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June 30, 2011
File: 117801.01

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: Alternatives Feasibility Analysis
Bob Rudd Community Center
150 North Highway 160
Pahrump, Nevada 89060**

Dear Mr. Friedman:

Kleinfelder is pleased to present the enclosed Alternatives Feasibility Analysis for the Bob Rudd Community Center in Pahrump, Nevada. The analysis was performed by BEC Environmental, Inc., a Kleinfelder subcontractor, with input and oversight from Kleinfelder. This work was performed under the existing contract between Kleinfelder and the Nevada Division of Environmental Protection (NDEP) (Contract No. DEP 10-008) and in general accordance with our revised proposal dated March 14, 2011 and approved by NDEP in a letter dated April 22, 2011.

The scope of the revised proposal included performing a Phase I Environmental Site Assessment (ESA), an asbestos survey, a lead-based paint survey and cost/benefit analysis at the Bob Rudd Community Center (Site), located at 150 North Highway 160 in Pahrump, Nevada. The Phase I ESA, asbestos survey and lead-based paint survey are provided under separate cover.

The purpose of the cost/benefit analysis was to evaluate the options for reopening the Bob Rudd Community Center. The cost/benefit analysis was scoped to evaluate two alternatives: 1) perform hazardous material assessment/abatement, energy efficiency retrofitting and other mechanical

upgrades to the existing structure, and 2) demolition of the existing structure and construction of a new, energy efficient facility. As a result of limited readily available costs, particularly the energy efficiency retrofits associated with Alternative 2, and the need to assess community need in the evaluation of the alternatives; the enclosed Alternatives Feasibility Analysis included the evaluation of four alternatives: 1) remediation of environmental hazards, 2) remediation of environmental hazards and completion of energy efficiency retrofits, 3) demolition and reconstruction of the community center only and 4) demolition and reconstruction of the community center and associated portions of the surrounding site.

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LIMITATIONS

Kleinfelder performed its services in a manner consistent with the standards of care and skill ordinarily exercised by members of the profession practicing under similar conditions in the geographic vicinity and at the time the services will be performed. No warranty or guarantee, expressed or implied, is part of the services offered by this proposal.

CLOSING

We appreciate the opportunity to be of service to the NDEP on this project. Please contact Mr. Joshua Fortmann at (775) 689-7800 if you have any questions, or require any additional information regarding this scope of work.

Sincerely,

KLEINFELDER WEST, INC.



FOR Phil Tousignant, CEM
Environmental Scientist



Joshua P. Fortmann, CEM
Project Manager

Enclosure: Alternatives Feasibility Analysis for the Bob Ruud Community Center

bec environmental, inc.

Environmental Consulting

**ALTERNATIVES FEASIBILITY ANALYSIS FOR THE
BOB RUUD COMMUNITY CENTER**

**150 North Highway 160
Pahrump, Nevada 89048**

PREPARED FOR:

Kleinfelder West, Inc.
4835 Longley Lane
Reno, NV 89502

PREPARED BY:

BEC Environmental, Inc.
7660 West Sahara Avenue, Suite 150
Las Vegas, Nevada 89117

June 30, 2011
Project No. 031.11.001

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1. Purpose

The purpose of this Alternatives Feasibility Analysis is to summarize existing studies and reports related to environmental concerns at the Bob Ruud Community Center and available cost information in order to provide a tool for decision makers to analyze options for contaminant abatement at the existing building or demolition and new construction.

2. Background

The Bob Ruud Community Center (Community Center) is owned and operated by the Town of Pahrump, and is located at 150 N. Highway 160, Pahrump, Nye County, Nevada. The majority of the building is block wall construction, which was originally constructed in the 1960's; this portion of the building includes the main meeting hall with stage, kitchen, and restrooms. Rooms A and B, on the west side of the building, were constructed as an addition at a later, unknown date. The facility consists of approximately 6,250 square feet, and is located on a 34.27 acre parcel which also includes Petrack Park, the McCullough rodeo arena, a public swimming pool, Pahrump Valley Fire and Rescue facilities, and the Town of Pahrump office. A diagram of the facility's current layout is provided in the Phase I Environmental Site Assessment and Limited Asbestos and Lead Based Paint Survey conducted by Kleinfelder West, Inc. (included as Appendix A).

Following a heavy rain event in late December 2010, a portion of the roof between rooms A and B partially collapsed due to water damage. Suspected mold contamination was uncovered in the location of the damage, and subsequent fungal assessment confirmed contamination. The Community Center has remained closed to the public since the partial roof collapse.

The Community Center has served a vital role as a venue for both public and private events in Pahrump since its construction. The Community Center served as the venue for Nye County Board of County Commissioners' (BoCC) meetings in Pahrump until July 2010. The facility also served as the venue for nearly all Pahrump Town Board meetings until its closure. The Community Center served as the primary community meeting space for Pahrump, and its closure, coupled with a lack of viable local alternatives, has made it difficult for many groups to find a regular meeting space.

The Town of Pahrump's rapid growth has strained the existing space at the Community Center. Constructed in the 1960s, when Nye County's total population was less than 5,500 (1970 US Census), the Community Center now serves Pahrump's current population of 36,441 (2010 US Census). With the Nevada State Demographer projecting continued growth in Nye County through 2030, the Town of Pahrump may want to evaluate the need for a larger Community Center as part of their decision on whether to renovate or demolish and reconstruct the facility.

3. Methodology

BEC Environmental, Inc. (BEC) prepared the Alternatives Feasibility Analysis through the completion of three main tasks: 1) Renovation and New Construction Cost Estimates; 2) Review of Previous Environmental Reports; and 3) Report Preparation. The first task, Renovation and New Construction Cost Estimates, included coordination with local abatement and construction contractors to collect cost estimates for 1) hazardous material assessment/abatement, energy efficiency retrofitting and other mechanical upgrades; and 2) demolition of the existing structure and construction of a new, energy efficient facility. The second task, Review of Previous Environmental Reports, included a desktop review of all readily available environmental assessments, energy audits and health and safety documents previously prepared for the Bob Ruud Community Center. This report comprises the third and final task of the Alternatives Feasibility Analysis process.

4. Assumptions and Constraints

While this report provides an overview of potential costs and benefits associated with a variety of options for the Community Center, it is limited by the availability of information at the time of the analysis. The conclusions and recommendations regarding the alternatives examined in this report are based on the scope of work and available data.

5. Previous Studies and Findings

BEC conducted a desktop review of readily available studies previously conducted for the Community Center. Studies reviewed for this report included: 1) Airborne, Surface, and Visual Fungal Assessment; 2) Asbestos Survey Report; 3) Energy Audit; and 4) Phase I Environmental Site Assessment. The findings from each report are outlined below.

5.1. Airborne, Surface, and Visual Fungal Assessment (Mold Report)

An airborne, surface, and visual fungal assessment was performed by Converse Consultants in January 2011 (Appendix B), which included a visual assessment of the water-damaged area of the Community Center, air sampling in four areas within the building, and collection and analysis of a surface sample from a discolored area on one of the wooden studs in the restroom hall area between rooms A and B.

Based on their assessment, Converse Consultants found:

- The fungal air sampling indicated fungal contamination was present in the contained areas of the building (rooms A & B and restroom area/hall between rooms A & B).
- The tape lift sample indicated the presence of surface fungal growth.

Converse Consultants provided recommendations which included repairing or replacing the roof prior to mold abatement, further investigation to more accurately determine the extent of the fungal contamination, and removal and/or cleaning of the affected materials in the building.

5.2. Asbestos Survey Report

A limited asbestos survey was conducted by Converse Consultants in January 2011 (included as Appendix C), and included the collection and analysis of nine bulk samples from the Community Center. None of the samples collected at that time were determined to contain asbestos.

5.3. Energy Audit

An energy audit was performed by Valley Electric Association (VEA) in January 2011, and included visual inspection of the Community Center, with the exception of Rooms A and B, as they were closed due to the presence of mold. VEA provided the following observations and recommendations for energy efficiency retrofits:

- Increase attic insulation to minimum of R-38 from the existing R-19. Feasibility of this recommendation may be limited due to the facility's flat roof;
- Install insulation in the crawl space in the portion of the building with a raised floor;
- Replace existing single pane windows with energy efficient windows;
- Wall insulation is non-existent in the block part of the building. Retrofit insulation of the block walls could be accomplished by either adding rigid foam on the exterior then

refinishing the outside of the building or by framing the inside of the building, then installing insulation;

- Weather-strip and caulk (windows, doors and any penetrations);
- Heating ventilation and air-conditioning (HVAC) air filters were found to be dirty and need to be replaced or cleaned monthly;
- The HVAC system is outdated (confirmed by Town staff). Older units are not as energy efficient and should be replaced for maximum efficiency;
- Replace appliances with Energy Star appliances;
- Seal all ductwork;
- Correct the poor drainage on the flat roof;
- The flat roof membrane is deteriorating and is in need of repair; and
- Replace existing inefficient water heater with more efficient water heater and a timer.

In addition to the high priority recommendations provided above, a detailed list of additional recommendations is included in the energy audit (included as Appendix D). Areas covered include lighting systems, lighting controls, lighting maintenance, HVAC, building envelope retrofits, other equipment, and load management strategies.

5.4. Phase I Environmental Site Assessment (ESA) and Limited Asbestos and Lead Based Paint Survey

A Phase I ESA and Limited Asbestos and Lead Based Paint Survey (Appendix A) was completed by Kleinfelder in June 2011. The assessment was prepared using the American Society for Testing and Materials (ASTM), Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E1527-05. The ESA included a review of historical documentation for the Community Center and nearby properties, as well as interviews with Town of Pahrump staff and a site inspection.

The assessment revealed no evidence of RECs in connection with the Community Center property, but did identify two potential environmental concerns:

- Poor best management practices were observed in the supply storage closet. Spilled floor seal/resin type material was observed. Kleinfelder recommended leaking containers be disposed of appropriately.
- Surface soil staining was observed in the area where one of the two septic/leach fields is reportedly located.

The limited asbestos sampling revealed the presence of asbestos in the exterior roofing system, 100 square feet of beige resilient floor tile and yellow mastic, and 150 square feet of grey resilient floor tile and brown mastic. Kleinfelder concluded, since all asbestos containing materials (ACMs) appeared to be in good condition, they did not pose a hazard (at the time of the report) and need not be removed. The report provided recommendations for proper disposal and handling in the case of demolition.

The lead-based paint survey did not reveal the presence of lead-based paint, but one sample collected from the roof cap flashing contained a low lead concentration. The sample was not considered to be lead-based paint, but a lead-containing substance. Kleinfelder recommended

that should removal of the material occur, the work should be conducted in accordance with Occupational Safety and Health Administration (OSHA) regulations.

6. Description of Alternatives

BEC evaluated four primary alternatives for the Community Center: 1) Remediation of environmental hazards; 2) Remediation of environmental hazards and completion of energy efficiency retrofits; 3) Demolition and reconstruction of the facility; 4) Demolition and reconstruction of the facility and associated portions of the surrounding site. Analysis of Alternatives 3 and 4 included an examination of multiple potential facility construction types.

6.1. Alternative 1 – Remediation of Environmental Hazards

Alternative 1 includes only the remediation of environmental hazards necessary to bring the Community Center to a usable state from an environmental perspective. The remediation alternative includes abatement of identified mold contamination in a portion of the building as well as abatement of ACMs associated with the roofing material. Although the roofing ACM was identified as being currently in good condition and abatement is not required at this time (per the limited asbestos survey), the recommendations presented in the Airborne, Surface, and Visual Fungal Assessment include repairing or replacing the roof prior to mold abatement. Removal or repair of the roof would require abatement of ACM in the roof.

6.2. Alternative 2 – Remediation of Environmental Hazards and Completion of Energy Efficiency Retrofits

Alternative 2 includes the abatement of environmental hazards as listed in Alternative 1 and retrofitting existing building components to improve energy efficiency, as described in the VEA energy audit.

6.3. Alternative 3 – Demolition and Reconstruction of the Community Center Only

Alternative 3 includes demolition of the existing Community Center and construction of a new facility on the same site. Abatement of mold and ACM would be necessary prior to demolition. Traditional site-built, modular, or steel frame construction could be utilized.

Alternative 3A – Site-Built

A traditional site-built facility would be constructed entirely on-site consisting of wood frame, metal frame or masonry construction.

Alternative 3B – Modular

A modular building is constructed off-site, shipped in sections, and assembled and finished on-site.

Alternative 3C – Steel Frame

A steel frame building consists of a steel panel exterior attached to a pre-engineered steel frame manufactured off-site and assembled and erected on-site.

6.4. Alternative 4 – Demolition and Reconstruction of the Community Center and Associated Portions of the Surrounding Site

Alternative 4 includes demolition of the existing Community Center and construction of a new building on the same or nearly the same site as well as demolition and reconstruction of the

parking area and associated infrastructure of the surrounding portion of the site. Abatement of mold and ACM would be necessary prior to demolition. Options for reconstruction of a Community Center under this alternative would include traditional site-built, modular and steel frame, as outlined in Alternatives 3A through 3C.

7. Costs, Advantages, and Timeframes

7.1. Alternative 1 – Remediation of Environmental Hazards

The estimate for mold abatement was based on an estimate provided to the Town of Pahrump by the Belfor Group USA, based in Las Vegas, Nevada. The anticipated timeframe for this alternative is up to six months. Estimated costs for mold abatement are presented in Table 1, below.

Table 1. Estimated Abatement Cost for Mold Contamination

Component	Abatement Cost
Room B	\$5,410.82
Hallway	\$1,612.90
Entry/Foyer	\$1,506.94
Room A	\$3,462.48
General (mobilization, etc.)	\$2,756.34
Materials tax	\$48.76
Total:	\$14,798.24

The estimate for ACM abatement was based on a rough estimate provided to BEC by Kleinfelder. It is worth noting the cost for abatement oversight includes oversight of removal of all ACMs, and it is assumed that the flooring and mastic removal would be concurrent with roof material removal. If only the roof ACMs were removed, the oversight cost would not change, but should the flooring then be removed at a later time, an additional oversight cost would likely be necessary at that time.

Additionally, Converse Consultants recommended repair or replacement of the roof prior to mold abatement in order to eliminate the cause of water infiltration in the mold contaminated area. A repair estimate of \$43,827 was provided to Belfor Group (and subsequently to the Town of Pahrump) by King Roofing. The estimated costs of ACM abatement are presented in Table 2, below.

Table 2. Estimated Abatement Cost for ACMs

Component	Area (SF)	Abatement Cost/SF	Abatement Cost
Exterior Roofing	7000	\$2.00	\$14,000.00
Beige floor tile and mastic	100	\$4.00	\$400.00
Grey floor tile and mastic	150	\$4.00	\$600.00
Abatement oversight			\$10,000.00
Total:			\$25,000.00

A summary of abatement and repair costs is presented in Table 3, below.

Table 3. Summary of Abatement and Repair Costs

Component	Cost
Roof repair	\$43,827.00
Mold abatement	\$14,798.24
ACM abatement	\$25,000.00
Total:	\$83,625.24

Estimated costs for mold and ACM abatement do not include the cost of materials or labor to reconstruct or repair the area abated other than the roof (e.g. ceiling tile, wall board, and flooring replacement).

Potential advantages of Alternative 1 include the relatively low cost and shortest duration for abatement and repair activities. The selection of Alternative 1 would result in the lowest immediate financial impact to the Town of Pahrump and the shortest timeframe for reopening the Community Center for public use, assuming no further contamination is uncovered during abatement.

7.2. Alternative 2 – Remediation of Environmental Hazards and Completion of Energy Efficiency Retrofits

Costs associated with Alternative 2 include all those costs associated with Alternative 1 and additional costs incurred for energy performance evaluation and retrofits, which cannot be determined with the information currently available. Should a detailed analysis of the costs and benefits of energy efficiency retrofits be desired, an energy performance contractor could be consulted for analysis of the Community Center. The anticipated timeframe for this alternative is up to six months.

In the absence of available data, recent energy usage and cost information was utilized to extrapolate the potential savings due to energy efficiency retrofits at energy reduction rates of 0%, 10%, 20% and 30%. The annual energy use and associated cost for the Community Center for 2010 is shown in Table 4, below.

Table 4. 2010 Annual Energy Use and Associated Cost for the Community Center

Account		Total Annual, 2010
0004	Use (kWh)	17,472
	Cost	\$2,234.93
0005	Use (kWh)	21,842
	Cost	\$2,703.86
0008	Use (kWh)	31,966
	Cost	\$3,790.28
Total	Use (kWh)	71,280
	Cost	\$8,729.07

There are electrical connections external to the building on all three of the meters (accounts) for the Community Center, including outdoor outlets used for special events and basketball court lighting near the building.

A summary of projected annual energy costs for various levels of energy efficiency improvement is presented in Table 5, below.

Table 5. Potential Annual Energy Savings

Energy Use Reduction	Annual Energy Use (kWh)	Annual Energy Cost	Annual Savings
0%	71,280	\$8,729.07	\$0.00
10%	64,152	\$7,964.15	\$764.92
20%	57,024	\$7,199.25	\$1,529.82
30%	49,896	\$6,434.34	\$2,294.73

Calculations were made using VEA energy rates as of the time of this report of \$30.00 per month for basic monthly service for each account, and \$0.10731 per kWh.

Potential advantages of Alternative 2 include the relatively low cost and short duration for abatement, repair, and retrofit activities. The selection of Alternative 2 would result in lower operations and maintenance costs for the Community Center as well as ongoing energy savings for the Town of Pahrump.

7.3. Alternative 3 – Demolition and Reconstruction of the Community Center Only

Costs associated with Alternative 3 vary, based on the method of construction chosen and the size of the new building (among other factors). Table 6, below, presents a summary of estimated costs and construction duration associated with the three types of facilities identified under Alternative 3, for various size buildings.

Table 6. Estimated Construction Costs for a New Facility

Facility Type	Cost/SF	6,250 SF	8,000 SF	10,000 SF	12,000 SF	Construction Duration
3A - Site-Built	\$200	\$1,250,000	\$1,600,000	\$2,000,000	\$2,400,000	12 months
3B - Modular	\$130	\$812,500	\$1,040,000	\$1,300,000	\$1,560,000	6 months
3C - Steel Frame	\$241	\$1,506,200	\$1,928,000	\$2,410,000	\$2,892,000	12 months

The estimated per square foot cost of the site-built and steel frame buildings are based on findings presented to the BoCC on July 7, 2009, and prepared by Charles Abbott and Associates (included as Appendix F). The per square foot cost range for a site-built building was identified as \$98 to \$250, with approximately \$200 per square foot identified as the likely value (rather than the lower per square foot value). The estimated per square foot cost for a modular building was based on the actual building cost for the 11,000 square foot Nye County Administration Building in Pahrump, completed in 2010. The estimated per square foot cost range for a steel frame building was \$156 to \$325. The mean value of \$241 per square foot was used in this analysis.

Construction time for a site-built facility is typically the longest in duration, but retains value best over time due to lower operation and maintenance costs and long facility life compared to modular or steel frame facilities. Site-built construction is typically the best insulated and has better energy efficiency than other options. The construction time for a modular building is typically the shortest in duration, but typically has higher operation and maintenance costs, shorter facility life, and does not retain value over time as well as a site-built facility. Modular construction is typically not as energy efficient as a site-built facility. The construction time for a steel frame facility is typically close to that of site-built construction, but typically is not as well insulated or energy efficient.

Alternative 3 would include costs in addition to those above, such as a soils study, site survey, limited site engineering, and architectural plans. Estimates for these costs are summarized in Table 7, below.

Table 7. Estimated Costs in Addition to Facility Construction Costs

Component	Reference	Cost	Duration
Site Survey	15,000 SF +/- site, estimate	\$1,600	2 weeks
Site Engineering	15,000 Ac +/- site, estimate	\$10,000	1-2 months
Architecture	11,000 SF	\$11,000	1 month
Soils Testing	Building only	\$5,000	1 month
Total:		\$27,600	

The site survey cost assumes eight hours of a two-man survey crew at \$200 per hour. The estimated cost for architectural design is based on the site engineering and architectural costs for the Nye County Administration building in Pahrump, approved by the BoCC on June 2, 2009. Though the architectural costs would likely vary based on the size of the building, the variation is not directly proportional to the square footage of the building, so the cost for an 11,000 square foot building is assumed for all building sizes presented. It should be noted the duration listed is for initial component completion only, and it is likely the site engineering and architectural plans would require revision subsequent to plan review. Mold and ACM abatement would be necessary with this alternative, but costs are not included as estimates used for Alternatives 1 and 2 assume the facility will remain intact. The cost for abatement prior to demolition may therefore be slightly less than those presented for Alternatives 1 and 2. Costs that will likely be included with Alternatives 3A through 3C, but were not readily available and are not quantified here include, but are not limited to:

- Demolition, including abatement;
- Traffic and drainage studies and mitigation fees, if applicable;

- Site grading and earthwork (including construction staking);
- Existing septic tank removal;
- Sewer service connection and capacity fees;
- Water service connection fees;
- Completion of concrete flatwork immediately surrounding the building;
- Applications, plan review, building permit, inspections, or impact fees;
- Building control or audio/visual components, such as fire alarms and public address systems; and
- Connection fees for electric, phone, or data services.

Potential advantages associated with Alternatives 3A through 3C may include improved and modernized indoor facilities (kitchen, restrooms, meeting rooms, stage, and storage areas), improved energy efficiency, improved technological integration, improved accessibility for persons with disabilities, enhanced property value, and improved community image and civic pride.

7.4. Alternative 4 – Demolition and Reconstruction of the Community Center and Associated Portions of the Surrounding Site

Costs and assumptions associated with the construction of the Community Center for Alternatives 4A through 4C mirror those for Alternative 3, as shown in Table 6, above.

Alternatives 4A through 4C would include costs in addition to those for the facility, such as a soils study, site survey, site engineering, and architectural plans for an expanded portion of the site. These additional costs are summarized in Table 8, below.

Table 8. Estimated Costs for Alternative 4 (in addition to building costs presented in Table 6)

Component	Reference	Cost	Duration
Site Survey	2.7 Ac +/- site, estimate	\$3,200	2 weeks
Site Engineering	2.7 Ac +/- site	\$30,000	2 months
Architecture	11,000 SF	\$11,000	1 month
Soils Testing	Estimate, bldg and parking	\$10,000	1 month
Total:		\$54,200	

The estimated cost for a site survey assumes 16 hours of a two-man survey crew at \$200 per hour. The estimated costs of site engineering and building architectural design are based on the site engineering and architectural costs for the Nye County Administration building in Pahrump, which was approved by the BoCC on June 2, 2009. Though the architectural costs would likely vary based on the size of the building, the variation is not directly proportional to the square footage of the building, so the cost for an 11,000 square foot building is assumed for all building sizes presented. It should be noted the duration listed is for initial component completion only, and it is likely the site engineering and architectural plans would require revision subsequent to plan review. Mold and ACM abatement would be necessary with this alternative, but costs are not included as estimates used for Alternatives 1 and 2 assume the facility will remain intact. The cost for abatement prior to demolition may therefore be slightly less than those presented for Alternatives 1 and 2. Costs that will likely be included with Alternatives 4A through 4C but

were not readily available and are not quantified here include all those listed for Alternative 3, and:

- Site construction (earthwork, paving, curbing, walkways, lighting, landscaping) and staking;
- Off-site engineering, if applicable; and
- Nevada Department of Transportation (NDOT) review fees, if applicable.

Potential advantages associated with Alternatives 4A through 4C may include those benefits identified for Alternatives 3A through 3C as well as the opportunity for installation of additional landscaping/beautification elements, improved site drainage, and improved site traffic circulation.

8. Conclusions and Recommendations

Evaluation Criteria

To further assess the feasibility of alternatives, community needs and costs were also evaluated as part of this analysis. Factors influencing community needs include current and projected population size, facility purpose and ability to meet the intended purpose, timeframe for implementation, projected lifespan of the facility and perceived risk/suspicion of contamination. Costs were evaluated based on readily obtainable information. Although this assessment does not account for all costs associated with the proposed alternatives, Alternatives 1 and 2 constitute a probable cost which is an order of magnitude less than probable costs for Alternatives 3 and 4. Timeframe for implementation was reviewed to assess how long the Town of Pahrump will remain without a community center. In developing recommendations, the Town of Pahrump's current and projected needs were weighed most heavily. BEC does not recommend one alternative over another, rather this report is concerned with providing the Town's decision makers with the relative costs and potential advantages of several alternatives meeting the Town's stated needs so an informed decision can be made.

Community Needs

As the primary public and community meeting space for the Town of Pahrump, the Community Center must serve the needs of the population. Due to the limited space offered by the Community Center relevant to the Town of Pahrump's current population and projected growth, the existing facility may need to be significantly expanded or a new facility constructed within the next 10 years to meet the community's needs. Additional considerations for the Town are whether the existing facility meets fire safety and Americans with Disabilities Act (ADA) requirements. Also, the perception of contamination and perceived risks of impacts from contamination even after remediation may limit the community's use of the facility.

The Town of Pahrump and community members have not been able to access their primary meeting facility for six months, and the proposed alternatives may require the facility remain closed for up to an estimated 24 additional months. Alternatives 1 and 2 will require the shortest timeframe for implementation (expected to range from one to six months). Alternatives 3 and 4 are anticipated to be completed within 24 months. The timeframes for all four alternatives may be impacted by the contracting process, Town Board reviews and approvals, and planning and permitting requirements.

Costs

The costs associated with each alternative are incomplete and will require the Town to obtain direct quotes for the measures proposed. At a minimum the cost of remediating the Bob Ruud Community Center, as proposed in Alternative 1, will be \$83,625.24. Alternative 2 will incur the costs associated with Alternative 1 and additional retrofitting costs. Existing buildings that undergo retrofits usually achieve up to 30% improved efficiency. If the Town were to implement \$10,000 in retrofits and

achieved 20% improved efficiency, it would require more than six years of energy savings to recover those costs; however, the percentage of energy use reduction based on a \$10,000 investment is an estimate and does not take into account the lifespan of the retrofits. The costs associated with new construction proposed in Alternatives 3 and 4 require significantly more of an investment ranging from \$812,500 to \$2,892,000 for construction costs alone.

Respectfully submitted,



Rachel Kryder
BEC Environmental, Inc.

Appendix A

Phase I Environmental Site Assessment Limited Asbestos and Lead Based Paint Surveys



**PHASE I ENVIRONMENTAL SITE ASSESSMENT
AND LIMITED ASBESTOS AND LEAD-BASED
PAINT SURVEYS
BOB RUUD COMMUNITY CENTER
150 NORTH HIGHWAY 160
PAHRUMP, NEVADA**

PROJECT NO. 117801.01

June 29, 2011

Only the Client or its designated representatives may use this document and only for the specific project for which this report was prepared.



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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: Phase I Environmental Site Assessment and
Limited Asbestos and Lead-Based Paint Surveys
Bob Ruud Community Center
150 North Highway 160
Pahrump, Nye County, Nevada**

Dear Mr. Friedman:

Enclosed are two hard copies and one electronic copy on compact disc (CD) of the Phase I Environmental Site Assessment (ESA) for the above-referenced property. The ESA was conducted under an approved Brownfields Grant. In addition to the submittals provided to NDEP, we are providing two copies to the Town of Pahrump, the applicant of this funded grant.

An executive summary is provided; however, we recommend that the report be read in its entirety for a comprehensive understanding of the items contained therein.

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 us at 775-689-7800.

Respectfully submitted,

KLEINFELDER

Joshua P. Fortmann, CEM
Project Manager

JPF/PJT/js
Enclosures

Copies with attachments to:

Town of Pahrump, Attention Bill Kohbarger

A report prepared for:

Nevada Division of Environmental Protection
Bureau of Corrective Actions
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**Subject: Phase I Environmental Site Assessment and
Limited Asbestos and Lead-Based Paint Surveys
Bob Ruud Community Center
150 North Highway 160
Pahrump, Nevada**

Kleinfelder Project No.: 117801.01

Prepared by:

*I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances.**



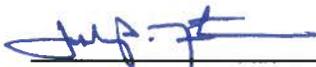
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June 29, 2011

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1 EXECUTIVE SUMMARY

An application was submitted by the Town of Pahrump, to the Nevada Division of Environmental Protection's (NDEP) Brownfields Program for Brownfields assessment funding. The grant application was submitted for conducting an assessment of the Bob Ruud Community Center. NDEP approved the application, and requested that a scope of services for conducting a Phase I Environmental Site Assessment (Phase I ESA) and limited asbestos and lead-based paint surveys be submitted by Kleinfelder. The scope was submitted on March 14, 2011 and approved by the NDEP on April 22, 2011, under NDEP Contract 10-008.

A Phase I Environmental Site Assessment (Phase I ESA) was performed for NDEP (Client) for property located at 150 North Highway 160, in the Town of Pahrump, located in Nye County, Nevada (subject property, Plate 1). This report was prepared using the American Society for Testing and Materials (ASTM), Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E1527-05.

The subject property consists of a concrete masonry block and wooden framed single story building, addressed as 150 North Highway 160, Pahrump, Nevada, in Nye County Nevada. The subject property is referred to as the Bob Ruud Community Center.

An historical profile of the subject property was developed using information obtained during our review of regulatory databases and one or more of the following historical sources: aerial photographs, topographic maps, fire insurance maps, street directories, and previous investigations.

The subject property was not listed in any of the regulatory databases searched.

There were no *recognized environmental conditions* (REC, as defined in Section 2.1) noted for the subject property during the preparation of this Phase I ESA. However, the following conditions of potential environmental concern were noted:

- Poor best management practices were observed in the supply storage closet. Spilled floor seal/resin type material was observed. Kleinfelder recommends that spills be cleaned and leaking containers be appropriately disposed.
- Surface stained soil was observed in the area where one of the two septic/leach fields areas is reportedly located. The Town of Pahrump should verify whether the surface staining is above the septic/leach field and if so, evaluate if the septic/leach field is functional.

There were no *historic recognized environmental conditions* noted for the subject property during the preparation of this Phase I ESA.

Asbestos

The Limited Asbestos Survey (LAS) revealed the presence of approximately 7,000 square feet of exterior roofing system asbestos-containing material (ACM), 100 square feet of beige resilient floor tile and yellow mastic ACM, 150 square feet of grey resilient floor tile and brown mastic ACM. At the time of this survey, all ACM appeared to be in good condition; and therefore does not currently pose a hazard and does need not be removed. However, if renovation or demolition is planned all friable ACM's must be removed by a licensed asbestos abatement contractor prior to renovation or demolition activities. Non-friable ACM's that may become friable during demolition activities must also be removed prior to demolition. It is recommended that abatement plans and specifications be prepared by an Asbestos Hazards Emergency Response Act (AHERA) accredited project designer who is independent of the abatement contractor. While non-friable ACM's may be removed by other than a licensed asbestos abatement contractor, it is recommended that all ACM's be removed by a licensed contractor prior to demolition activities. Non-friable ACM's should be handled, transported and disposed of in such a way as to prevent the material from becoming friable and potentially releasing asbestos fibers.

Lead-Based Paint

The lead-based paint (LBP) survey did not reveal the presence of LBP, but one paint chip sample collected from roof cap flashing contained a low lead concentration (89 ppm) identifying the presence of low concentration lead-containing paint. This paint is

not considered to be LBP, and the low concentration is unlikely to cause exposure concerns to site workers. However, Occupational Safety and Health Administration (OSHA) considers it to be lead containing and therefore, removal of the deteriorated paint and/or the cap flashing should be conducted in accordance with OSHA regulations.

A full evaluation of this site including any deviations, historical environmental conditions, and *de minimis* findings are discussed in Chapter 8 of this report. This report is subject to the limitations in Section 2.5.

2 INTRODUCTION

The following report is a summary of work performed using the guidelines set forth in the ASTM Standard E-1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM Standard). This report generally conforms to the ASTM Standard's suggested table of contents. To assist in better reading and understanding of the report, Kleinfelder made minor format modifications to the ASTM Standard's suggested table of contents.

2.1. PURPOSE

The purpose of this Phase I ESA is to identify, to the extent feasible pursuant to the terms of our NDEP Contract 10-008, and limitations discussed in this report, RECs and other environmental issues related to the subject property. As defined in the ASTM Standard, a REC is:

The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions.

The ASTM standard also requires the identification of Historical RECs (HRECs). As defined in the ASTM Standard, subsection 3.2.39, a HREC is:

An environmental condition which in the past would have been considered a REC, but which may or may not be considered a REC currently. The final decision rests with the EP and will be influenced by the current impact of the

HREC on the property. If a past release of any hazardous substance or petroleum products has occurred in connection with the property and has been remediated, with such remediation accepted by the responsible regulatory agency (for example, as evidence by the issuance of a no further action letter or equivalent), this condition shall be considered a HREC and included in the findings section of the Phase 1 ESA report... (EP opinion statement)... If this HREC is determined to be a REC at the time the Phase 1 ESA is conducted, the condition shall be identified as such and listed in the conclusions section of the report."

This report describes Kleinfelder's assessment methodology and documents our assessment findings, subject to the limitations presented in Section 2.5 of this report.

2.2. DETAILED SCOPE-OF-SERVICES

The following sections describe Kleinfelder's work scope:

- Section 2, **Introduction**, includes a discussion of the purpose/reason for performing the Phase I ESA, additional services requested by the Client (i.e., an evaluation of business environmental risk factors associated with the subject property), significant assumptions (i.e., property boundaries if not marked in the field), limitations, exceptions, and special terms and conditions (i.e., contractual), and user reliance parameters.
- Section 3, **Site Description**, is a compilation of information concerning the subject property location, legal description (if provided), current and proposed use of the subject property, a description of structures and improvements on site at the time of Kleinfelder's assessment, and adjoining property use.
- Section 4, **Records Review**, is a compilation of Kleinfelder's review of several databases available from Federal, State, and local regulatory agencies regarding hazardous substance use, storage, or disposal at the subject property; and for off-site facilities within the search distance specified in the ASTM Standard. Records provided by the Client are summarized and copies of relevant documents are included in the appendices of this report. Physical setting sources (including topography, soil and groundwater conditions) and typical Client-provided information (i.e., title records, environmental liens, specialized knowledge, valuation reduction for environmental issues, and owner, property manager, and occupant information) are also summarized in this section. Other interviews with people knowledgeable about the subject property (including the client) are included in Section 7.
- Section 5, **History of the Site**, summarizes the history of the subject property and adjoining properties. This subject property history is based on various sources which may include: a review of historical aerial photographs, Sanborn Fire Insurance Maps, city or suburban directories, historical topographic maps, building department records, and results of previous site assessments.

- Section 6, **Site Reconnaissance**, describes Kleinfelder's observations during the site reconnaissance. The methodology used and limiting conditions are described.
- Section 7, **Interviews**, is a summary of telephone and personal interviews conducted with "Key Site Managers" that may include the owner/manager of the facility, occupants/tenants, local government officials, and the Client. Additional interview sources may be contacted if "Key Site Managers" are not available prior to production of this report, and may include adjoining landowners and people with historical knowledge of the area.
- Section 8, **Evaluation**, is a presentation of our findings and opinions regarding the information in Sections 3 through 7, and presents our conclusions regarding the presence of RECs connected with the site, and recommendations if required by the Client.
- Section 9, **References**, is a summary of some of the resources used to compile this report.

Pertinent documentation regarding the subject property is included in appendices of this report.

2.3. ADDITIONAL SERVICES

The scope of work for this Phase I ESA included a LAS and a LBP survey. Other ASTM Standard non-scope considerations, such as radon, lead in drinking water, wetlands, regulatory compliance, cultural and historical resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high voltage power lines.

2.4. SIGNIFICANT ASSUMPTIONS

No significant assumptions were made regarding the subject property.

2.5. LIMITATIONS AND EXCEPTIONS

Phase I ESAs are non-comprehensive by nature and may not identify all environmental problems, and will not eliminate all risk. This report is a qualitative assessment. Kleinfelder offers a range of investigative and engineering services to suit the needs of our clients, including more quantitative investigations. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help the Client understand and better manage risks. Since such detailed services involve greater expense, we ask our clients to participate in identifying the level of service, which will provide them with an acceptable level of risk. Please contact the signatories of this report if you would like to discuss this issue of risk further.

Kleinfelder performed this Phase I ESA in general accordance with the guidelines set forth in the ASTM Standard, and the proposed scope subsequently approved by our Client. No warranty, either express or implied, is made. Environmental issues not specifically addressed in this report were beyond the scope of our services and not included in our evaluation.

During the LAS survey, no attempt was made move equipment, furnishings or to uncover or observe below-ground systems or equipment. Areas that were not considered safely accessible were not evaluated. There remains the possibility that additional ACMs (e.g., in underground asbestos-containing cement pipes and/or ACM-wrapped utility pipes), or other hazardous materials may be encountered during future building demolition and/or below grade excavation activities.

2.6. SPECIAL TERMS AND CONDITIONS

No special terms and conditions in addition to those discussed previously were agreed to either by the Client and Kleinfelder.

2.7. USER RELIANCE

This report may be used only by the NDEP, and the Town of Pahrump and only for the purposes stated within a reasonable time from its issuance, *but in no event later than 1 year from the date of the report*. Land or facility use, on- and off-site conditions, regulations, or other factors may change over time, and additional work may be required with the passage of time. Since site activities and regulations beyond our control could change at any time after the completion of this report, our observations, findings, and opinions can be considered valid only as of the date of the site visit. This report should not be relied upon after 180 days from the date of its issuance (ASTM Standard, Section 4.6). Any party other than the Client who wishes to use this report shall notify Kleinfelder of such intended use.

3 SITE DESCRIPTION

The site description is presented in this section and describes the condition of the subject property at the time of the Phase I ESA. The site location is shown on Plate 1. Tables 3-1 through 3-5 summarize the physical characteristics of the site and adjoining properties.

3.1. LOCATION AND LEGAL DESCRIPTION

The information presented in Table 3-1 describes the physical location and legal description of the subject property. This information was obtained from review of various maps (such as topographic maps and tax assessor maps), aerial photographs, public records at city and/or county offices, interviews, and/or information provided by the Client.

**TABLE 3-1
LOCATION AND LEGAL DESCRIPTION**

Parameter	Information/Comments
ADDRESS	150 North Highway 160, Pahrump, Nevada 89060
LOCATION	Town of Pahrump, Nye County, Nevada
SECTION, TOWNSHIP & RANGE	Section 10, Township 20 South, Range 53 East
ASSESSOR'S PARCEL NO.	035-121-15 (portion of)
LEGAL DESCRIPTION	T20S R53E S10 F#523204 P.2 34.27AC
ACREAGE	Approximately 0.16
ZONING/LAND USE	690 - Public Lands or Parks - Improved

3.2. CURRENT/PROPOSED USE OF THE PROPERTY

At the time of Kleinfelder's assessment the land use for the subject property was a fully developed, but vacant building, approximately 7,000 square feet in size. Current and proposed uses are described in Table 3-2.

**TABLE 3-2
CURRENT/PROPOSED USES**

Parameter	General Observations
CURRENT USE	Bob Ruud Community Center - not in use
PROPOSED USE	Renovated Community Center

3.3. DESCRIPTION OF STRUCTURES/IMPROVEMENTS

Structures and/or improvements observed on site at the time of Kleinfelder's site reconnaissance are described in Table 3-3.

**TABLE 3-3
STRUCTURES/IMPROVEMENTS**

Parameter	General Observations
STRUCTURES	Approximately 7,000 square foot, single story concrete masonry block and wood framed stucco building, with concrete foundation and built up roof, with septic system.
IMPROVEMENTS	Approximately 100 feet by 15 feet addition constructed on the north side of the structure in mid 1970's, with septic system.

3.4. CURRENT USES OF ADJOINING PROPERTIES

Kleinfelder performed a brief drive-by survey of the properties immediately adjoining to the subject property on June 1, 2011. A summary of the surrounding properties is presented in Table 3-4.

**TABLE 3-4
ADJOINING PROPERTIES**

Direction	Land Use Description
NORTH	Park area with baseball/softball park beyond
EAST	Parking and park restroom, with Highway 160 beyond.
SOUTH	Pahrump Valley Junction Shopping Center (separated from the subject property by Basin Avenue).
WEST	Basketball court, with playground, tennis courts and rodeo arena beyond

An aboveground storage tank (AST), supplying propane to the building, was observed located on the north side of the building. The propane AST was observed to be protected from vehicle contact by steel rail fencing and appeared to be in good condition.

A Rebel Oil fuel station, containing underground storage tanks (USTs) was observed located to the southeast of the subject property. The Rebel Oil fuel station, located at the corner of Basin Avenue and South Highway 160, is separated from the subject property by East Basin Avenue.

There were no other environmental conditions visible, from either the subject property boundary or public right-of-way view, on the adjoining properties at the time of Kleinfelder's site reconnaissance. Based on our observations at the time of our site visit, the adjoining properties do not appear likely to adversely affect the subject property, with the possible exception of the Rebel Oil fuel station. This facility is further discussed in Section 4.3 of this report.

4 RECORDS REVIEW

4.1. STANDARD ENVIRONMENTAL RECORD SOURCES

The purpose of the records review is to obtain and review records that would help to evaluate RECs of potential concern in connection with the subject property and bordering properties.

Federal, state and local regulatory agencies publish databases or "lists" of businesses and properties that handle hazardous materials or hazardous waste, or are the known location of a release of hazardous substances to soil and/or groundwater. These databases are available for review and/or purchase at the regulatory agencies, or the information may be obtained through a commercial database service. Kleinfelder contracted a commercial database service, TrackInfo Services of Montrose, California to perform the government database search for listings within the appropriate United States Environmental Protection Agency (USEPA) All Appropriate Inquiry (AAI) minimum search distance of the subject property. TrackInfo Services refer to their reports as the FirstSearch Environmental Report (FirstSearch). A description of the types of information contained in each of the databases reviewed and the agency responsible for compiling the data is also included in the FirstSearch Report. The FirstSearch database search results are presented in Appendix B, including the databases summarized in Table 4-1.

**TABLE 4-1
RECORDS REVIEW & SEARCH DISTANCE**

FEDERAL LIST	DISTANCE
National Priority List (NPL)	1 mile
Delisted NPL	½ mile
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)	½ mile
CERCLIS-No Further Remedial Action Planned (NFRAP)	½ mile
Resource Conservation Recovery Act (RCRA)-CORRACTS facilities	1 mile
RCRA-non CORRACTS TSD facilities	½ mile
RCRA generators	¼ mile
Institutional Control/Engineering Control registries	¼ mile
Emergency Response Notification System (ERNS)	Site
NPL-equivalent lists of hazardous waste sites (SHWS)	1 mile
CERCLIS-equivalent lists of hazardous waste sites	½ mile
Landfills or Solid Waste Listing	½ mile
Leaking Underground Storage Tank (LUST)	½ mile
Registered Underground Storage Tanks (UST)	¼ mile
Institutional Control/Engineering Control-equivalent registries	¼ mile
Voluntary Cleanup Sites (VCP)	½ mile
Brownfields	½ mile

FirstSearch utilizes a geographical information system to plot the locations of business and properties listed in the regulatory databases listed in Table 4-1. Kleinfelder reviews this information to help establish if the site, or nearby properties, have been included in the noted databases and lists. The FirstSearch report includes radius maps that show the locations of the listed properties with respect to the site, and a summary of pertinent information for these properties. For each listed site, the summaries include the name of the responsible party, the property address, the distance and direction from the subject property, as well as the databases and lists on which the listed property appears. The dates that the databases were updated are also included in the FirstSearch report.

4.2. RESULTS OF DATABASE SEARCH

The following sections contain information on the results of FirstSearch's record search. Listed search distances are those specified in the ASTM Standard. The subject property was not listed in any of the databases.

4.2.1. Federal Lists

Within their respective ASTM recommended minimum search distances, there was one geocoded site found:

Home Depot USA, HD 2211, 301 North Highway 160 (RCRA small quantity generator) - Since this listing is located approximately 1,500 feet north (cross-gradient), it is unlikely to pose a risk to the subject property.

There were three nongeocoded sites (refer to Section 4.2.4) listed in the FirstSearch Report that are described as being within the town of Pahrump. All three listings are for EPA Brownfields sites. Although these were nongeocoded, addresses were listed in the FirstSearch Report. Based on the locations of these addresses, these sites are at least 3,000 feet away and do not pose a risk to the subject property.

4.2.2. State Lists

Within their respective ASTM recommended minimum search distances, there were four geocoded sites found:

Rebel Oil Co #78, 40 South Highway 160 (UST) – This site is located approximately 200 feet to the southeast of the subject property, across East Basin Avenue. The FirstSearch Report lists five gasoline USTs ranging from 4,000 to 12,000-gallons in size, and one 6,000-gallon diesel UST. They were installed in 1998 and consist of steel and fiberglass reinforced plastic (FRP) construction. Piping is constructed of FRP. This site is further discussed in Section 4.3.

Nye County Maintenance Yard, Highway 160 and Boothill Drive (LUST) –The FirstSearch Report indicates that a release of diesel to soil was reported in October

1998. The NDEP reportedly granted case closure in March 1999. Since regulatory closure has been granted and this site is located approximately ½ mile north (cross gradient), it is unlikely to pose a risk to the subject property.

Preferred Equities, 220 Highway 160 and 372 (LUST) - The FirstSearch Report lists that the type of event as a “No Impact, Clean Close” for this site. This site is located approximately ½ mile south of the subject property. The NDEP granted a clean closure in August 1996. This site therefore does not pose a risk to the subject property.

D and M Partners, 370 Gemini (State) – The FirstSearch Report lists a release of “other cyanide” to soil, reported in February 1995. The case was closed by the NDEP in 1996. Since regulatory closure has been granted and this site is located approximately 0.75 miles northwest (crossgradient or downgradient), it is unlikely to pose a risk to the subject property.

There were five nongeocoded sites (refer to Section 4.2.4) listed in the FirstSearch Report. Addresses were listed for two of the sites, which are located several miles south of the subject property. The exact locations of the other three sites could not be determined. However, they are unlikely to be located in the immediate vicinity of the subject property, as the types of businesses/properties listed are not present in the vicinity of the subject. All cases are also listed as being closed, and are therefore not likely to pose a risk to the subject property.

4.2.3. Supplemental Federal, State, and Local Lists

In addition to the ASTM Standard database search, Kleinfelder requested that FirstSearch provide information for the following supplemental databases: State Wells, Releases, Coal Gasification, Fire Insurance Map Coverage, Dry Cleaners, and Meth Labs.

None of these supplemental databases had listings.

4.2.4. Orphan (nongeocoded) List

Sites not plotted by FirstSearch due to poor or inadequate address information are nongeocoded and are referred to as orphan sites. There were a total of eight orphan sites. The summary report was reviewed to evaluate if Kleinfelder could ascertain their location (based upon local and general knowledge, and selected file review requests) and if so, whether these sites are a REC to the subject property. As discussed in Sections 4.2.1 and 4.2.2, the locations for five of the sites were found and assessed to be too distant to affect the subject property. The remaining three sites are also not likely to be in the vicinity of the subject property, and all cases have been closed.

4.3. OTHER RECORDS REVIEWED/AGENCIES CONTACTED

Kleinfelder reviewed the NDEP online databases for active and closed release cases. The subject property was not listed in the databases, and no facilities not previously identified in the FirstSearch report were listed.

Kleinfelder obtained the following file from the NDEP for review:

UST# 7-000775, Rebel Oil #78, 40 S. Highway 160: Information reviewed in the file indicated that four USTs are currently used at this facility, which is located directly southeast of the subject property across East Basin Avenue. The USTs include two 12,000-gallon gasoline USTs, a 4,000/8,000 multi-compartment gasoline UST, and a 6,000/6,000-gallon multi-compartment UST containing gasoline and diesel. They were installed in November 1998, are double-walled, and constructed of steel and fiberglass. Inventory control, automatic tank gauging, and interstitial monitoring are used as leak detection methods, and spill/overflow protection measures are installed. Product piping is constructed of FRP, and automatic line leak detectors are used.

Several inspection records were included in the file. The initial compliance inspection, conducted in May 1999, found that six inches of product was present in one of the sumps and that the leak detection sensor in the sump had been raised. The sump was subsequently pumped and the sensor was lowered to its proper position. Other violations regarding product and/or water in turbine sumps were noted during inspections performed in 2001, 2003, and 2010. In each case, the leak detection sensors were either not installed properly or were raised above the product/water level.

Other violations have included inadequate installation of automatic line leak detectors and spill buckets, and inadequate record keeping. Based on information in the file, each violation was resolved after notification letters from the NDEP were sent, and the facility currently appears to be compliant with UST regulations.

No releases have been reported for this facility, but documentation showed that product was present in turbine sumps on several occasions since this fuel station opened in 1998. There is a possibility that at least some product escaped the sumps and was released to soil and/or groundwater. Since this facility is located approximately 200 feet crossgradient from the subject property, it may pose a moderate risk to the subject property.

4.4. PHYSICAL SETTING SOURCE(S)

Table 4-2 presents information about the physical setting of the site. This information was obtained from published maps.

**TABLE 4-2
PHYSICAL SETTING**

Data	Source	General Information
USGS TOPOGRAPHIC QUADRANGLE	Pahrump, Nevada Quadrangle, 7.5 Minute Series (Topographic), Provisional Edition 1984	The subject property is located at an approximate elevation of 805 feet above mean sea level (msl) and the topographic relief slopes to the southwest. Land use in the vicinity of the site was depicted as a recreational and non-descriptive development.
SOIL TYPE	USDA-Natural Resources Conservation Service, Web Soil Survey (http://websoilsurvey.nrcs.usda.gov), accessed June 6, 2011.	Loam (Nopah loam) and very gravelly sandy loam/stratified cobbly coarse sand to extremely gravelly sand (Yermo, hot-Yermo-Arizo association)
OIL AND GAS FIELDS	NBMG, Bulletin 104 (Garr, et. al) and NBMG, Open-File Report 04-1 (Hess, et. al)	There are no oil and gas fields in the site vicinity. There are no oil or gas wells within a 1-mile radius of the subject property.

Information about the regional geology is presented on Table 4-3. This information was obtained from published data and maps, interviews with public agencies, and/or from previous investigations conducted by Kleinfelder or others in the vicinity of the subject property.

**TABLE 4-3
REGIONAL GEOLOGY AND HYDROGEOLOGY**

Physical Parameter	INFORMATION/COMMENTS
REGIONAL GEOLOGY (Source: NBMG, Preliminary Geologic Map of Pahrump Quadrangle, 1999)	Alluvial Fan remnants characterized by subdued bar and channel morphology, incipient desert pavement, weak rock varnish, and no to slight etching of carbonate surface clasts. Soils are typically A-C and A-Bk-C profiles with a 1- to 5-centimeter-thick, light brown, eolian epipedon (Av) and a 5- to 20-centimeter-thick, weak or nonexistent calcic horizon (Bk) with Stage I carbonate development. Mid to late Holocene age.
DEPTH TO REGIONAL GROUNDWATER (Source: Town of Pahrump Wellhead Protection Plan.)	The depth to groundwater in Pahrump ranges from less than 30 feet below land surface (bls) to several hundred feet under the alluvial fans east of Highway 160. Under the valley floor area, the depth generally ranges from 90 feet near Highway 160 to between 45 and 65 feet on the west side of the valley, except in the areas near Manse Spring, the Artesia development, and Stewart Valley where the groundwater is near land surface. General groundwater depth may be influenced by local pumping, rainfall, and irrigation patterns.
DIRECTION OF ANTICIPATED FLOW ¹ (Source: Town of Pahrump Wellhead Protection Plan.)	The estimated direction of groundwater flow beneath the subject property is reported to be southwest.
REGIONAL GROUNDWATER QUALITY PROBLEMS	No information on the regional groundwater quality is known.

**TABLE 4-3
REGIONAL GEOLOGY AND HYDROGEOLOGY**

Physical Parameter	INFORMATION/COMMENTS
WATER SUPPLY (Source: Town of Pahrump, wellhead protection plan)	The Town of Pahrump's water supply is through wells. A wellhead protection plan for the Town of Pahrump, dated March 2006 was reviewed. The document (reviewed on June 6, 2011) indicates that approximately 9,000 people get their water from the public water supply system. The remaining residences in Pahrump are not dependent upon public water supply systems and get their water from domestic wells. There are about 10,000 domestic wells in Pahrump Valley, and several hundred new domestic wells are drilled each year. There are no public water supply wells in the immediate vicinity of the subject property and therefore, the wellhead protection plan does not include the subject property and immediate vicinity in the wellhead protection area and contaminate source inventory analysis and discussion. This 66 page document is not included as an Appendix, but can be provided if requested.
FLOOD ZONE DESIGNATION (Source: Nye County Government Website, http://www.nyecounty.net)	According to FEMA Flood Insurance Rate Map (FIRM) for Nye County, Panel 8850 of 8900, Map Number 3203C8850E, effective date February 17, 2010, the subject property is not located within the 100-year flood zone.

¹ Groundwater flow direction is based on regional information sources. Site-specific conditions may vary due to a variety of factors including geologic anomalies, utilities, nearby pumping wells (if present), and other developments.

4.5. USER PROVIDED INFORMATION

According to Client, the purpose for performing this Phase I ESA is to satisfy due diligence requirements. Information regarding current owner/occupant is listed in Table 4-4.

**TABLE 4-4
OWNER/OCCUPANT INFORMATION**

Entity	Name
OWNER	Town of Pahrump
PROPERTY MANAGER	Town of Pahrump
OCCUPANT	No current occupants. The subject property is currently an unused community center.

Interviews of key individuals (“Key Site Managers”) are provided in Section 7. The following section presents information provided by the Client.

4.5.1. Title Records

A Preliminary Title Report or Chain-of-Title Report was not provided to Kleinfelder for review prior to production of this report. These documents may provide information about land including ownership and other interests in the land, easements, and liens. Not all liens, defects, and encumbrances affecting title to the land may be included on the Preliminary Title Report.

4.5.2. Environmental Liens and Activity Usage Limitations

As part of the ASTM E1527-05 process (ASTM E1527-05, Section 6.2), it is the User’s responsibility to provide Environmental Liens and Activity Usage Limitations (AULs) information to the environmental professional (Kleinfelder), unless the agreed scope of services provides otherwise. Our scope of services did not include researching Environmental Liens and Activity Usage Limitations for the subject property, nor was that information provided to Kleinfelder to review.

4.5.3. Value Reduction

As part of the ASTM E1527-05 process (ASTM E1527-05, Section 6.5), the User must provide information regarding the prospective purchase price of the property relative to the fair market value of the subject property. If there appears to be a value reduction,

that reduction must be identified with respect to whether the difference could be attributed to environmental degradation of the property.

This Phase I ESA is not being completed for purchase and therefore, this portion of the Phase I ESA does not apply.

4.5.4. Other Information/Documents Provided

Except has discussed in Section 7 (Interviews) of this Report, no other information/documents were provided to Kleinfelder.

5 HISTORY OF THE SITE

The history of the site was researched to identify obvious uses. Historical land use was researched to the first developed use, or back to 1940, whichever was earlier or readily available. For the subject property, the earliest readily ascertainable historical reference available was 1943. Table 5-1 summarizes the availability of information reviewed during this assessment.

**TABLE 5-1
HISTORICAL SOURCES**

	Years reviewed	Availability
AERIAL PHOTOGRAPHS	1945, 1953, 1973, 1983, 1990, 2006, 2010	Available
SANBORN FIRE INSURANCE MAPS	Not Applicable	No Coverage
LOCAL STREET DIRECTORIES	1992, 1995, 2004, 2007	Available
HISTORICAL TOPOGRAPHIC MAPS	1958, 1984	Available
BUILDING DEPARTMENT	None	None
PREVIOUS ASSESSMENT(S)	None	None
OTHER	None	None

5.1. AERIAL PHOTOGRAPHS

A review of historical aerial photography may indicate past activities at a site that may not be documented by other means, or observed during a site visit. The effectiveness of this technique depends on the scale and quality of the photographs and the available coverage. Aerial photographs were obtained from the historical photograph collection held by FirstSearch. Aerial photographs covering the years between 1945 and 2006 were available during the timeframe that this report was being prepared. The Nye County Assessor Website was reviewed for a current (2010) aerial photo review and is used for Plate 1. A tabulation of the aerial photographs reviewed is presented in Table 5-2.

**TABLE 5-2
HISTORICAL AERIAL PHOTOGRAPHS REVIEWED**

Date	Approximate Scale	Type	Source	Quality
1945	1 inch = 750 feet	Black and White Monoscopic	Environmental FirstSearch	Fair
1953	1 inch = 750 feet	Black and White Monoscopic	Environmental FirstSearch	Fair
1983	1 inch = 750 feet	Black and White Monoscopic	Environmental FirstSearch	Fair
1990	1 inch = 750 feet	Black and White Monoscopic	Environmental FirstSearch	Good
2006	1 inch = 750 feet	Color Monoscopic	Environmental FirstSearch	Good
2010	Varies	Color Monoscopic	Nye County Assessor Website	Excellent

Note: Aerial photographs only provide information on indications of land use and no conclusions regarding the release of hazardous substances or petroleum products can be drawn from the review of photographs alone.

5.1.1. Subject property

The 1945 and 1953 aerial photographs show the subject property as undeveloped. The subject property boundaries are difficult to assess due to the lack of landmarks. In the 1973 photograph, it appears that the subject property is developed with the Bob Ruud Community Center. There are no significant changes to the subject property in the remainder of the aerial photographs.

The aerial photographs do not suggest the presence of RECs in association with the subject property.

5.1.2. Surrounding Areas

The 1945 and 1953 aerial photographs show no development in the vicinity of the subject property, with the exception of Highway 160. A few dirt roads are also present, and may be located in the vicinity of the subject property. However, the exact location

of the subject property is difficult to assess due to the lack of landmarks. The 1973 aerial photograph shows the park areas to the north and west of the subject property, and East Basin Avenue is also present. Some grading has been performed on the east side of North Highway 160. In the 1983 photograph, the Nye County administrative building to the north (at 250 North Highway 160) is visible, and additional grading to the northwest of the subject property has occurred for future residential development. In the 1990 photograph, a few new commercial properties are present to the east, across North Highway 160. The 2006 and 2010 photographs show that the shopping center and Rebel Oil fuel station have been constructed to the south across East Basin Avenue, and some residential development has occurred to the northwest of the subject property.

The aerial photographs do not suggest the presence of RECs.

5.2. FIRE INSURANCE MAPS

Fire insurance coverage maps, such as those maintained by The Sanborn Map Company, were produced for the purpose of assessing the potential fire hazard of a particular building or area. The maps generally show the type of building construction may show locations of stored chemicals, ASTs, USTs; and also often identify site uses and features not ordinarily available from other sources. These maps are generally available only for historically established urban and suburban areas. These historical fire insurance maps were maintained for various cities from 1867 through the 1950s.

Fire Insurance Maps provide historical land use information for some metropolitan areas and small established towns. The maps generally show the type of building construction, may show locations of stored chemicals, above ground storage tanks, underground storage tanks; and also often identify site uses and features not ordinarily available from other sources.

Kleinfelder requested a search of Fire Insurance Map Coverage by FirstSearch. FirstSearch indicated that coverage was not available for the site vicinity. A letter of no coverage is provided with the FirstSearch Report in Appendix B.

5.3. LOCAL STREET DIRECTORIES

Local Street Directories (City Directories) provide information regarding property occupants by address and are one means to evaluate past ownership and property usage. FirstSearch provided a review of City Directories from 1992 through 2007 for the subject property and nearby properties.

The address for the subject property is listed in the 2004 directory only as “Towns, Wanda”, an apparent residential listing. Various listings are presented for nearby addresses starting in 2004, including listings for various “Nye County” offices and services. A copy of the City Directory review is included in Appendix D.

5.4. HISTORICAL TOPOGRAPHIC MAP REVIEW

Kleinfelder obtained information regarding historical topographic maps of the subject property vicinity from FirstSearch report. The topographic maps reviewed for this assessment are listed below in Table 5-3.

**TABLE 5-3
HISTORICAL TOPOGRAPHIC MAPS REVIEWED**

Year	Quadrangle	Series	Scale
1958	Pahrump, NV	15 minute	1:62,500
1984	Pahrump, NV	7.5 minute	1:24,000

5.4.1. Subject property

The 1958 historic topographic map shows no development on the subject property. The 1984 map show a small structure, which appears to be the Bob Ruud Community Center.

5.4.2. Surrounding Areas

The 1958 historic topographic map shows the presence of North Highway 160 to the east, and a few dirt roads in the immediate vicinity of the subject property. The 1984

map shows several additional roads and structures, including the Nye County administrative building to the north of the subject property.

5.5. BUILDING DEPARTMENT RECORDS

No Building Department records were reviewed. Nye County building records typically do not provide information related to environmental issues.

5.6. PREVIOUS ASSESSMENTS

No previous assessments were provided to Kleinfelder for review.