KLEINFELDER
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4835 Longley Lane
Reno, NV
89502

p| 775.689.7800
f| 775.689.7810

kleinfelder.com

June 28, 2011
Project Number 117225.02

Mr. David P. Friedman, CEM
Nevada Division of Environmental Protection
Bureau of Corrective Actions
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701-5249

Subject: **Hazardous Substances Phase II Environmental Site Assessment**
Abandoned Water Tank near the Moapa Senior Center
Moapa Paiutes Indian Reservation
Moapa, Clark County, Nevada

Dear Mr. Friedman:

As part of an application submitted by the Moapa Band of Paiutes (Moapa Indian Reservation), a Federal Tribal Organization, to the Nevada Division of Environmental Protection's (NDEP) Brownfields Program for grant funding to conduct an assessment of the Annex-Senior Center; sampling of a nearby abandoned water tank was included. The abandoned water tank was included in the grant because it is located near the Senior Center, is a gathering place for tribal teenagers and has a deteriorated outer shell, which allows access to the tank's insulation. The Paiute Tribe requested the water tank be included with the Annex-Senior Center project scope to evaluate the presence of potential Asbestos-Containing Material (ACM) to address the safety concerns of residents. Plate 1 shows the general site location and Plate 2 shows the water tank.

The NDEP approved the grant application and requested a scope of services to implement the assessment be submitted by Kleinfelder. The scope was submitted on March 14, 2011 and approved by the NDEP on April 26, 2011, under NDEP Contract 10-008.

117225.02/REN11R035
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June 28, 2011

On June 8, 2011, three samples of exposed water tank insulation were collected by Mr. Daniel Burns, Nevada Asbestos Consultant-Inspector (I-0971).

The samples were submitted to Fiberquant Analytical Services (Fiberquant) located in Phoenix, Arizona. Fiberquant is certified under the United States Environmental Protection Agency's National Voluntary Laboratory Accreditation Program (NVLAP).

Fiberquant reported the samples as being negative for asbestos. A copy of the laboratory analytical results is included as Appendix A. Therefore, no further action is recommended regarding the water tank and the Paiute Tribe can evaluate how they want to remove the abandoned water tank, without asbestos concerns.

LIMITATIONS

This report may be used only by the client and only for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both onsite and offsite) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use this report shall notify Kleinfelder of such intended use. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party.

CLOSING

We appreciate the opportunity to provide these services for you. Should you require additional information, have any questions regarding this report, or wish to discuss the recommendations provided, please contact Joshua P. Fortmann at 775-689-7800.

Respectfully submitted,

KLEINFELDER, INC.

Daniel C Burns

Daniel C. Burns, CEM
Senior Professional
Nevada Asbestos Abatement Consultant, No. I 0971
(Expires 8/09/2011)

Joshua P. F.

Joshua P. Fortmann, CEM
Project Manager

DCB/jf

Enclosures: Plate 1:   Site Location Map
             Plate 2:   Water Tank
             Attachment A: Laboratory Analytical Report and Chain-of-Custody Form

Copies with attachments to:
Moapa Paiute Farm, Moapa River Indian Reservation, Attention Mr. William Anderson, One Lincoln Street, PO Box 340, Moapa, Nevada 89025-0340

PLATES

260 Feet

GISMO

☐ Annex-Senior Center

☐ Approximate Location of Abandoned Water Tank

N

Original in Color

SUBJECT SITE AND VICINITY MAP

KLEINFELDER
6380 South Polaris Avenue
Las Vegas, Nevada 89118
Ph. (702) 736-2936   Fax. (702) 361-9094

Abandoned Water Tank
Moapa Indian Reservation
Moapa, Clark County, Nevada

PLATE
1

| Drawn by: DCB | Checked by: DH | Date: 6/20/2011 | PROJECT NO.: 117225.02 |

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ABANDONED WATER TANK

KLEINFELDER
6380 South Polaris Avenue
Las Vegas, Nevada 89118
Ph. (702) 736-2936   Fax. (702) 361-9094

Moapa Indian Reservation
Moapa, Clark County, Nevada

PLATE

2

Drawn by: DCB	Checked by: PT	Date: 06/20/11	PROJECT NO.: 117225.02

ATTACHMENT A

FIBERQUANT
ANALYTICAL SERVICES

Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber:	201105804

Client: KLEINFELDER INC

6380 S POLARIS AVE

LAS VEGAS, NV   89118-3821

Office Phone: (702) 736-2936
FAX: (702) 361-9094

 # Samples: 3   **PLM**   **Rec:** 6/10/2011   **Method:** EPA 600/R-93/116   PLM analysis for asbestos in bulk smp

Client Job: 117225.02/Water Tank   **PO Number:** 117225.02

Report Date: 6/14/2011   **Date Analyzed:** 6/14/2011   **Routing Number:** -

Method and Analysis Information: **Fiberquant Internal SOP:**   PLMn

Each bulk sample is first dissected under a 7-30x magnification stereo-microscope. This examination is used to determine the general type of sample, how many and what type of layers it has, and initial estimates of fiber types and quantities. Second, liquid media mounts are made of each layer - such mounts may be of selected fibers (used solely for identification purposes) or may be representative of the layer as a whole (used for quantitation purposes). The mounts may be made in a synthetic Canadian balsam, one of several solvents, or in refractive index oils (media of known refractive index). Generally, a variety of different mounts are made: some optimized for fiber visibility, some optimized for fiber identification, and some optimized for fiber quantitation. The mounted slides are then examined at 50-400x magnification on a Nikon Labphot-pol microscope. Optical characteristics are used to identify each observed fiber type; the optical data are contained for each sample on its detail analysis sheet, attached.

Current EPA and NESHAP regulations designate a result of <=1 % asbestos as "negative" and >1 % asbestos as "positive". Samples containing layers that have been determined to be "positive" may have to be handled differently during a renovation or demolition than samples whose layers have been determined to be "negative."

The method of fiber analysis and identification is the EPA Method 600/R-93/116. The method of fiber quantitation is an estimation technique in which the analysts quantitation is routinely calibrated by reference quantitation standards, and which has been shown to be equivalent in precision and accuracy to point counting. Friability is estimated for the purposes of deciding when to point count. Friabilities determined in the field take precedence over those determined in the laboratory. Those sample layers which are friable and estimated by the analyst to contain <= 1% asbestos are point counted using 400 points. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Polutants, Nov. 1990) in order to rely on analytical results that are <= 1%. The coefficient of variation for the estimation quantitation technique is 100% in the range 0-5%. This means that PLM analysis is not capable of conclusively determining whether a layer containing close to 1% asbestos is actually "positive" or "negative". For this reason, Fiberquant refers to results where asbestos was detected but <= 1% as "borderline negative", and results where asbestos was >1 % but <= 2% as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos reported is defined for our purposes as the detection of several asbestos fibers during the analysis; this level would be right at the limit of detection for the method. Trace is only reported on the analysis detail - in the summary a trace would be reported as <=1%. The limit of detection (the smallest % of asbestos that can be detected) varies greatly depending on the matrix in which the asbestos is found. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 1% stated in the method. During the analysis, the analyst, for Fiberquant identification purposes only, determines the "apparent sample type" and "apparent layer types." It must be emphasized that these types are only what is apparent. Often, different materials appear similar or identical after sampling, so the analyst may assign a type other than what was sampled.

Floor tiles present a special problem for PLM asbestos analysis. Floor tile can contain chrysotile fibers so thin that they cannot be resolved by optical methods. In such a case, we may observe a percentage of asbestos which is lower than the actual percentage, or not observe asbestos at all when some is present. For this reason, floor tiles reported as negative should be confirmed to be negative using transmission electron microscope (TEM) analysis. Likewise, vermiculite insulation materials containing traces of asbestiform asbestos present a problem for routine PLM analysis - the amphiboles are sometimes present in trace amounts inhomogeneously distributed. We recommend a hydro-separation technique for such samples.

Vermiculite-containing samples may contain trace amounts of asbestiform amphibole that may or may not be detected during routine PLM analysis. For this reason, loose vermiculite samples reported as negative should be confirmed to contain no amphibole using hydroseparation techniques.

The samples were analyzed under the following ongoing quality assurance program: Blank samples are routinely analyzed to maintain contamination-free materials. Each analyst has at least a bachelor's degree in physical science, and has also completed extensive training specific to asbestos analysis for 1-3 months before being allowed to analyze client samples. Qualitative reference samples are routinely analyzed to assure that analysts can identify asbestos and asbestos-look-alike fibers. Quantitative reference samples are routinely analyzed to calibrate and characterize the estimation procedure. Microscope alignment is checked each day. Refractive index oils are calibrated at least quarterly. At least 10% of client samples are re-analyzed from scratch by a different analyst than the original, and any discrepancies are resolved for the sample and similar sample types before the results are reported. All quality checks performed for these samples were in control except as detailed in the "Analytical Notes" below. All analysts participate in interlab round robins and proficiency testing to assure competence. Fiberquant is accredited by NVLAP (Lab #101031) for the analysis of bulk samples for asbestos using PLM. Accreditation does not imply endorsement by the EPA, any other United States

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governmental agency or any private agency or association. Each lab analysis refers only to the sample tested, and may not, due to the sampling process, be representative of the material sampled. This report may not be reproduced except in full, without the approval of Fiberquant Analytical Services.

Some results may have been calculated using client supplied data, such as volume or area sampled, for which Fiberquant assumes no liability for accuracy.

Job Analysis Notes:

PLM Analysis Summary: **Job Number:**   **201105804**   117225.02/Water Tank

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *		*Asbestos Results*	
Sample # **ACM-01**			2011-05804- 1	Insulation	Positive Layer? No
Layer # 1	tan	Insulation		*no asbestos detected*	
Sample # **ACM-02**			2011-05804- 2	Insulation	Positive Layer? No
Layer # 1	tan	Insulation		*no asbestos detected*	
Sample # **ACM-03**			2011-05804- 3	Insulation	Positive Layer? No
Layer # 1	tan	Insulation		*no asbestos detected*	

* Apparent Sample Types and Apparent Layer Types are as they appeared to the analyst. Since many types of materials appear similar after sampling damage, the apparent type of material may not be the actual type of material.

Sample ACM-01

Sample ACM-01	**Lab Number** 2011-05804- 1 **Sampled:** 6/8/2011 10:50 **Condition:** acceptable
Analyzed By MAC 6/14/2011	**An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes	**# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3

Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers / Percents of Each Fiber

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	tan	3	90-100%	<=1%	-	-	-	-
	Total %	100		**Overall %**	90-100%	<=1%	-	-	-	-

Fiber Identification: glass fiber | cellulose fiber

Fibers / Refractive Index Determinations

#	Fibers	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	glass fiber	CL	D	Y									
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps.

Sample ACM-02

Sample ACM-02	**Lab Number** 2011-05804- 2 **Sampled:** 6/8/2011 10:51 **Condition:** acceptable
Analyzed By MAC 6/14/2011	**An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes	**# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3

Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers / Percents of Each Fiber

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	tan	3	90-100%	<=1%	-	-	-	-
	Total %	100		**Overall %**	90-100%	<=1%	-	-	-	-

Fiber Identification: glass fiber | cellulose fiber

Fibers / Refractive Index Determinations

#	Fibers	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	glass fiber	CL	D	Y									
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps.

Sample ACM-03

Sample ACM-03	**Lab Number** 2011-05804- 3 **Sampled:** 6/8/2011 10:52 **Condition:** acceptable
Analyzed By MAC 6/14/2011	**An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes	**# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3

Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers / Percents of Each Fiber

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	tan	3	90-100%	<=1%	-	-	-	-
	Total %	100		**Overall %**	90-100%	<=1%	-	-	-	-

Fiber Identification: glass fiber | cellulose fiber

Fibers / Refractive Index Determinations

#	Fibers	Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	glass fiber	CL	D	Y									
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps.

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable
Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various
Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends;
D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper
Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High
Elg=sign of elongation - may be +, - or B (both); Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining
Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow;
vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.
RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber
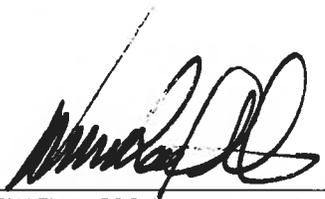
Analyst: MICHAEL A. COOK

Larry S. Pierce, Approved Accreditation Signatory

Printed: 14-Jun-11
Original Print Date: 14-Jun-11

FIBERQUANT ANALYTICAL SERVICES

Fiberquant Analytical Services 5025 S. 33rd St.,
Phoenix, AZ 85040; Phone: 602-276-6139; FAX: 602-276-4558;
info@fiberquant.com

Analysis Request/Chain-of-Custody Form

Submitted by (Company)	Kleinfelder
Address	6380 S. Polaris Avenue
City, State, Zip Code	Las Vegas, NV 89118
Phone 702-736-2936	FAX 702-361-9094
Email	dburns@kleinfelder.com

Invoice to (Company)	Kleinfelder
Address	6380 S. Polaris Avenue
City, State, Zip Code	Las Vegas, NV 89118
Phone 702-260-5603	FAX 702-361-9094

Contact (print) Daniel Burns

Sampled by (signature) _[signature]_

Job Number or Project Name 117225.02/ Moapa Senior Center water tank

PO Number 117225.02

Analysis Method Requested — ONLY ONE METHOD per COC

			Turn-around-time (circle one)		
			Rush	Norm	Ext.
Asbestos by PLM	Improved ☒ Interim ☐		<6 hrs	1-3 days ☒	15-30 days ☐
	Analyze ☒ All ☐ ATPF				
	If so then By Layer ☒ or Sample ☐		n/a		10:25
	Single Layer Protocol: Yes ☐ No ☐				
Fibers by PCM	7400(Area) ☐ ORM (Personal) ☐		<4 hr ☐	24hr ☐	3-5d ☐
Asbestos by TEM	AIR: AHERA ☐ Mod. AHERA ☐		<6hr ☐	24 hr ☐	3-5d ☐
	Water*: Water ☐ Sludge ☐		1-2d ☐	3-5d ☐	N/A
	Annex2: Chatfield ☐ Full ☐				
	Vacuum Dust (ASTM)		3-5d ☐	5-10d ☐	N/A
Pb by FLAA	Analyte: Pb Other		<6 hrs ☐	2-3 days ☐	N/A
	Matrix: Filter: MCE ☐				
	Paint: by Area ☐ by Weight ☐				
	Soil ☐				
	Wipe ☐				
	Initial here certifying wipes used are ASTM E1792 compliant ☐				
Fungi	Air Sample: Zef ☐ Aller ☐ Oth ☐		<6 hrs ☐	1-2 days ☐	N/A
	ID/Count: Bulk ☐ Swab ☐				
	Tape: Qual (%) ☐				
	Tape: Quant (cm2) ☐				
	Other				
Dust	NIOSH 500 ☐		<4hr ☐	24h ☐	N/A
Other			Call	Call	

Sample Number	Description/Location (include your treatment/rep. Date)	Sample Date	Sample Time	Vol/Area
1) ACM-01	Insulation - water tank	6/8/11	1050	
2) ACM-02	Insulation - water tank	6/8/11	1051	
3) ACM-03	Insulation - water tank	6/8/11	1052	
4)				
5)				
6)				
7)				
8)				
9)				
10)				
11)				
12)				
13)				
14)				
15)				
16)				
17)				
18)				
19)				
20)				

1) Relinquished by _[signature]_	Date: 6/9/11	Time 800	3) Relinquished by UPS Airbill	Date 6/10/11	Time:	
2) Received by UPS Airbill	6/9/11	Time 800	4) Received by _[signature]_	Date 6/10/11	Time 9:50A	

* TEM Water: Sampler's name Required by State of Arizona   Print Name

Review of Analysis Request (Initials) _____

1-1 201105804 / UPS

Note: Data completed by client (including number and identity of samples) is assumed to be correct until it is verified at time of sample preparation.
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