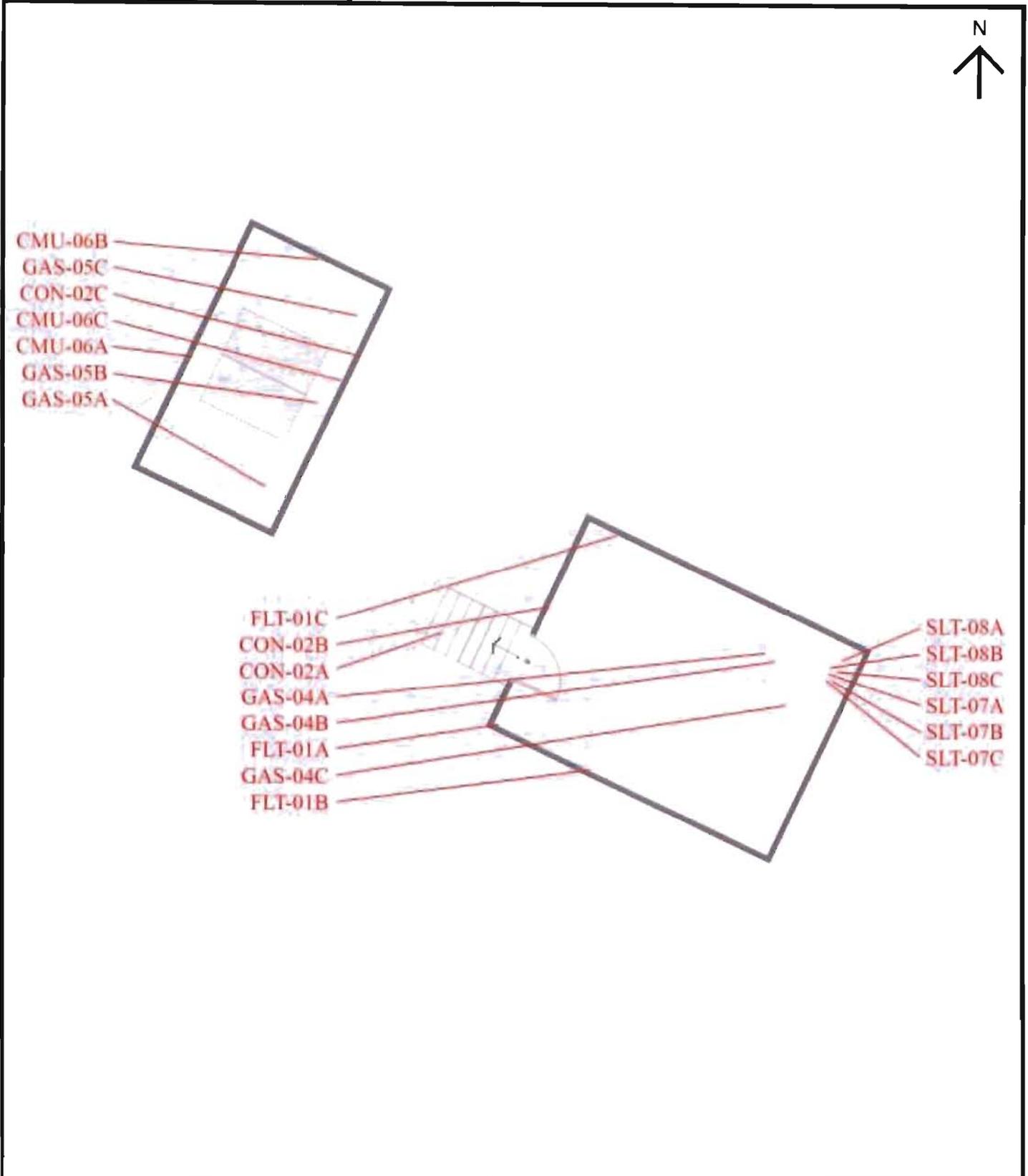
- **GAS-04 Gasket – 4”, Black, Plastic-Like, with White Fibrous Binder
20% Chrysotile Asbestos, ≈5 Square Feet**

These samples do not represent a complete asbestos survey at the project site. Areas with no access were not sampled. If other suspect materials are encountered elsewhere at the project site, these materials should be assumed until sufficient sampling and analysis can be performed. Same-day analysis can usually be easily arranged. Regulatory references and guidance are available upon request. See attached sample location diagram in Section 4.0 of this report for the locations where the materials were sampled.

4.1 Bulk Sample Log

Sample Number	Material Sampled	Functional Space	Analytical Results	Friability	Condition	OSHA Class	NESHAP Category	Quantity (if >1%)
M-FLT-01 (A)	Vapor Barrier Felt – Black, Asphaltic, Paper-Like, associated with, Metal Roofing	Pumpstation	ND	N/A	N/A	N/A	N/A	N/A
M-FLT-01 (B)								
M-FLT-01 (C)								
M-CON-02 (A)	Concrete - (Walls, Foundation, Stairs) Gray, Cementitious	2B	ND	N/A	N/A	N/A	N/A	N/A
M-CON-02 (B)								
M-CON-02 (C)								
M-SLT-03 (A)	Sealant – (Exterior Siding) White, Pliable	2B	ND	N/A	N/A	N/A	N/A	N/A
M-SLT-03 (B)								
M-SLT-03 (C)								
M-GAS-04 (A)	Gasket – 4", Black, Plastic-Like, with White Fibrous Binder	2B	10% Chrysotile	Non-Friable	Good	Class II	CAT I	5 Sq. Ft.
M-GAS-04 (B)								
M-GAS-04 (C)								
M-GAS-05 (A)	Gasket - Red. Vinyl-Like	Vault	ND	N/A	N/A	N/A	N/A	N/A
M-GAS-05 (B)								
M-GAS-05 (C)								
M-CMU-06 (A)	Concrete Masonry Unit – 8" x 16", Gray, Cementitious, and associated Grout – Gray, Cementitious	Vault	ND	N/A	N/A	N/A	N/A	N/A
M-CMU-06 (B)								
M-CMU-06 (C)								
M-SLT-07 (A)	Sealant – (Metal Roof Panels) Gray, Pliable	2B	ND	N/A	N/A	N/A	N/A	N/A
M-SLT-07 (B)								
M-SLT-07 (C)								
M-SLT-08 (A)	Sealant – (Metal Roof Panels) Gray/Blue, Pliable	2B	ND	N/A	N/A	N/A	N/A	N/A
M-SLT-08 (B)								
M-SLT-08 (C)								

4.2 Sample Location Diagram



Project No.	A15-00372	Sample Location Diagram Crystal Lane Pumpstation and Vault	 Dunn ENVIRONMENTAL™ ENVIRONMENTAL CONSULTING
Date	9/1/2015		
Drawn	DT	6538-6550 Crystal Lane Prescott, Arizona 86301	
Scale	NTS		

5.0 LIMITATIONS AND EXCLUSIONS OF WARRANTY

This investigation was performed using procedures and a level of diligence typically exercised by professional consultants performing similar services. Hidden or changed conditions, activities that may have occurred after the time of the investigation, and possible inaccuracies of information supplied to Dunn Environmental Services Inc by others might have a material bearing on the findings, conclusions, and recommendations. Dunn Environmental Services Inc reserves the right to change its opinion when new information is encountered.

The procedures used for this survey attempt to establish a balance between the competing goals of limiting investigative costs and time, and reducing the uncertainty about unknown conditions. It would be cost prohibitive to do an exhaustive investigation. Because an exhaustive investigation was not performed or necessary, the recommendations should not be construed as a guarantee that all safety or health hazards that may exist at the subject property have been identified.

No warranty or guarantee, expressed or implied, is made regarding the findings, conclusions or recommendations contained in this report. The limitations presented above supersede the requirements or provisions of all other contracts or scopes of work, implied or otherwise, except as expressly stated or acknowledged herein. Dunn Environmental Services Inc is not responsible for the actions other parties involved in this project.

It is expressly agreed that Dunn Environmental Services Inc will have no liability to any party for reliance upon any of the findings or recommendations contained in this report. To the extent that this provision is found unenforceable by any court, any liability Dunn Environmental Services Inc may have arising out of its agreement with the contracting party is expressly agreed to be limited to the amount paid to Dunn Environmental Services Inc.

Comprehensive Asbestos Bulk Sampling Report
Crystal Lane Pump Station
Pumpstation and Vault
Project Number: A15-00567



APPENDIX 1

Laboratory Reports & Chain of Custodies

Pumpstation and Vault-Lab Report



Aerobiology Laboratory Associates, Inc.
 2228 W Northern Ave. Suite B-110
 Phoenix, AZ 85021
 (602) 441-3700
 www.aerobiology.net

Client:
Dunn Environmental
 13122 S. 178th Ave.
 Goodyear, AZ 85338
 Attn: Roy Dunn

Certificate of Analysis
Project Name: A15-00567 Civiltech Engineering-Crystal Lane Pump 90115
Project ID: 15020764

Date Collected: 09/01/2015
 Date Received: 09/01/2015
 Date Analyzed: 09/02/2015
 Date Reported: 09/04/2015
 Job ID:

Test: **3002 - Asbestos in Bulk Samples**

Method: **EPA-600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials**

Sample Identification		Physical Description of Sample/Layer	Homo- geneous (Y/N)	Layer Percentage	Asbestos	
					Asbestos Detected	Asbestos Percentage
Client	Laboratory					
M-FLT-01 (A)	15020764-001-A	Black Felt	N	100	ND	
M-FLT-01 (B)	15020764-002-A	Black Felt	N	100	ND	
M-FLT-01 (C)	15020764-003-A	Black Felt	N	100	ND	
M-CON-02 (A)	15020764-004-A	Gray Concrete	N	100	ND	
M-CON-02 (B)	15020764-005-A	Gray Concrete	N	100	ND	
M-CON-02 (C)	15020764-006-A	Gray Concrete	N	100	ND	
M-SLT-03 (A)	15020764-007-A	Brown Fibrous Material W/White and Green Paint	N	15	ND	
	15020764-007-B	White Caulk W/Brown and White Paint	N	85	ND	
M-SLT-03 (B)	15020764-008-A	Brown Fibrous Material W/Green Paint	N	25	ND	
	15020764-008-B	White Caulk W/Brown Paint	N	75	ND	
M-SLT-03 (C)	15020764-009-A	Brown Fibrous Material W/Green Paint	N	10	ND	
	15020764-009-B	White Caulk W/Brown Paint	N	90	ND	
M-GAS-04 (A)	15020764-010-A	Gray/Rusty Gasket	N	100	CHRY	20
M-GAS-04 (B)	15020764-011-A	Gray/Rusty Gasket	N	100	CHRY	20
M-GAS-04 (C)	15020764-012-A	Gray/Rusty Gasket	N	100	CHRY	20
M-GAS-05 (A)	15020764-013-A	Brown Gasket	N	100	ND	
M-GAS-05 (B)	15020764-014-A	Brown Gasket	N	100	ND	

A Amosite
 AC Actinolite
 AN Anthophyllite
 CHRY Chrysotile
 CR Crocidolite
 TR Tremolite
 Trace Less Than 1%
 ND None Detected

Elvira Meister
 Analyst

Aaron Agajanian
 Asbestos Laboratory Supervisor

Pumpstation and Vault-Lab Report



Aerobiology Laboratory Associates, Inc.
 2228 W Northern Ave. Suite B-110
 Phoenix, AZ 85021
 (602) 441-3700
 www.aerobiology.net

Client:
Dunn Environmental
 13122 S. 178th Ave.
 Goodyear, AZ 85338
 Attn: Roy Dunn

Certificate of Analysis

Project Name: **A15-00567 Civiltech Engineering-Crystal Lane Pump 90115**
 Project ID: **15020764**

Date Collected: **09/01/2015**
 Date Received: **09/01/2015**
 Date Analyzed: **09/02/2015**
 Date Reported: **09/04/2015**
 Job ID:

Test: **3002 - Asbestos In Bulk Samples**

Method: **EPA-600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials**

Sample Identification		Physical Description of Sample/Layer	Homo- geneous (Y/N)	Layer Percentage	Asbestos	
					Asbestos Detected	Asbestos Percentage
Client	Laboratory					
M-GAS-05 (C)	15020764-015-A	Rusty Compound	N	18	ND	
	15020764-015-B	Black Gasket	N	82	ND	
M-CMU-06 (A)	15020764-016-A	Gray Grout/Concrete	N	100	ND	
M-CMU-06 (B)	15020764-017-A	Gray Grout/Concrete	N	100	ND	
M-CMU-06 (C)	15020764-018-A	Gray Grout/Concrete	N	100	ND	
M-SLT-07 (A)	15020764-019-A	Brown Fibrous Material W/Multicolored Paint Layers	N	15	ND	
	15020764-019-B	Gray and White Caulk	N	85	ND	
M-SLT-07 (B)	15020764-020-A	Brown Fibrous Material W/Multicolored Paint Layers	N	18	ND	
	15020764-020-B	Gray and White Caulk	N	82	ND	
M-SLT-07 (C)	15020764-021-A	Brown Fibrous Material W/Multicolored Paint Layers	N	15	ND	
	15020764-021-B	Gray Caulk	N	85	ND	
M-SLT-08 (A)	15020764-022-A	Light Gray Caulk W/Gray Paint	N	100	ND	
M-SLT-08 (B)	15020764-023-A	Light Gray Caulk W/Gray Paint	N	100	ND	
M-SLT-08 (C)	15020764-024-A	Light Gray Caulk W/Gray Paint	N	100	ND	

Elvira Meister
 Analyst

Aaron Agajanian
 Asbestos Laboratory Supervisor

A Amosite
 AC Actinolite
 AN Anthophyllite
 CHRY Chrysotile
 CR Crocidolite
 TR Tremolite
 Trace: Less Than 1%
 ND None Detected



Client: Dunn Environmental 13122 S. 178th Ave. Goodyear, AZ 85338 Attn: Roy Dunn	Certificate of Analysis Project Name: A15-00567 Civiltech Engineering-Crystal Lane Pump 90115 Project ID: 15020764	Date Collected: 09/01/2015 Date Received: 09/01/2015 Date Analyzed: 09/02/2015 Date Reported: 09/04/2015 Job ID:
--	--	--

General Notes

- * ND indicates no asbestos was detected; the method detection limit is 1 %.
- * Trace or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.
- * All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestiform variety of the mineral riebeckite.
- * Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.
- * These results are submitted pursuant to Aerobiology Laboratory Associates, Inc.'s current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.
- * Unless notified in writing to return the samples covered by this report, Aerobiology Laboratory Associates, Inc. will store the samples for a minimum period of thirty (30) days before discarding. A shipping and handling charge will be assessed for the return of any samples.
- * Aerobiology does not guarantee the results of tape lifts, microvacs, wipe, and/or debris samples. Accurate analysis cannot be performed due to particle size, media used, and/or amount of material given. Analysis of these materials should be performed by a TEM. A result of ND does not indicate that the sample area does not contain asbestos. It means the analyst could not identify asbestos in the specific sample for the reasons listed above.

Notes Required by NVLAP

- * This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Pumpstation and Vault-Chain of Custody



Lab Use:
15020764
9/1/15



Aerobiology Client		Dunn Environmental Services, Inc.	
Field Contact	Dane Thompson	Date / Time:	9/1/15 1:43 pm
Address	13122 S. 178th Ave.	Collected By:	[Signature]
Address	Goodyear, AZ 85338	Date / Time:	9/1/15 1:43 pm
Phone/Fax	480-884-4324	Sampler Type	Andersen SAS Zefon BioPump AeroTrap Other BioCulture
Email	Dane.Thompson@DunnEnvironmental.com Dunn@ExpertsAZ.com Chris.Gales@DunnEnvironmental.com	PO#Job#Project Name:	A15-00567 Cimtech Engineering - Crystal Lake Pump
Mold package: Residential	Test day standard non-viable mold	Same Day	4 Hour 2 Hour 3 Day (Asbestos Only)
Notes/CC Info:			

Sample No.	Test Code	Sample Location	Total Volume/Area
1	M-FLT-01 (A-C)	Felt	N/A
2	M-COV-02 (A-C)	Concrete	
3	M-SLT-03 (A-C)	Sealant	
4	M-GAS-04 (A-C)	Gasket	
5	M-GAS-05 (A-C)		
6	M-CMV-06 (A-C)	CMV/Graet	
7	M-SLT-07 (A-C)	Sealant	
8	M-SLT-08 (A-C)	Sealant	
9			
10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative - Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative - Bulk	1010	WATER - Potable - E. coli/total coliforms
1005	AIR Culture - Bacterial Count w/ ID's	1012	SWAB - E. coli/total coliforms
1030	AIR Culture - Fungal Count w/ ID's	2028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1006	SWAB Culture - Bacterial Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	3001	ASBESTOS - Point count
1008	BULK Culture - Bacterial Count w/ ID's	3002	ASBESTOS - PLM Analysis
1033	BULK Culture - Fungal Count w/ ID's	3003	ASBESTOS - Particle characterization
1007	WATER Culture - Bacterial Count w/ID's	3004	ASBESTOS - PCM Analysis

2226 W. Northern Avenue, Suite B110, Phoenix, AZ 85021 - (602) 441-3700 Fax (602) 441-2816 - email: phoenix@aerobiology.net
 780 Simms Street, Suite 104, Golden, CO 80401 - (866) 620-9348 Fax (303) 232-0283 - email: denver@aerobiology.net
 4501 Circle 75 Parkway, Suite A1190, Atlanta, GA 30339 - (866) 620-9313 Fax (770) 947-2938 - email: ATL@aerobiology.net
 43760 Trade Center Pkwy, Suite 100, Dulles, VA 20166 - (877) 648-9150 Fax (703) 648-3919 - email: lab@aerobiology.net
 1761 Hotel Circle South, Suite 121, San Diego, CA 92108 - (650) 302-2223 Fax (720) 235-5918 - e-mail: aerobiologywest@aerobiology.net

Comprehensive Asbestos Bulk Sampling Report
Crystal Lane Pump Station
Pumpstation and Vault
Project Number: A15-00567



APPENDIX 2

Asbestos Certifications

THE ASBESTOS INSTITUTE

Certifies that

Charles Thompson

has attended the EPA approved course

AHERA Building Inspector Refresher

Approval Code: CA-089-06

July 10, 2015

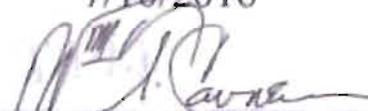
and successfully passed the competency exam.

Date of Examination: 7/10/2015

Date of Expiration: 7/10/2016



William T. Cavness
Director



Approved Instructor

THE ASBESTOS INSTITUTE

20033 N. 19th Avenue

Building #6

Phoenix, AZ 85027

602-864-6564

This training meets all requirements for asbestos accreditation under Toxic Substance Control Act Title II and California OSHA.

September 18, 2015

Mr. Jeff Fanning
Project Manager
Civiltec Engineering Inc.
2054 N. Willow Creek Road
Prescott, Arizona 86301



**Subject: Crystal Lane Pump Station
Pump Station and Vault
6538-6550 Crystal Lane
Prescott, Arizona 86301**

Dear Mr. Jeff Fanning:

Dunn Environmental Services Inc. (Dunn) is pleased to submit the following report for the Lead Abatement Oversight and Clearance performed at the subject facility to Civiltec Engineering Inc. This report contains the XRF results, property sketch, and certifications from the inspection on September 1, 2015. This inspection was completed using the inspection protocol given in Chapter 7 of the *HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (1997)*.

The results of the XRF inspection indicate that lead-based paint was not detected in amounts greater than or equal to 1.0 mg/cm² in the affected areas, with the following exceptions:

Pumpstation

- **XRF#16 Valve Flange Edge – Metal, Red 2.4 mg/cm² ≈1 square foot**

If there are any questions please do not hesitate to contact us at (623) 691-6400.

Sincerely,

A handwritten signature in black ink, appearing to read "RL", is positioned above the typed name of the sender.

Roy L. Dunn CIH, CEICC, CMC
General Manager/Senior Scientist

Attachment: Limited Lead-Based Paint Survey Report



tel: 623.691.6400 • fax: 623.691.6409
13122 S. 178th Ave. • Goodyear, AZ 85338
www.dunnenvironmental.com



LIMITED LEAD-BASED PAINT SURVEY REPORT

Crystal Lane Pump Station
Pump Station and Vault
Project Number: A15-00567

Project Submitted to:

Mr. Jeff Fanning
Project Manager
Civiltec Engineering Inc.
2054 N. Willow Creek Road
Prescott, Arizona 86301

Report Prepared by:

Charles D. Thompson, CSST
Senior Project Manager

Report Reviewed by:

Chris S. Gates, CAC
Director of Operations



tel: 623.691.6400 • fax: 623.691.6409
13122 S. 178th Ave. • Goodyear, AZ 85338
www.dunnenvironmental.com



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1.0 EXECUTIVE SUMMARY

Dunn Environmental Services, Inc. (Dunn), conducted sampling of suspected lead-based paint from the Crystal Lane Pump Station located at 6538-6550 Crystal Lane, Prescott, Arizona 86301, on September 1, 2015. Mr. Charles D. Thompson, CSST, Senior Project Manager of Dunn, performed the lead inspection of the subject property in accordance with U.S. Department of Housing and Urban Development guidelines as provided in: *Guidelines for The Evaluation and Control of Lead Based Paint Hazards in Housing, Chapter 7*. Mr. Charles D. Thompson, CSST holds a current certification as an EPA-Certified Lead Risk Assessor, Certification #AZ-R-13808-3 exp. December 5, 2017.

Sampling was conducted due to an upcoming demolition project. The purpose of the limited survey was to determine if the materials that are planned to be removed during demolition/removal activities contained regulated levels of lead-based paint prior to repair work being conducted. No destructive testing was performed to access obstructed building materials.

A total of twenty-five (25) testing combinations were analyzed throughout the property, which included The Pumpstation, Vault, and building exteriors.

All affected materials were sufficiently sampled to satisfy OSHA, HUD, and EPA requirements.

It should be noted that areas not tested for lead based paint should be assumed to be above the limits until testing proves the areas do not contain lead-based paint.

The results of the XRF inspection indicate that lead-based paint was not detected in amounts greater than or equal to 1.0 mg/cm² in the affected areas, with the following exceptions:

Pumpstation

XRF#16 Valve Flange Edge – Metal, Red 2.4 mg/cm² ≈1 square foot

Lead-Based Paints Summary - Table #1

XRF No.	Room Equivalent - Location	Component	Color	Substrate	Estimated Quantity
16	Pumpstation	Valve Flange Edge	Red	Metal	≈1 sq. ft.

Laboratory results are attached to this report. The chain of custody can be obtained by sending us a letter requesting a copy of the COC. If there are any questions, please do not hesitate to contact us at (623) 691-6400.

2.0 SURVEY PROCEDURES

Testing was conducted using an x-ray fluorescence spectrometer (XRF). The instrument is calibrated using known lead based paint chip sample before the start of the survey, after the survey is completed, and/or every four hours during the survey. The XRF instrument used in this investigation was the NITON XLp 300 XRF Analyzer, Serial #26071. It should be noted that for



the known lead based paint chip sample (Red SRM 2573) a twenty (20) second reading, the result should yield at or between 0.98 mg/cm² and 1.1 mg/cm² (1.04 mg/cm² ± 0.06)

The following table lists the detailed information of the onsite XRF calibrations:

XRF Calibrations - Table #4

Time	First Reading	Second Reading	Third Reading	Average	Difference (1.04 mg/cm ²)
10:28AM	1.1	1.1	1.0	1.0667	.02667
	XRF Reading #2	XRF Reading #3	XRF Reading #4		
11:16AM	1.0	1.0	1.0	1.0	.04
	XRF Reading # 23	XRF Reading #24	XRF Reading #25		

This XRF Analyzer gives instant readings of the substrate tested. The analyzer counts a sufficient number of times to give a 95% confidence level. If the XRF Analyzer gives an “inconclusive” reading then a paint chip sample is taken and sent to a laboratory for analysis. The XRF Analyzer uses two modes: standard for calibrations, and quick mode for the survey. It is suitable for both commercial and residential applications.

It should be noted that the Lead Inspector regulations for HUD require an inspector to analyze each wall, each substrate, and each component per room equivalent. Testing combinations not analyzed may contain lead based paint levels above the HUD standard. This is due to the construction / maintenance / renovations that may have occurred over time. The work completed by Dunn Environmental Services was conducted in accordance with HUD guidelines.



3.0 FINDINGS

The following table lists the detailed information of the XRF lead-based paint survey of the Crystal Lane Pump Station:

Room Equivalent		1 Pump Station Exterior						
#	Component	Color	Substrate	Test Location	XRF Result	Class (P,N,I)	Condition	Estimated Quantity
5	Roof	Blue	Metal	A Left	0.00	N	Intact	N/A
6	Eave	Blue	Wood	A Center	0.01	N	Intact	N/A
7	Siding	Brown	Wood	B Right	0.00	N	Intact	N/A
8	Eave	Blue	Wood	C Center	0.00	N	Intact	N/A
9	Siding	Brown	Wood	D Left	0.00	N	Intact	N/A
10	Wall	Brown	Concrete	A Left	0.01	N	Intact	N/A
11	Wall	Brown	Concrete	B Left	0.00	N	Intact	N/A
12	Wall	Brown	Concrete	C Right	0.00	N	Intact	N/A
13	Wall	Brown	Concrete	D Left	0.01	N	Intact	N/A
14	Door	Brown	Wood	B Center	0.00	N	Intact	N/A
15	Door Frame	Brown	Wood	B Center	0.00	N	Intact	N/A

Room Equivalent		2 Pump Station						
#	Component	Color	Substrate	Test Location	XRF Result	Class (P,N,I)	Condition	Estimated Quantity
16	Valve	Red	Metal	A Right	2.40	P	Intact	≈1 Sq. Ft.
17	Pipe	Blue	Metal	A Center	0.00	N	Intact	N/A
18	Pipe	Gray	Metal	A Left	0.02	N	Intact	N/A
19	Door	Tan	Wood	B Center	0.00	N	Intact	N/A
20	Door Frame	Tan	Wood	B Center	0.00	N	Intact	N/A

Room Equivalent		3 Vault						
#	Component	Color	Substrate	Test Location	XRF Result	Class (P,N,I)	Condition	Estimated Quantity
21	Pipe	Red	Metal	D Right	0.00	N	Intact	N/A
22	Ladder	Black	Metal	D Center	0.00	N	Intact	N/A

Please see Appendix 1 of this report for a property sketch of the areas/locations tested.

It should be noted that some of the areas may have lead present below the HUD limit of 1.0 mg/cm² of lead. If the areas are subjected to abrading, scraping, or grinding activities, lead-containing dust may be produced. Any contractor who disturbs the lead-based paint should follow lead-safe procedures for remediation, clean-up, or repair.

This report should be kept by the owner and distributed as necessary per the federal law found in 24 CFR Part 35.

4.0 PROPERTY SKETCH

Dunn Environmental Services
Property Sketch

Dunn Project Number A15-00567
 Case/Claim Number _____

Civiltec
 Client Engineering Inc.

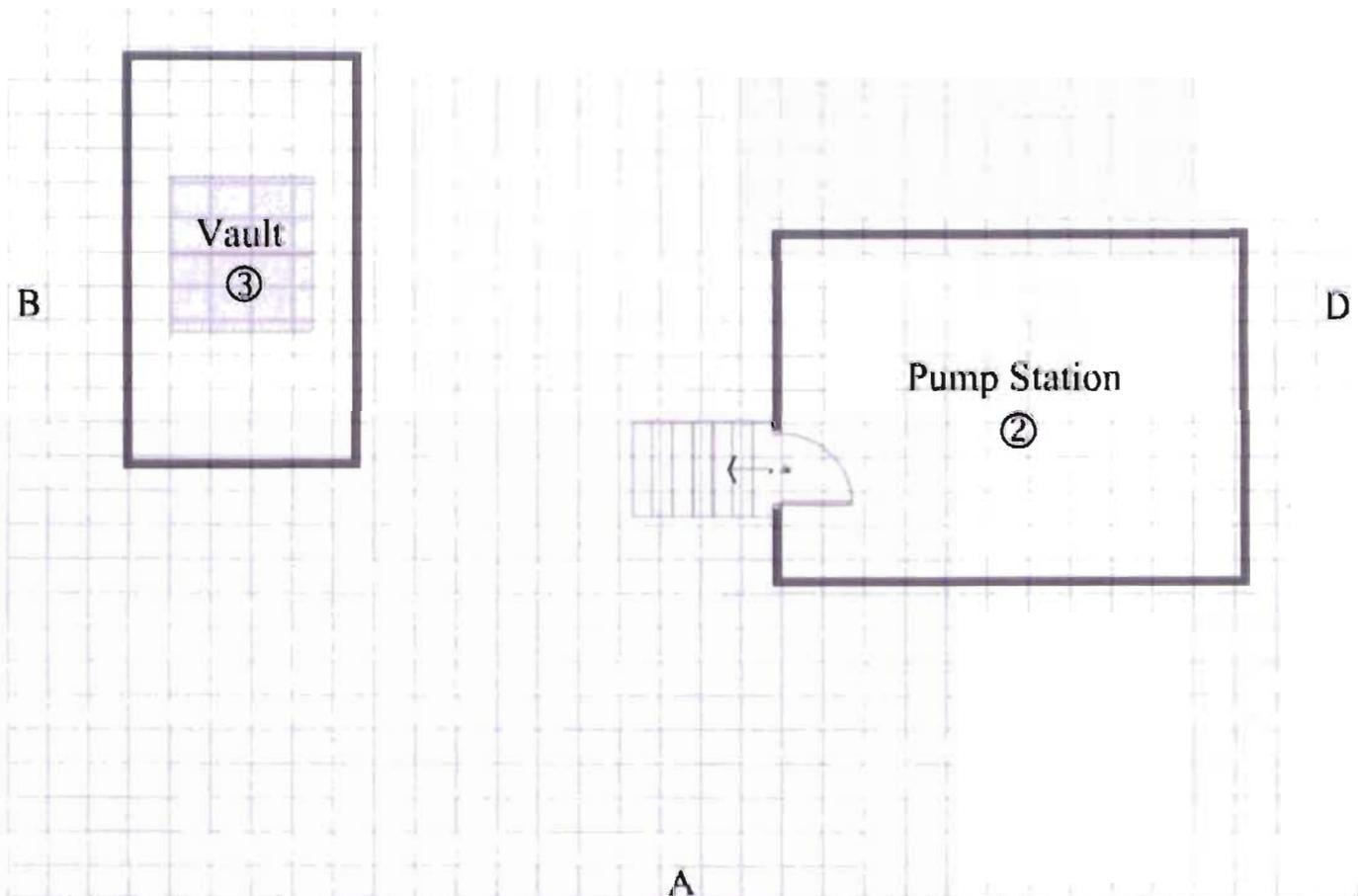
Address: 6538-6550 Crystal Lane, Prescott, Arizona 86301

Page 1 of 1

Drawn By: Charles D. Thompson

Date 9/1/2015

C



Side A is the side of the house facing the street listed in the address.

Room Key:

1. Pump Station Exterior	8.	15.
2. Pump Station	9.	16.
3. Vault	10.	17.
4.	11.	18.
5.	12.	19.
6.	13.	20.
7.	14.	21.

x = where soil was sampled A = child play areas D = Door W = Window

5.0 REFERENCES

The following references are used as guidelines for the industrial hygiene survey:

1. American Conference of Government Industrial Hygienist (ACGIH): Industrial Ventilation 24th Edition; 2001; published by ACGIH
2. American Conference of Government Industrial Hygienist (ACGIH): Theshold Limit Values for Chemical Substances and Physical Agents; 2003; published by ACGIH
3. American Industrial Hygiene Association (AIHA): The Occupational Environment – Its Evaluation and Control; AIHA, 1998.
4. National Safety Council (NSC): Fundamentals of Industrial Hygiene; 1996; published by the NSC
5. National Institute for Occupational Safety and Health (NIOSH): Pocket Guide to Chemical Hazards; 1997; published by US Department of Health and Human Services
6. Occupational Health and Safety Administration (OSHA): 29 CFR Part 1926 OSHA Safety and Health Standards for the Construction Industry; 2000; published by The Industrial Commission of Arizona
7. Occupational Health and Safety Administration (OSHA): 29 CFR Part 1910 Occupational Safety and Health Standards for General Industry; 2000; published by The Industrial Commission of Arizona
8. Proctor & Hughes: Chemical Hazards of the Workplace; 1996, published by John Wiley & sons.
9. U.S. Department of Housing and Urban Development, Guidelines for The Evaluation and Control of Lead Based Paint Hazards in Housing, Chapter 7: Lead-Based Paint Inspections. Revised 1997
10. U.S. Environmental Protection Agency, Lead; Renovation, Repair, and Painting Program, Part 745 - Lead-Based Paint Poisoning Prevention In Certain Residential Structures: Subpart E Residential Property Renovation. based on publication in April 22, 2008 and March 20, 2009 *Federal Register*



6.0 LIMITATIONS AND EXCLUSIONS OF WARRANTY

This investigation was performed using procedures and a level of diligence typically exercised by professional consultants performing similar services. Hidden or changed conditions, activities that may have occurred after the time of the investigation, and possible inaccuracies of information supplied to Dunn Environmental Services Inc by others might have a material bearing on the findings, conclusions, and recommendations. Dunn Environmental Services Inc reserves the right to change its opinion when new information is encountered.

The procedures used for this survey attempt to establish a balance between the competing goals of limiting investigative costs and time, and reducing the uncertainty about unknown conditions. It would be cost prohibitive to do an exhaustive investigation. Because an exhaustive investigation was not performed or necessary, the recommendations should not be construed as a guarantee that all safety or health hazards that may exist at the subject property have been identified.

No warranty or guarantee, expressed or implied, is made regarding the findings, conclusions or recommendations contained in this report. The limitations presented above supersede the requirements or provisions of all other contracts or scopes of work, implied or otherwise, except as expressly stated or acknowledged herein. Dunn Environmental Services Inc is not responsible for the actions other parties involved in this project.

It is expressly agreed that Dunn Environmental Services Inc will have no liability to any party for reliance upon any of the findings or recommendations contained in this report. To the extent that this provision is found unenforceable by any court, any liability Dunn Environmental Services Inc may have arising out of its agreement with the contracting party is expressly agreed to be limited to the amount paid to Dunn Environmental Services Inc.

Limited Lead-Based Paint Survey Report
Crystal Lane Pump Station
Pump Station and Vault
Project Number: A15-00567



APPENDIX 1

Asbestos Certifications

United States Environmental Protection Agency

This is to certify that



Charles Thompson

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:

Risk Assessor

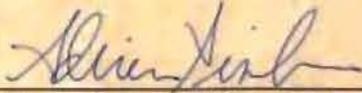
In the Jurisdiction of:

Arizona

This certification is valid from the date of issuance and expires December 05, 2017

AZ-R-13808-3
Certification #
September 23, 2014
Issued On




Adrienne Priselac, Manager, Toxics Office
Land Division