



Field Sampling Plan for:

**Hazardous Substances Phase II Environmental Site Assessment for
Moapa Band of Paiutes Administration Building
Moapa, Nevada**

For

Moapa River Reservation
Moapa, Nevada

November 11, 2011

Program Coordinator: David Friedman, NDEP Brownfields Program
Project Manager: Joshua Fortmann, Kleinfelder
Phase II Project Manager: Joshua Fortmann, Kleinfelder
Quality Coordinator: Mary Siders, NDEP Brownfields Program

Approved by NDEP Brownfields
Program Coordinator:

Date:

David Friedman

Reviewed by: NDEP Brownfields
Quality Coordinator:

Date:

Mary Siders

Brownfield Project: Moapa Band of Paiutes Administration Building located at 1 Lincoln Street on the Moapa River Reservation, Moapa, Nevada.

Introduction: Kleinfelder has prepared this Field Sampling Plan (FSP) for assessment activities to be conducted at the administration building, located at 1 Lincoln Street on the Moapa River Reservation in Moapa, Nevada. The proposed assessment activities are being funded by the State of Nevada Brownfields program. This FSP was prepared in accordance with the Nevada Division of Environmental Protection (NDEP) Quality Assurance Program Plan (QA Program Plan) for the Nevada Brownfields Program (NBP) (NDEP 2007).

The purpose of the assessment activities is to evaluate the locations, condition, and quantity of potentially hazardous asbestos-containing material (ACM) with asbestos content greater than 1% and lead paint (LP) that might present a worker safety hazard and/or might require special handling and waste disposal as part of future planned renovation

Project History: The administration building is owned by the Moapa Band of Paiute Indians (Paiute Tribe) and was built in 1968. Over time, the facility has fallen into disrepair. The Paiute Tribe hopes to renovate the facility, but several Tribal members have expressed concern regarding the facility's deterioration, and potential hazardous constituents (ACM and LP). There is concern that these materials may pose a health concern to construction workers hired to renovate the facility, and to employees and Tribal members that use the facility on a daily basis. The Paiute Tribe is seeking assistance to evaluate the potential presence of ACM and LP.

Problem Statement: Due to the age of the Administration Building, it is likely that ACM and LP are present at the site. The Paiute Tribe needs to know if ACM and LP are present while considering potential renovation of the building and to comply with the Hazardous Communications and Right to Know Act.

Kleinfelder will provide a State of Nevada certified Asbestos Abatement Consultant to conduct an asbestos survey of the structure. Kleinfelder will also provide a U.S. Environmental Protection Agency (EPA) certified lead inspector to conduct a visual survey and collect samples of suspect LP and coatings observed on building components at the site. The EPA certified lead inspector will be certified to conduct LP inspections in both Region 9 Tribal Lands and the State of Nevada jurisdictions.

Background: The administration building is located at 1 Lincoln Street, near the intersection of Reservation Road and Lincoln Street. It is a single story structure, built in 1968.

Asbestos Survey

1. An Asbestos Hazard Emergency Response Act (AHERA) trained Asbestos Building Inspector that is accredited under the Nevada Occupational Safety and Health Administration (OSHA) as an Asbestos Abatement Consultant will conduct the asbestos survey. The location of the project site lies within the Moapa River Reservation, which is a “non-delegated” district, within Clark County, Nevada. Therefore, the survey will be completed in general accordance with the asbestos NESHAP regulation (40 CFR, Chapter 61, Subpart M) enforced by the U.S. EPA Region IX located in San Francisco, California as a guideline.

2. The survey will include a visual inspection and collection of an estimated total of 45 bulk samples of the following observed suspect ACM for submittal to an analytical laboratory for asbestos content:
 - a. Three bulk samples from white 12 –inch square resilient floor tiles and mastic;
 - b. Three bulk samples from brown 12 –inch square resilient floor tiles and mastic;
 - c. Three bulk samples from acoustical type ceiling tiles;
 - d. Three bulk samples from spray-on ceiling texture;
 - e. Three bulk samples from textured wall board system;
 - f. Three bulk samples for wall papered wall board system;
 - g. Three bulk samples from carpet mastic;
 - h. Three bulk samples from cove and mastic;
 - i. Three bulk samples from concrete block masonry wall and mortar (at/near utility penetrations);
 - j. Three bulk samples from composite roofing material and mastic;
 - k. Three bulk samples from roof penetration mastic;
 - l. Three bulk samples from above ceiling insulation (if safely accessible);
 - m. Three bulk samples from ducting wrap or plenum mastic (if safely accessible);
 - n. Three bulk samples from exterior damaged clay paver tile/brick and mortar; and

- o. Three bulk samples from interior grey tile mortar (if can be sampled at inconspicuous locations and without damaging the tile).
- 3. The visual survey will evaluate suspect ACM. Survey activities will be performed in accordance with the attached site-specific health and safety plan.
- 4. Samples will be analyzed for asbestos content by Polarized Light Microscopy (PLM) with dispersion staining techniques, as outlined in the EPA's "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116, July 1993). The laboratory to be used will be accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene Association (AIHA). As required under EPA regulations additional Point Count analysis may be performed to determine if a material is a regulated material with an asbestos content greater than 1 percent.
- 5. The sampling strategy will comply with the sampling protocol established under NESHAP (40 CFR Chapter 61, Subpart M). Samples will be handled with accepted procedures for the collection, packaging, chain-of-custody documentation and transport of bulk samples to the laboratory for analysis.
- 6. Suspect ACM will be visually inspected and classified as Category I non-friable ACM, Category II non-friable ACM or RACM. Once the homogenous areas have been identified for each suspect ACM, the required amount of samples of each type of suspect ACM will be collected for analysis. Bulk samples of suspect ACM will be collected by spraying the suspect material with amended water, where appropriate, removing a small portion of the material, and placing it into a laboratory provided or generic zip-lock plastic bag.
- 7. After the building has been visually surveyed to establish functional spaces and homogenous areas, a unique sample identification number (ID) will be assigned to each functional space (i.e., BR-bathroom, HW – hallway, MR – meeting room). The homogenous areas within each functional space will follow the functional space ID, as described above (BR-ACM-001, BR-ACM-002). For each location sampled, the letter designation that follows the sample ID (ACM-001a) will be used to identify where the sample was collected. The approximate location of the sample will be marked on a map of the building.
- 8. All asbestos bulk samples will be sent to Fiberquant Analytical Services (Fiberquant) located in Phoenix, Arizona. Fiberquant is certified under NVLAP.

9. Recommendations will be provided as necessary on the abatement of the RACM, Category I, and Category II friable and non-friable ACM.
10. Under section 61.145 (b) of the Asbestos NESHAP, written notification to EPA Region IX NESHAP Program, enforcement section is required at least 10-working days before the planned demolition activities. This notification applies to any demolition even if no ACMs are found within a building, and planned renovations that include the amount of Category I and Category II non-friable ACM or RACM.

Lead Paint Survey

1. An EPA Certified Lead Paint Inspector/Risk Assessor (certified under Region IX) will conduct the survey. The survey will be conducted for the purposes of hazardous waste management and compliance with OSHA requirements for hazard communication and worker safety. The EPA and US Department of Housing and Urban Development (HUD) define lead based paint LBP as paints containing greater than 1.0 milligrams per square centimeter (mg/cm^2) lead, or 0.5 percent lead by weight (% by weight), which is equivalent to 5,000 milligrams per kilogram (mg/kg) and 5,000 parts per million (ppm). Federal OSHA and Nevada OSHA regulations (Lead Construction Standard) do not provide a definition for "lead-based paint," but refer to the EPA and HUD values discussed above. Nevada OSHA is primarily concerned with worker protection, and regulates any amount of lead contained within painted building components. There are two OSHA lead standards. The OSHA Construction Lead Standard (29 CFR 1926.62) applies to new construction or renovation, demolition or salvage, installation of products that contain lead, and maintenance activities. The General Industry Standard (29 CFR 1910.1025) applies to non-construction activities.
2. An EPA Certified Inspector/Risk Assessor will conduct a visual inspection and collect paint chip samples of suspect LP on painted building components and surface coatings at the site. The LP survey will consist of sampling the following specific media:
 - a. Up to nine paint chip samples will be collected. Paint chips will be collected from each exterior paint that is visually observed to be a different

- color. Paint chips will be collected from each interior paint that is visually observed to be a different color and shows indications of deterioration or wear; and
- b. Three samples will be collected from accessible window caulking.
3. The condition of each paint sample will be noted to assess if the paint is intact or damaged. Damaged paint can crack, chip and/or peel away from the substrate as a result of moisture, wear, heat and/or age. Paint chip samples will be collected in general accordance to the protocol outlined in the OSHA Construction Lead Standard (29 CFR 1926.62)
 4. All samples will be submitted to Fiberquant for analysis using Flame Atomic Adsorption Spectroscopy (Flame AA) in accordance with the EPA's Standard Operating Procedures for Lead in Paint by Atomic Adsorption Spectroscopy (AAS) [SW846 3050b-7420]. Fiberquant is accredited under the AIHA Environmental Lead Laboratory Accreditation Program (ELLAP), which is an approved lead laboratory accreditation program under the EPA National Lead Laboratory Accreditation Program (NLLAP).
 5. Paint chip samples will be collected either using a cold scrape method or a low temperature heat gun method, depending on the location of the painted surface, and/or ease of removal. The objective will be to remove paint and not the substrate to which the paint is applied. An approximate 2-inch by 2-inch area will be sampled and placed into a sealable, generic zip-lock plastic bag. The bag will be labeled with the sample identification number, and date of collection.
 6. All window caulking samples will be collected using a cold scrape method. An approximate 2-inch length of caulking will be collected and placed into a sealable, generic zip-lock plastic bag. The bag will be labeled with the sample identification number, and date of collection
 7. All sampling identifications will consist of the prefix – LP, followed by a sequential number (such as 01) to represent the material being sampled. For each location sampled, the letter designation that follows the Sample ID (LP-01) will be used to identify where the sample was collected. The approximate location of the sample will be marked on a map of the building.

9. A final written report will be prepared by Kleinfelder that will include an evaluation of the information obtained from the asbestos and LP surveys. The report will include the following:
- A description of the field activities, observations and sampling protocols;
 - Written description of locations, type, friability and condition of the assessed ACMs. Written descriptions of locations, condition and substrate of paint chip samples collected;
 - Tabulated results of the sampling and analysis;
 - A map indicating building materials, ACM sample locations, and LP chip sample locations;
 - A description of applicable Federal, State and local regulations; and
 - Laboratory analytical report, including the results of laboratory QA/QC.

Attachment: Site-Specific Health and Safety Plan



SITE-SPECIFIC HEALTH AND SAFETY PLAN

Project No.	<u>122783.01</u>	Date	<u>11-11-2011</u>
Client	<u>NDEP</u>	Address	<u>1 Lincoln Street</u> <u>Moapa, Nevada</u>
Site Contact	<u>William Anderson</u>	Site Phone No.	<u>702-865-2787</u>

Work Location Administration Building, Moapa River Reservation, Moapa, Nevada

Scope of Work

Kleinfelder personnel will follow the attached Job Safety Analysis (JSA) procedures to complete the fieldwork. Prior to site entry, all Kleinfelder field personnel must review this health and safety plan and scope of services detailed in the proposal.

Assess the presence of asbestos containing material (ACM) and lead paint (LP) in the building structure. The Administration Building is located at 1 Lincoln Street near the intersection of Reservation Road and Lincoln Street, across Lincoln Street from the Tribal Senior Center and across Reservation Road from the Tribal Police Station.

In the event of an emergency requiring immediate medical attention or evacuation to a hospital while on the reservation, contact the reservation medical facility Irene Benn Medical Center at (702) 865-2700 and provide the location on the reservation. Dispatch should route the call to the on-site emergency response unit.

If the medical center is not available, call 911.

During the survey, if problems arise, the project's Project Manager, Joshua Fortmann will be contacted at (775) 689-7805, extension 109.

In the event of an emergency requiring immediate medical attention or evacuation to a hospital, contact 911.

KEY INDIVIDUALS

Project Manager Joshua Fortmann
Prepared by Daniel Burns **Reviewer/ Approver** Phil Tousignant
Emergency Hospital/Clinic Irene Benn Med Center / Mesa View Regional Hospital
Phone No. 702-865-2700 / 702-346-8040
Address 10 Lincoln Street, Moapa / 1299 Bertha Howe Avenue, Mesquite Nevada (Exit 120)
Paramedic 911 **Fire Dept.** 911 **Police Dept.** 911

Emergency/Contingency Plans

Stop work and evaluate the situation. If necessary, call 911 to request emergency assistance. Do not move victim(s) unless there is a life-threatening situation. Apply first aid to stabilize victim(s) while awaiting assistance. If injuries do not require emergency medical attention, refer to the attached written directions and map to the hospital or Medical locations.

Notify the Project Manager. The Project Manager will notify the Client and appropriate personnel for the situation.

15 Minute Eyewash Site Control Measures
 Not Required
 Fire Extinguisher Required
 First Aid Kit Required

Kleinfelder personnel will wear personal protective equipment appropriate to the work being undertaken.

CHEMICAL HAZARDS

Chemical Name (CAS#)	Expected Concentration	Health Hazards
<p>Asbestos and lead based paint sampling will be conducted, resulting in potential for inhalation hazard. During sampling of materials for asbestos testing, personal protective equipment will require modified Level C protection, consisting of an air purifying respirator and gloves for the asbestos sampling personnel.</p>		
<p>Further evaluation may require modifying the Level of Protection, listed in Personal Protective Equipment Section below.</p>		

PHYSICAL HAZARDS

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Heat | <input checked="" type="checkbox"/> Slip, Trip, Fall | <input type="checkbox"/> Excavations/Trench |
| <input type="checkbox"/> Cold | <input checked="" type="checkbox"/> Electrical Hazards
Underground Hazards | <input type="checkbox"/> Moving Equipment |
| <input checked="" type="checkbox"/> Wet | <input type="checkbox"/> Overhead Hazards | <input type="checkbox"/> Confined Space |
| <input checked="" type="checkbox"/> Noise | | |
| <input checked="" type="checkbox"/> Other | | |
| <u>Biological (snakes, insects)</u> | | |

PERSONAL PROTECTIVE EQUIPMENT

R = Required

A = As Needed

- | | | |
|--|---|--|
| <input type="checkbox"/> Hard Hat | <input checked="" type="checkbox"/> Safety Eye gear: glasses | |
| <input checked="" type="checkbox"/> Safety Boots | <input checked="" type="checkbox"/> Respirator (Type): Full-face Organic Vap. | <input type="checkbox"/> Half-face Acid gas <input checked="" type="checkbox"/> HEPA <input checked="" type="checkbox"/> |
| <input type="checkbox"/> Orange Vest | <input type="checkbox"/> Filter (Type): Gloves (Leather): | <input type="checkbox"/> Neoprene <input type="checkbox"/> PVC <input type="checkbox"/> Nitrile <input type="checkbox"/> |
| <input type="checkbox"/> Hearing Protection | <input checked="" type="checkbox"/> Other | <u>Clothing appropriate for hot weather conditions</u> |

MONITORING EQUIPMENT

- | | | |
|---|---|--|
| <input type="checkbox"/> Organic Vapor Analyzer (FID) | <input type="checkbox"/> PID with lamp of Detector Tube (specify) | |
| <input type="checkbox"/> Oxygen Meter | <input type="checkbox"/> Passive Dosimeter | |
| <input type="checkbox"/> Combustible Gas Meter | <input type="checkbox"/> Air Sampling Pump | |
| <input type="checkbox"/> H2S Meter | | |

Route and Map to Hospital (Emergency)

If access to the Moapa Paiute Reservation Medical Center is not permitted to non-Tribal personnel, the nearest off Reservation Hospital with emergency service is

Mesa View Regional Hospital
1299 Bertha Howe Avenue
Mesquite, NV 89027
Exit 120
(702) 346-8040

From the work area:

Cross Lincoln Street onto Reservation Road for approximately 1.75 miles to Nevada Highway 168

turn right onto NV 168 for approximately 4 miles to US Interstate 15 (I-15)

turn left on I-15 for approximately 29 miles

to Mesquite Boulevard/Falcon Ridge Parkway Exit (Exit 120)

Turn left onto Mesquite Boulevard for approximately 0.5 miles

Mesquite Boulevard becomes Falcon Ridge Pkwy

Turn left Bertha Howe Avenue

The Hospital is on the right

The hospital is identified on Attachment 1.

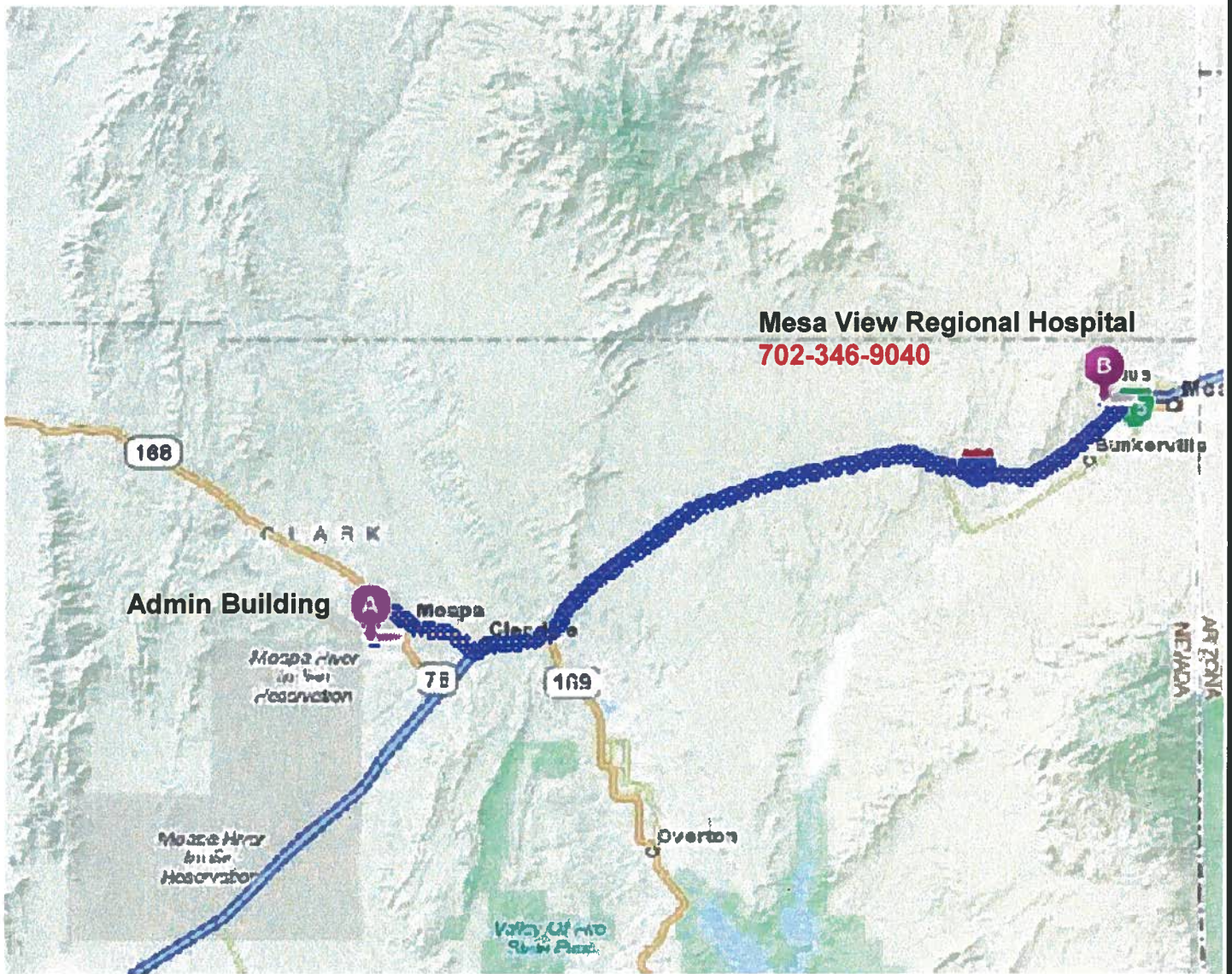
If so directed by emergency response, the Reservation Medical Center is shown on Attachment 2.

Irene Benn Medical Center
10 Lincoln Street
Moapa, Nevada
(702) 865-2700

From the work area,

Proceed **right on Lincoln Street** for approximately 0.5 miles

turn right into the Medical Center.



Mesa View Regional Hospital
702-346-9040

Admin Building

A

B



Original in Color

Map Source:
MapQuest

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

ROUTE TO OFF RESERVATION HOSPITAL

Mesa View Regional Hospital
 702-346-8040
 1299 Bertha Howe Avenue, Mesquite Nevada (Exit 120)

1

Drawn by: PJT | Checked by: DD | Date 11-1-11

PROJECT NO.: 122783



Original in Color

Source:
 Clark County Nevada
 OpenWeb Info Mapper
 Aerial Photograph
 Fall 2011

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

ROUTE TO ON-RESERVATION MEDICAL CENTER

IRENE BENN MEDICAL CENTER
 (702) 865-2700
 MOAPA, NEVADA

2

Drawn by: PJT | Checked by: DD | Date 11-1-11 | PROJECT NO.:122783.01



Job Loss Analysis

Job Task		Driving (Streets and Highways)	
Publish Date:	June 12, 2007	Origination Date:	June 12, 2007
Group		Category	
Development Team:	Alex Hildebrand, Ryan Merkley, Jen Grippa	Latest Review Team:	James Grippa Southwest DSM, Sean Pritchard Pacific DSM, Stephen Coffee Central DSM
Minimum Required Equipment (check all that apply)			
Reflective Vest	Goggles	Supplied Air Respirator	X Other: Seat belt
Hard Hat	Face Shield	Air Purifying Respirator	Cartridge:
Steel Toed Boots	Life/Harness	Protective Clothing	Material:
Safety Glasses	Hearing Protection	Gloves	Material:
Job Steps		Risks/Hazards	
Walk-around inspection (Safety Check) Enter vehicle and prepare to operate		<p>Identify, remove, or adjust for any obstacles that may impede moving the vehicle; secure any loose items.</p> <p>Verify tires are properly inflated and tread wear is within tolerances (+1/16th inch). Tip: Place a penny with Lincoln's head pointed to tire. If the entire head shows, tire replacement is warranted or check for wear bars that are not level with tire surface.</p> <p>Verify lights and lens covers are intact; confirm operation of horn, lights, and instrument panel.</p> <p>Check for any body damage that may affect drivability of vehicle. If abnormalities are discovered, report immediately to staff responsible for vehicle maintenance/management.</p> <p>Check that vehicle has valid current plates, registration, and insurance documentation.</p> <p>Seat belt must be fastened whenever operating vehicle.</p> <p>Adjust seat and mirrors so driver is able to effectively check the outside of the vehicle from the driver's position (using windows/mirrors looking behind or over the shoulder).</p> <p>including climate controls, radio, windshield wipers and washers, and cruise control. Driver should be able to easily reach and manipulate all controls of the vehicle.</p> <p>Verify the vehicle is in a neutral position and emergency (parking) brake is applied before starting (this decreases the likelihood of vehicle movement when engine is started).</p> <p>Monitor vehicle for sounds from engine or abnormal gauge readings.</p> <p>If abnormalities are discovered, remove vehicle from service until reported to and addressed by staff responsible for vehicle maintenance/management.</p>	
Vehicle starting sequence		<p>Unintended vehicle movement could result in injury and/or property damage.</p> <p>Faulty systems performance</p>	



Job Loss Analysis

Driving (Streets and Highways)	
Job Task	Origination Date:
June 12, 2007	June 12, 2007
<p>Initiate driving sequence</p>	<p>Check surroundings to be certain vehicle movement is not obstructed. Apply brake before releasing emergency (parking) brake prior to engaging transmission to maintain control of vehicle. Proceed cautiously to prohibit lurching start and to feel/listen for faulty systems performance. Telegraph lane change with signals (hand or turn signals) to enter traffic stream. Operate vehicle consistent with traffic laws. Avoid distractions (such as cellular phone use or music-related distractions) to more easily focus on the task of driving. Utilize turn signals in accordance with local regulations and traffic laws. Regularly check mirrors for awareness of surrounding conditions. Check every 5 to 8 seconds as a rule of thumb. Consistently "scan the road ahead". Maintain a "cushion of safety" in the front, sides, and rear of vehicle while operating. Utilize the "4 second rule" for following other vehicles. Look over shoulders when changing lanes. Be aware of blind spots. Approach intersections cautiously. Cover brake pedal when approaching "stale" green lights. Come to a complete stop at stop signs and red lights. Yield to pedestrians, bicycles, and vehicles with right of way. Check for opposing traffic when starting from a stopped position. Drive with both hands on the steering wheel (at the 9 and 3 o'clock positions). Maintain speed within posted speed limits. Adjust speeds and account for stopping distances as appropriate for driving conditions or approaching challenging roadway alignments. Maintain a clear view through windshield at all times. Use window washer, or stop and clear as necessary. Do not operate the vehicle in an aggressive manner. Do not change lanes rapidly or frequently and do not tailgate vehicle in front of you. Always maintain a calm disposition and be curious to traffic around you. Be aware of other drivers exhibiting signs of "road rage" around you. If you observe signs of road rage, slow down the vehicle and allow time for that driver to increase their distance ahead of you. Some states have procedures to allow drivers to report other drivers who drive overly aggressive. Consistently use LPSA tool to account for conditions and external</p>
<p>Property damage due to striking obstructions Faulty systems performance Unintended vehicle movement could result in injury and/or property damage</p>	
<p>Death or injury to self or other drivers due to negligent, erratic, or inattentive actions Property damage due to negligent, erratic, or inattentive actions Operating citation by law enforcement for failure to adhere to traffic laws</p>	
<p>During driving sequence</p>	



Job Loss Analysis

Job Task		Driving (Streets and Highways)	
Publish Date:	June 12, 2007	Origination Date:	June 12, 2007



Job Loss Analysis

Job Task		Fieldwork in Areas with Biological Hazards	
Publish Date:	February 4, 2008	Origination Date:	February 4, 2008
Group		Category	
Development Team:		Latest Review Team:	
Steve Siegel, Phil Tousignant, Melissa Sherman			
Minimum Required Equipment (check all that apply)			
Reflective Vest	Supplied Air Respirator	X Other:	high ankle boots w/good traction
Hard Hat	Air Purifying Respirator	X Other:	bug net, snake gators
Steel Toed Boots	Protective Clothing		Material: Long Sleeve shirt, pants
X Safety Glasses	Gloves		Material: leather, canvas
		Client Specific:	
Job Steps		Quality/Safe Work Practices	
Working at a site with the potential presence for:			
INJURIOUS INSECTS/SPIDERS (i.e. ticks, mosquitos, chiggars, bees, wasps, spiders, lice, fleas, scopions, fire ants)	Bites, stings, allergic reactions, viruses, diseases, infections	PPE - long sleeve shirt, pants, gloves, insect repellent, bug nets 1. Become familiar with insects/arachnids present in area 2. Avoid high concentration areas, hives, nests 3. Use insect repellents containing DEET 4. Look before sitting or placing hands to avoid contact 5. Perform self-check when leaving field to detect insects	
VENOMOUS SNAKES/REPTILES	Bites, bodily injury, loss of limb, shock, circulatory and respiratory problems, infection	PPE - long sleeve shirt, thick material pants or snake gators, gloves 1. Use buddy system 2. Become familiar with snakes and reptiles present in area 3. Be able to ID snake or repile 4. Avoid high grasses, debris piles, rock outcrops, burrows if possible 5. Have HASP with Emergency Action Plan, means of communication 6. Don't provoke snake, don't handle, stay body distance away	
WILD ANIMALS	Bites, viruses, diseases, infections, serious bodily injury	PPE - protective clothing, gloves 1. Avoid handling and contact with dead or alive wild animals 2. Do not provoke animals 3. Do not place hands where you cannot see 4. Do not leave food around work site 5. Use buddy system 6. Avoid closed areas/dust with fecal mater and urine from rodents	
POISONOUS/SPINED PLANTS (i.e. poison oak, water hemlock, poison hemlock, poison ivy, poison sumac, stinging nettle, spined plants)	Rash, skin irritation, eruptions, allergic reaction, vision impairment, punctures, spines implanted	PPE - long sleeve shirt, pants, gloves, Tecnu protectant, face shield or goggles, ankle high boots with good traction 1. Become familiar with poisonous plants present in area 2. Be Alert - Avoid contact with all parts of suspect plants 3. Avoid contact with contaminated clothing - wash in detergent 4. Don't touch eyes, nose or mouth if suspect contact 5. Wash skin with Tecnu wash or soap and cold water after fieldwork 6. Don't eat any plant in the wild	



Job Loss Analysis

Job Task		Fieldwork in Areas with Biological Hazards	
Publish Date:	February 4, 2008	Origination Date:	February 4, 2008
STREAMS, RIVERS, SURFACE WATER	Waterborn diseases, parasitic diseases, serious illness	1. Always bring fresh potable water for fieldwork 2. Don't drink untreated water from surface water sources 3. Always treat cuts and other wounds, avoid contact with water	
Document Task Activity	Unable to prove through records that task performed as required	Complete task documentation legibly and in a timely manner	
Personnel trained/certified/qualified to perform task	Work is invalid as performed by person not trained/certified/qualified to perform task	Ensure have the correct certification and training to perform the assigned task	
Perform task according to approved plan/procedure	Perform wrong test/job function Miss a step or make a mistake while performing activity	Review work plan or other directing document before performing task Have copy of procedure/standard available while performing task	



Job Loss Analysis

Job Task		General Site Activities	
Publish Date:	July 21, 2010	Origination Date:	June 30, 2006
Group	Environmental/Materials	Category	General
Development Team:	Jessica Hudson, Danielle Digironimo	Latest Review Team:	Chadd Fry, Jenny Meyer
Minimum Required Equipment (check all that apply)			
<input checked="" type="checkbox"/> Reflective Vest	<input type="checkbox"/> Goggles	<input type="checkbox"/> Supplied Air Respirator	Other:
<input checked="" type="checkbox"/> Hard Hat	<input type="checkbox"/> Face Shield	<input type="checkbox"/> Air Purifying Respirator	Cartridge:
<input checked="" type="checkbox"/> Steel Toed Boots	<input type="checkbox"/> Life/Harness	<input type="checkbox"/> Protective Clothing	Material:
<input checked="" type="checkbox"/> Safety Glasses	<input type="checkbox"/> Hearing Protection	<input checked="" type="checkbox"/> Gloves	Material: Nitrile; Leather; Kevlar
Job Steps		Risks/Hazards	
Quality/Safe Work Practices			
1. Working in or around Noisy Equipment	Noise induced hearing loss/communication loss	Hearing protection must be donned when working around operating equipment if levels are greater than 85dBA. Typically when normal communication cannot be carried on at a distance of 3 feet, hearing protection is required. Establish hand signals for major activities (e.g. stop, dump, caution, go, etc.)	
2. Working in Hot/Cold Environments	Heat/Cold stress.	Implement a Heat/Cold Stress Program applicable to environmental conditions and use of PPE. Program should include: taking frequent breaks, buddy system, condition appropriate food/beverage consumption and getting work done earlier or later in the day to avoid hottest/coldest parts of the day.	
3. Working outdoors	Insect bites	Use insect repellants	
	Poisonous Snake bites	Be alert, avoid approaching; wear snake chaps if high probability of poisonous snake inhabitation	
	Encountering other wildlife	Be alert; do not approach; stay safe distance away; do not startle	
	Contact with poisonous/irritating vegetation	Recognize hazards and avoid contact	
4. Working in Traffic Areas	On-Site traffic hazard.	Follow Traffic Control Devices and Traffic Flow Diagram.	
	Pedestrian/unauthorized visitor entry to work area.	Notify all pedestrians that this is a work zone by delineating work zone and keeping watch. Delineate work area with caution tape or other barrier to restrict access.	
5. Moving vehicles and equipment	Hit by/striking another vehicle, property, or person	Use spotters when backing up vehicles and equipment. Inspect the work area by walking around the vehicle and equipment to identify any potential striking hazards. Insure back up alarms are functioning properly if vehicle or equipment is so equipped	



Job Loss Analysis

General Site Activities	
Job Task	Job Loss Analysis
Publish Date:	Origination Date:
	July 21, 2010
	June 30, 2006
6. Working With Hand Tools.	<p>Misuse of hand tools could result in slips, trips, falls, abrasions, eye injuries and other common injuries.</p> <p>Follow all housekeeping procedures and work zone delineation.</p> <p>Wear gloves appropriate to task—leather work gloves for general tasks, Nitrile gloves when handling contaminated materials, and Kevlar gloves when handling sharp/jagged objects.</p> <p>Follow the decontamination procedure listed in Section 12.0 in the Site H&S Procedure Manual.</p> <p>Wear appropriate PPE at all times (listed above). Level D is the standard, upgrade when necessary to Level C. Contact H&S Officer before going to Level C.</p> <p>Ensure proper training has been conducted prior to using any DR instruments. Such training includes proper equipment inspections and calibration.</p> <p>Keep walking paths clear of debris/materials/equipment; ensure walking surfaces clear of ice, snow, or other slippery materials (i.e. oils, greases)</p> <p>Cover open holes/openings immediately; install well covers after sampling; level ruts or uneven ground as soon as possible</p> <p>If walking through undeveloped or highly developed areas of a Site with limited line of sight of the ground, move slowly and continuously check where you are stepping.</p> <p>Wear gloves appropriate to task—leather work gloves for general tasks, Nitrile gloves when handling contaminated materials, and Kevlar gloves when handling sharp/jagged objects.</p> <p>Do not lift objects >50 lbs without assistance; use safe lifting/back safety techniques; use mechanical devices to aid or handle loads as much as possible</p> <p>Complete task documentation legibly and in a timely manner</p> <p>Ensure have the correct certification and training to perform the assigned task</p> <p>Review work plan or other directing document before performing task</p> <p>Have copy of procedure/standard available while performing task</p>
7. Working With and Sampling For Hazardous Chemicals/Materials.	<p>Hand abrasions, lacerations</p> <p>Cross-contamination of vehicles, persons, or belongings.</p>
8. Working with Direct Reading Instruments.	<p>Faulty readings/equipment</p> <p>Slips/falls</p> <p>Trip hazards</p> <p>Being struck by sharp objects</p> <p>Hand abrasions, lacerations</p> <p>Back Injuries</p> <p>Unable to prove through records that task performed as required</p> <p>Work is invalid as performed by person not trained/certified/qualified to perform task</p> <p>Perform wrong test/job function</p> <p>Miss a step or make a mistake while performing activity</p>
9. Walking/working surfaces	
10. Lifting/Carrying/Moving materials or objects	
11. Document Task Activity	
12. Personnel trained/certified/qualified to perform task	
13. Perform task according to approved plan/procedure	



Job Loss Analysis

Job Task		Sample Collection	
Publish Date:	April 6, 2007	Origination Date:	February 8, 2007
Group	Environmental	Category	Sampling
Development Team:	Simon Gillison, Russ Granfors, Ryan Eberle	Latest Review Team:	Gretchen Thach
Minimum Required Equipment (check all that apply)			
<input checked="" type="checkbox"/> Reflective Vest	<input type="checkbox"/> Goggles	<input type="checkbox"/> Supplied Air Respirator	<input type="checkbox"/> Other:
<input checked="" type="checkbox"/> Hard Hat	<input type="checkbox"/> Face Shield	<input type="checkbox"/> Air Purifying Respirator	Cartridge:
<input checked="" type="checkbox"/> Steel Toed Boots	<input type="checkbox"/> Life/Harness	<input type="checkbox"/> Protective Clothing	Material:
<input checked="" type="checkbox"/> Safety Glasses	<input type="checkbox"/> Hearing Protection	<input checked="" type="checkbox"/> Gloves	Material: Nitrite
Job Steps		Risks/Hazards	
Collect samples		Client Specific:	
Slips, trips, falls		Quality/Safe Work Practices	
Contact with overhead hazards		Pick-up any debris, equipment, or tools in the work area.	
Pinch points and lacerations		Step around site with caution, as some trip hazards cannot be removed.	
Heavy lifting and muscle strains		Wear hardhat where overhead obstructions are present.	
Lose track of physical sample		Watch placement of hands and fingers when collecting samples.	
Incomplete sample record		Use appropriate tools when collecting samples.	
Unable to prove through records that task performed as required		Get assistance when moving heavy objects greater than 25 pounds (two or more people).	
Work is invalid as performed by person not trained/certified/qualified to perform task		Write the sample number and project number on the sample or sample container	
Perform wrong test/job function		Complete the sample custody document legibly at time of sample collection	
Miss a step or make a mistake while performing activity		Complete task documentation legibly and in a timely manner	
Personnel trained/certified/qualified to perform task		Ensure have the correct certification and training to perform the assigned task	
Perform task according to approved plan/procedure		Review work plan or other directing document before performing task	
		Have copy of procedure/standard available while performing task	

KLEINFELDER

Job Safety Analysis

Job Task		Asbestos Building Inspection	
Office location: Denver	Date:	Date Created: May 8, 2007	
Revision Date:			
Group	Environmental	Category	Building Investigation
Development Team:		Review Team:	
Alex Becker			
Minimum Required Personal Protective Equipment (check all that apply)			
<input checked="" type="checkbox"/> Reflective Vest	<input type="checkbox"/> Goggles	<input type="checkbox"/> Supplied Air Reserator	<input checked="" type="checkbox"/> Other: second person
<input checked="" type="checkbox"/> Hard Hat	<input type="checkbox"/> Face Shield	<input checked="" type="checkbox"/> Air Purifying Reserator	Cartridge: purple (magenta)
<input type="checkbox"/> Life/Harness	<input checked="" type="checkbox"/> Steel Toed Boots	<input type="checkbox"/> Protective Clothing	Material:
<input checked="" type="checkbox"/> Safety Glasses	<input type="checkbox"/> Hearing Protection	<input checked="" type="checkbox"/> Gloves	Material:
Job Steps	Hazards	Safe Work Practices	
1. Arrival at correct site/building	Entering the wrong site or building	Have an accurate map before traveling to site. Confirm location and timing of the site inspection with the client/ site manager. Request an escort if possible. Double check map upon arrival.	
2. Pre-job Health and Safety Meeting	See "General Site Activities", "Entering Vacant or Abandoned Buildings", and "Asbestos Building Inspection" JSAs	All employees assigned to this task will attend a pre-job health and safety meeting, which include the pertinent JSA(s), Site Safety Procedures Manual, types of potential hazards, and actual hazards present and controls for those hazards. Select proper PPE for the task and site conditions. Wear a reflective vest, hard-hat, safety glasses and steel toed shoes on active construction sites. Follow specific facility PPE requirements if they exist.	
3. Entry into the building	Unauthorized persons within site buildings (possibly under the influence of drugs or alcohol), presenting physical threat in vacant buildings.	Inform office staff of destination prior to travelling to site. DO NOT ENTER THE BUILDING IF SUSPICIOUS PERSONS ARE OBSERVED!! Make your presence known by loud noises and observing the exterior of the building prior to entry. Have a partner along for security. Check the entire building before conducting work.	
4. Inspection/Assessment of Building	Poor structural integrity of building, overhead hazards, slip, trip, and fall, sharp objects. Insect or vermin bites and attack	Walk into building only where the building is structurally sound. Do not walk across areas where the surface is obscured by debris. Note the presence of spider webs, droppings, nests, scratchings, or other signs of insect or animal activity. Stay clear of areas of noted activity. DO NOT CORNER RODENTS OR OTHER ANIMALS - NEVER BLOCK THEIR ESCAPE ROUTE! Clear spider webs before entering an area. Do not enter areas with heavy amounts of spider webs, animal droppings, or nests. Visually inspect entry area of the room or building before entering - including overhead areas.	

KLEINFELDER

Job Safety Analysis

Job Task		Asbestos Building Inspection	
Office location: Denver		Date:	
		Date Created: May 8, 2007	
		Revision Date:	
Group	Environmental	Category	Building Investigation
	Biological hazards (virus, contagions)		Note the presence of droppings, dirty or soil clothes, needles, illicit drug use. Wear steel-toed boots and do not walk upon questionable items. Do not walk upon soft items, as they may be covering unseen hazards. Wear appropriate gloves for the work conducted. Wash possibly affected body areas with a disinfecting wipe upon exiting the building and before entering the vehicle. Wear respirator if appropriate.
5. Working with Hand Tools	Misuse of hand tools could result in slips, trips, falls, abrasions, eye injuries and other common injuries.		Ensure proper training has been conducted prior to using a piece of equipment. Ensure proper inspection of said equipment prior to use. Mark all faulty equipment with red tag and remove from service.
	Hand abrasion, lacerations		Wear gloves appropriate to task - leather gloves for general tasks, nitrile gloves when handling contaminated materials, and Kevlar gloves when handling sharp/jagged objects.
6. Working in a confined space	Toxic, flammable, oxygen-deficient atmospheres; engulfment, entrapment, other general hazards associated with confined spaces.		Refer to Confined Space JSA.
7. Working with ladders	slips, trips, and falls		Ensure proper training has been conducted prior to using a ladder. Ensure proper inspection of ladder prior to use. Mark all faulty ladders with red tag and remove from service. Place the ladder according to manufacturer's specification prior to climbing the ladder. Ensure three-point contact at all times. Do not stand on the top rung.
8. Collecting asbestos samples	exposure to asbestos		Wet the sampling area prior to sample collection.