# Exhibit 1

- Envirotank Exhibit #1: Boards depicting windbreaks
- Envirotank Exhibit #2: Expert Report of James F. Bowlby, Jr.
- Envirotank Exhibit #3: Cross section of a mine tire with picture depicting source tire
- Envirotank Exhibit #4: Grazing Lease Agreement
- Envirotank Exhibit #5: Letter of Violation dated July 28, 2008
- Envirotank Exhibit #6: September 17, 2008 letter from Eugene J. Hynes
- Envirotank Exhibit #7: September 23, 2008 letter from Loren J. Weatherwax and Michael Bulger
- Envirotank Exhibit #8: October 13, 2008 letter from Michael Bulger
- Envirotank Exhibit #9: October 24, 2008 letter from the Department of Environmental Quality
- Envirotank Exhibit #10: October 29, 2008 letter from Heather Jacobson
- Envirotank Exhibit #11: February 2, 2011 letter from Heather Jacobson
- Envirotank Exhibit #12: Notice of Violation dated April 18, 2011
- Envirotank Exhibit #13: 2003 Guidance issued by the Department of Environmental Quality
- Envirotank Exhibit #14: Solid Waste Guideline #21
- Envirotank Exhibit #15: November 19, 2008 letter from the Department of Environmental Quality to Billy Ward
- Envirotank Exhibit #16: June 3, 2009 letter from the Department of Environmental Quality to Jerry Shimic

- Envirotank Exhibit #17: Board of key sections of Chapter 1 of the Solid Waste Regulations
- Envirotank Exhibit #18: Chapter 1 and Chapter 15 of the Solid Waste Rules and Regulations.
- Envirotank Exhibit #19: Bills of Lading
- Envirotank Exhibit #20: Invoices for freight loads
- Envirotank Exhibit #21: Brian Morgan's letter to Heather Jacobson dated February 20, 2009
- Envirotank Exhibt #22: Carl Anderson's notes dated March 11, 2011

ENVIROTANK EXHIBIT #1

# OTHER OFF-ROAD TIRE REUSES: GILLETTE TO BILL, WYOMING







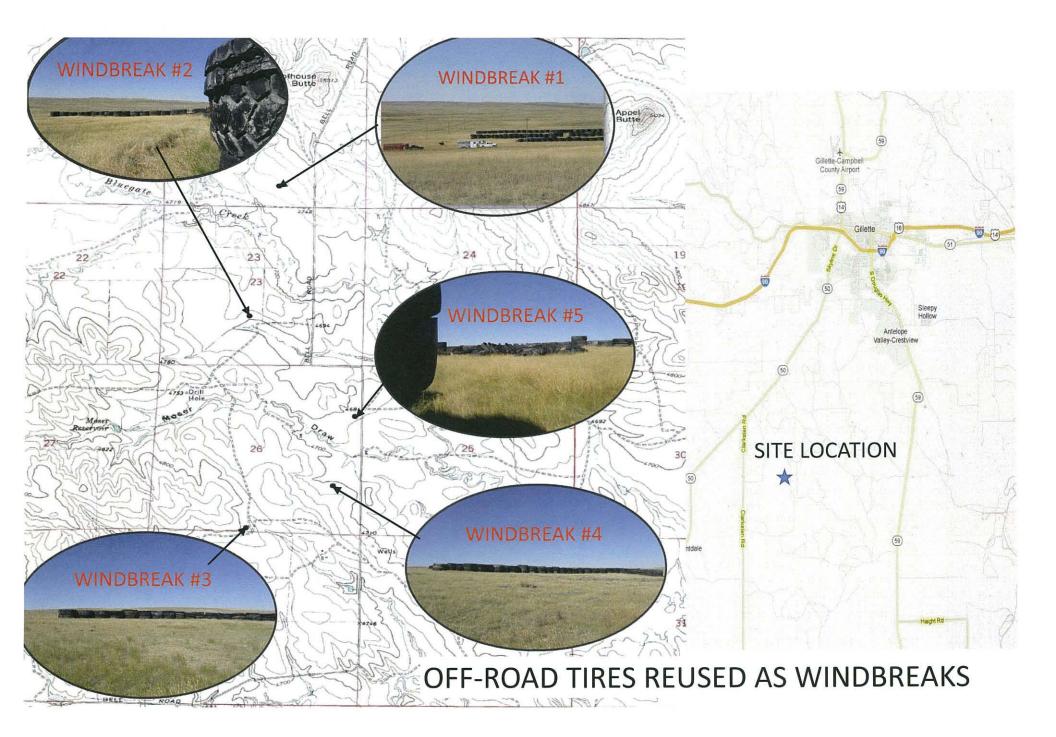












# WYOMING WINDBREAKS





ENVIROTANK EXHIBIT #2

# EXPERT WITNESS REPORT ENVIROTANK, INC. WYOMING ENVIRONMENTAL QUALITY COUNCIL SOUTH OF GILLETTE, WYOMING 82718

Aquaterra Project Number 04992.10 October 2011

Prepared For:

Throne Law Office P.C.

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# ENVIROTANK, INC. EXPERT WITNESS REPORT ON BEHALF OF THRONE LAW OFFICE, P.C. Mr. Jim Bowlby October 2011

### 1.0 BIOGRAPHY

I have more than 34 years' experience, 22 in consulting and 12 with the private mining industry in Sheridan, Wyoming. I have a B.S. degree (1975) from Colorado State Universitity (CSU) in Watershed Sciences and additional graduate work at CSU. My technical experience includes regulatory compliance, permitting, and agency negotiation; expert witness testimony: design and implementation of hydrogeological, hydrological, and sedimentation studies; watershed management projects; stormwater management; wetlands delineation and permitting; and reclamation/remedial design and implementation. I have also managed Phase I and II site assessments, compliance audits, and due diligence projects for manufacturing, construction, oil field, and mining properties; and property for transfer and mergers. I have led investigations and remedial evaluations for numerous private industry clients, State of Colorado municipal clients, U.S. Army, U.S. Air Force, U.S. Navy, and U.S. Environmental Protection Agency (EPA) Region 8. I am a hydrologist and an environmental permitting and regulatory compliance expert. I have been an operations manager, department manager, chief hydrologist, environmental services manager, ARCS program manager, Air Force base-specific contract manager, project manager, and principal-in-charge on a broad array of environmental and capital improvement projects. My qualifications resume is provided in Appendix A.

Over the past five years, I have presented several regulatory compliance seminars on a number of subjects including National Environmental Policy Act (NEPA), wetlands determination, storm water compliance, and U.S. Environmental Protection Agency (EPA) Storm Water General Permit for Construction Activities, and a number of related regulatory compliance topics. I have not prepared formal technical papers over the past five years.

I have provided deposition testimony for two clients over the past year. Under the direction of Featherstone, Petrie, DeSisto LLP., I provided a deposition in 2010 but no formal trial testimony for inactive surface uranium mine located near Spokane, Washington. The testimony concerned regulatory compliance from 1955 until 1981, and specifically dealt with water quality inputs and discharge issues. The case was settled without a trial.

In a second deposition and trial testimony in 2010 and 2011, respectively, under the direction of Waas Campbell Rivera Johnson & Velasquez, I provided expert testimony on redevelopment potential for a site that had been previously contaminated with chlorinated solvents, petroleum hydrocarbons, and other constituents in soil and groundwater. The Denver-area Regional Transportation District (RTD) condemned the property for the Light Rail West Corridor expansion, and the client contested the valuation by RTD. The case went to a trial and an opinion was rendered.

I have not provided other deposition or trial testimony over the past 5 years, other than written environmental regulation feedback to new or revised federal or state environmental regulations.

## 2.0 STATEMENT OF ISSUE

The subject property is owned by the Lange family and is located at 227 Bell South Road, south of Gillette in Campbell County, Wyoming. Based on a site reconnaissance and interview with the former lessee Mr. Brian Morgan, Envirotank Inc. (Envirotank) was contracted to place windbreaks and/or corrals at five locations on the property with large used off-road heavy equipment or mine truck tires. The windbreaks are located in Township 48N, Range 73W, Sections 14, 23, and 26. The five windbreak locations are shown on the topographic map (Figure 1) and on the aerial photograph (Figure 2).

The purpose of this expert witness report is to generally assess the regulatory framework and potential environmental impacts of the windbreaks constructed from used large off-road tires. It is my understanding that Envirotank merely responded to a business request from the lessee to build windbreaks with used mine vehicle tires at five locations and completed four of the five windbreaks at the time the original Letter of Violation was issued by Department of Environmental Quality (DEQ) on July 28, 2008.

The intent of this expert witness report is to complete the following:

- Document and briefly evaluate the history of the compliance issue
- Provide the results of the site reconnaissance and literature review
- Briefly evaluate the environmental impacts of the tires on soil, water, and air; based on the site reconnaissance, knowledge of the area, and existing literature
- Briefly discuss the issue of mosquito larvae breeding habitat
- Discuss the current reuse of tires in the area
- Provide expert opinions

Based on U.S. EPA data, over 290 million used tires are generated each year in the U.S. (Al Vick. 09/23/2011). As our waste disposal facilities struggle with the decisions regarding these tires, some facilities have banned tire disposal based on landfill capacity and waste volume. In fact, Envirotank contacted the Campbell County solid waste facility in 2008, and the landfill responded that they would not accept used tires for disposal. The Campbell County landfill, Department of Public Works, Ms. Marie Boyle, was contacted on October 19, 2011 regarding disposal of tires. Based on information provided by Campbell County, the landfill does not dispose of tires; rather they contract with Moore Services, a transportation recycler, to transport the tires to North Dakota to use as a fuel source in an incinerator.

Other landfills in Wyoming are reaching their capacity. In the City of Cheyenne, municipal solid waste is transported to the Weld County (Ault, Colorado) landfill due to space and capacity restrictions at the landfill. At the Wyoming Solid Waste and Recycling Association August 2010 and 2011 meetings in Wyoming, there was discussion about State guidance on solid waste disposal in Wyoming. It is our understanding that the State is looking at regionalizing three Subtitle D-compliant landfills (Sheridan, Cheyenne and Casper) and closing the smaller county landfills. Under the proposal, transfer stations will be constructed at these closed landfill facilities. Any disposal of suspect waste would have to be completed at these regional landfills and solid waste transported to these landfills.

Transporting solid waste off-site or out of state is costly. The size of the off-road tires presents difficulties in transportation and with the number of tires that can be transported at a time. With transportation costs increasing, the concerns for highway safety, wear-and-tear on equipment, fuel use, vehicular emissions, landfill capacity, and limitations of landfill availability for disposal; there are few options for used tires except for reasonable reuse or disposal.

The people of Wyoming have seen extreme economic fluctuations over the past 80-100 years. With that in mind, it has been my experience that the people of Wyoming, especially the ranching community, have a history of finding beneficial reuses of used and presumably waste materials. Having visited many ranchers in Johnson, Sheridan, and Campbell County over the past 34 years, I have witnessed used and waste materials put back to productive reuses such as livestock cattle controls, livestock water/feeding devices, erosion control along river banks, irrigation structures, and other innovative methods of reuse. This can include storage of these materials in the shop or corral equipment storage yard for future uses that are yet to be determined. Tires are commonly reused in the surrounding area and in agricultural and ranching settings. It seems logical that a viable reuse, without health and

safety and environmental consequences, of these used tires would be an appropriate approach.

The opinions rendered in this expert report are based on the information available at the time the report was submitted and represent my opinions, as an environmental permitting and regulatory compliance expert.

## 3.0 REGULATORY TIMELINE

Based on the available information, the windbreaks were placed at five locations between November 2004 and November 2007 (State of Wyoming DEQ April 18, 2011). In order to put the issue in perspective, a timeline of relevant decisions and documentations was developed from available and published information. The following is a summary of these decisions and documents reviewed for this expert witness report and for the expert opinions rendered.

## Timeline

- 11/25/2003 DEQ states position on permit requirements for beneficial use of tire bales in Wyoming.
- 11/15/2004 Solid Waste Operating Permit # 51.031 issued to John Hull by DEQ.
- 11/2004 Lange family began leasing property to Brian Morgan located at 227 Bell Road South of Gillette in Campbell County, Wyoming. United States Postal Service lists zip code as 82718-9350.
- 4/19/2006 DEQ approved the transfer of the Solid Waste Operating Permit # 51.031 to Michael Bulger, Envirotank.
- From approximately November 2004 through November 2007 (DEQ NOV. 2011) windbreaks constructed on Lange property.
- 7/11/2008 DEQ Solid Waste Guideline #21, Standards for Scrap Tire Management, issued.
- 7/28/2008 Letter of Violation from the DEQ to Envirotank (under Permit # 51.031) in response to a complaint concerning an alleged unauthorized storage/management of large off-road scrap tires issued.

- 9/17/2008 Letter from Envirotank to DEQ proposing hole drilling as an abatement method to prevent the possibility of mosquito larvae breeding habitat.
- 9/23/2008 Follow-up letter to DEQ from Envirotank, Inc. presenting background information, restating the possible use of drilling holes in the tires to render them non-water holding, and information that the Campbell County Landfill would not accept used whole tires for disposal.
- 10/13/2008 Letter to DEQ from Envirotank, Inc. providing notification that Envirotank is in compliance with the permit and that they have only been owners of record since Department approval on April 19, 2006.
- 10/24/2008 Letter from DEQ to Envirotank, Inc. resolving the compliance matter once holes are drilled in the tires.
- 10/29/2008 Letter from Heather A. Jacobson claiming Sandra Lange will not consent to any plan unless it includes total removal of the tires and/or scraps from the property.
- 11/11/2008 Letter to Heather A. Jacobson informing her that the removal of the tires is not the obligation of Envirotank.
- 4/18/2011 Notice of Violation and Order issued to Envirotank, Inc. by the DEQ.

The history of DEQ decisions on this matter has been inconsistent and varied. Among the various documents reviewed, the following policies and decisions concerning used tires changed from beneficial use, to solid waste only, to the Administrator can and has approved reuses of tires as a beneficial use. In 2008, the DEQ issued a Letter of Violation to Envirotank that had been apparently resolved by Envirotank proposing to drill holes in the whole tires to drain any potential standing water. Then in 2011, the DEQ issued a NOV to Envirotank, which is the subject of this hearing. The following sequence puts the inconsistencies in context.

On September 19, 1997, DEQ established a policy on tire bales (Mr. Dave Finley, Administrator Solid and Hazardous Waste Division [SHWD]). Based on the information available, the DEQ "determined that the use of tire bales as an alternative building material is a beneficial reuse of this solid waste".

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Under the Wyoming Environmental Quality Act, the duties of the administrator of the solid and hazardous waste management division were established (W.S 35-11-502). In subsection (a) "No persons, except when authorized under the permit system established pursuant to this act, shall: (i) Locate, construct, operate or close a solid waste management facility". Through the research conducted for this expert report, I believe the windbreaks constructed from used off-road tires does not meet the definition of a solid waste management facility and this rule would not apply to the subject property as determined under Wyoming Solid Waste Management Rules and Regulations (SWMRR), Chapter 1, Sec. 1(f) (i) "A permit or a one-time or emergency disposal authorization is required for the location, construction, operation or closure of any new or existing solid waste management facility as specified by Chapter 1, Section 5, or by the applicable chapter(s) of these rules and regulations".

If it is determined that the windbreaks do not meet the definition of a solid waste management facility, permitting would not be required. In the event the Lange facilities meet the definition, I believe that the structures qualify as a beneficial use exemption as defined under SWMRR Chapter 1, Sec. 1(I)(xxi):

The administrator may exempt the following from a permit or any requirement to obtain a waste management authorization under these regulations, provided that persons engaged in activities which are otherwise exempted may be required to supply information to the administrator which demonstrates that the act, practice, or facility is exempt, and shall allow entry of department inspectors for purposes of verification of such information:

(xxi) The reuse of wastes in a manner which is both beneficial and protective of human health and the environment, as approved by the administrator.

In this case, it is my opinion the subject property meets the definition of a beneficial use. The information provided in this expert report will substantiate this opinion.

DEQ has approved the reuse of tires in the past. On May 06, 1998, stock feeders and water containers were approved by Mr. David Finley, Administrator SHWD, DEQ.

On November 25, 2003, The DEQ published a "Notice to Affected Parties" for the removal of solid waste exemption for tires and acknowledges that properly managed tire bales can be beneficial when used as a wind break for livestock, or as a fence under certain conditions that include the reduction of mosquito breeding habitat.

. . .

On September 12, 2008, the DEQ issued Guideline # 21 "Standards for Scrap Tire Management" that indicted the "Department will not approve whole scrap tires, tire shreds, or tire bales for use in windbreaks, fences, or other exposed applications. Envirotank had completed four of the five windbreaks when this guideline was issued. None-the-less, Section 5.1, (xxi) allows the "reuse of wastes in a manner which is both beneficial and protective of human health and the environment, as approved by the administrator". Even though this is not a statute or a regulation and is only a "guideline", it acknowledges that reuse is viable and the Administrator can provide approval.

On July 20, 2009, Mr. Carl Anderson, Administrator Solid & Hazardous Waste Division, approved the reuse of industrial tire sidewalls for building a snow fence, windbreak, and a section of a property fence. Mr. Anderson determined the proposed use constitutes a beneficial use per SWMRR Chapter 1 Section 1 (I) (xxi) and approved the application with three stipulations that included: no other tires can be used, the site must be cleaned up and tires disposed of properly in the event of a fire, and access will be granted to DEQ for inspections.

DEQ regularly approves the disposal of tires at mine sites without considering groundwater impacts. For example, the DEQ approved the mine permit application for the April 2010 Black Thunder Mine Permit. Black Thunder encouraged reuse of off-road tires in the permit application, and in the event no reuses could be found, the permit authorizes burial of the tires in the pit floor after recovery of the coal has ceased. This application, along with the coal mining permits, are regularly approved by DEQ and would indicate that DEQ does not consider the burial of tires to present a post mining groundwater impact.

This summary of events is based on information provided by legal counsel to Envirotank and through electronic records discovery, and is assumed to represent the actual events leading to the Notice of Violation (NOV) 04/18/2011. The opinions and recommendations are based generally on this timeline of activities and technical information readily available.

## 4.0 LITERATURE SUMMARY

Based on U.S. Environmental Protection Agency estimates, 290 million used tires (based on 2003 data) are generated annually in the U.S. (<u>www.ehow.com/about environmental - impact-burying-tires.html</u>). Recent estimates of used tires is in excess of 300 million annually. Modern tires are composed of single polymers or a blend of polymers with high molecular weight (styrene-butadiene, polymers), a small amount of natural rubber, fillers

(carbon black and zinc oxide for color and to control hardness), chemical vulcanizers such as mercaptobenzothiazole used in the production process, small additions of plasticizers and chemical protective agents such as antioxidants and antiozonants (Day April 13, 1993).

The following summarizes the regulatory framework and guidance for used (scrap) tires in Wyoming and assesses the designed application of these materials to the subject property and reuse of the tires for windbreaks. The summary also includes a literature review of environmental impacts, with particular emphasis on water, air, and fire hazards.

## 4.1 Definitions of Solid Waste and Disposal in Wyoming

In W.S. 35-11-502(a), "No persons, except when authorized under the permit system established pursuant to this act, shall: (i) Locate, construct, operate or close a solid waste management facility." Through the research conducted for this expert report, I believe the windbreaks constructed from used off-road tires do not meet the definition of a solid waste management facility and this rule would not apply to the subject property. Thus, a permit would not be required.

Even if the Lange property were subject to the requirement for a solid waste permit, I believe that it meets the requirements for a beneficial use exemption under SWMRR Chapter 1, Section 1(I)(xxi), as quoted above. As described in detail in the following, the reuse of tires at the Lange property is in a manner which is both "beneficial and protective of human health and the environment." In this case, it is my opinion that the windbreaks represent a beneficial use and do not pose a risk to human health and the environment, as constructed.

Solid waste is defined by the Wyoming Environmental Quality Act, W.S. 35-11-103(d)(i) and more specifically in Chapter 1, Section 1(e) of the SWMRR (www.deq.state.wy.us/shwd) as:

Garbage, and other discarded solid materials, materials, including solid waste materials resulting from industrial, commercial, and agricultural operations, and from community activities, but, unless disposed of at a solid waste management facility, does not include:

Solids or dissolved material in domestic sewerage or other significant pollutants in water resources, such as silt, dissolved solids in industrial waste water effluents, dissolved materials in irrigation return flows or other common water pollutants;

Liquid, solids, sludges, or dissolved constituents which are collected or separated in process units for recycling, recovery or reuse including the

recovery of energy, within a continuous or batch manufacturing or refining process, or Agricultural materials which are recycled in the production of agricultural commodities.

The subject property does not meet the definition of a solid waste disposal facility or a solid waste management facility in W.S. 35-11-103(d)(ii) defined as "any facility for the transfer, treatment, processing, storage, or disposal of solid waste."

The subject property is not intended for this purpose, rather the windbreaks and/or corrals are designed as a beneficial reuse and the subject property does not meet this definition.

Solid waste disposal is defined by SWMRR Chapter 1, Section 1(e) (<u>www.deq.state.wy.us/shwd</u>) as "discharge, deposit, injection, dumping, spilling, leaking, or placing of any waste material into or on any land or water so that such waste material or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters."

The managed placement of reused tires for windbreaks and/or corrals does not meet the definition of disposal. The intent of placing the tires at the subject property is for a productive and beneficial use. The used tires are a valuable recycled product and are not being disposed.

Envirotank did not dispose of the used off-road tires, rather they were beneficially reused as a windbreak. As such, no permit is required since the materials were not disposed of at a solid waste management facility. Even if the reuse was determined to be a disposal of a solid waste, the subject property meets the definition of a beneficial use and would be subject to the exemption.

Envirotank placed recycled used off-road tires at the subject property and these tires are being put to a beneficial use. As such, the used off-road tires are not intended to be a solid waste. It is up to the discretion of the Administrator to determine that this is a valid beneficial reuse of the materials.

## 4.2 Wyoming DEQ Guidance # 21 Standards for Scrap Tire Management

The Wyoming DEQ Guideline # 21, developed under W.S. 35-11-502, was apparently prepared to provide guidance for scrap tire management in Wyoming under the Solid and Hazardous Waste Management Division. It is not a statute or a regulation, as defined under

Section 1.0 Introduction, paragraph 1 "This document provides guidance for the management of scrap tires in Wyoming". The justification for the guideline is identified in Section 1.0 Introduction, paragraph 3, where the DEQ has identified "scrap tires and tire bales where accumulation of tires have been a source of historic public complaints and problems in Wyoming resulting in unsightly appearance of tire piles, potentially uncontrollable tire fires, and the spread of West Nile virus from the mosquito habitat from accumulated tires".

It is my opinion that the reuse of tires may be unsightly to some and a beneficial reuse of a valuable product to others. While the windbreaks may result in a slight but insignificant increase in fire hazard, they certainly are not located near any facilities or structures and the potential for fire damage is very low.

Water does accumulate in the inner core of tires, but standing water is found in other sources in the area, including existing ponds, reservoirs, streams (when flowing), livestock watering tanks, and irrigation ditches (when flowing). A review of the two U.S. Geological Survey Topographic Quadrangle maps surrounding the subject property (Scaper Reservoir and Appel Butte) representing an area of 72 square miles, indicates approximately 69 identified stock ponds, reservoirs, or coal bed methane ponds. It is assumed that a majority of these ponds and reservoirs have been approved by the Wyoming State Engineers Office and may have been reviewed or approved by the DEQ itself.

The windbreaks on the Lange property represent a potential minimum source of standing water and mosquito habitat of approximately one per Section (1 square mile). Along with potential standing water in streams after a runoff event (snowmelt or rainfall), irrigation ditches, livestock watering troughs or holding tanks (some designed and constructed with used tires), and potential new ponds created by expanding coal bed methane development in the area, the quantity and location of the potential standing water in the tires, for mosquito larvae breeding habitat, is insignificant.

The justification for "cart blanche" disapproval of the use of scrap tires for use in windbreaks, fences, or other exposed applications is not justified or warranted. This decision should be based on existing statutes and regulations, Article 5 of the Wyoming Environmental Quality Act and the SWMRR, actual beneficial reuse, and at the discretion of the Administrator. In fact, the Guideline Section 5.1 quotes the beneficial use exemption from subsection (xxi) and allows: "The reuse of wastes in a manner which is both beneficial and protective of human health and the environment, as approved by the administrator". The reuse of tires on the Lange property is not a reuse of solid waste or a disposal in a solid waste management facility. Rather, it is beneficial and as demonstrated in the following sections,

the placement of the windbreaks and/or corrals are protective of human health and the environment.

# 4.3 Potential for Human Health and Environmental Impacts to Water, Land, and Air

The placement of the five windbreaks is on relatively level ground within a fenced area on private property and they are not directly in a stream or ephemeral channel, shallow groundwater does not appear to be an issue under the windbreaks sites, and no erosional features were observed from the windbreaks to the stream channels. There was also no apparent staining of soils in the vicinity of the windbreaks. The subsequent sections, observations, and opinions will also demonstrate that the tires will not have an adverse effect on human health and the environment, including emissions into the air or discharged into any waters, including groundwater.

There is a significant history of literature that reports the potential beneficial reuse of tires, either whole or partially cut tires, tires shreds, and pelletized rubber (crumbs) for ball fields and other recreational field uses. Along with site observations and an assessment of potential receptors, the literature and data will support the opinion that the tires have no significant impact on human health or the environment.

The following discussion provides a summary of the studies conducted to determine the potential health and safety and environmental impacts of used tires. It is a rigorous unbiased examination of literature, but is by no means a complete review.

The placement of tire chips within leachate columns was conducted (J&L Testing Company, Inc. May 31, 1989). Metals, pH, and some other constituents were tested. No appreciable change in chemistry was detected over the 90-day timeframe.

The levels of chemical leached from tires under the Toxicity Characterization Leaching Procedure (TCLP) was studied to determine the leaching characteristics of the tires (Rubber Manufactures Association. September 25, 1989). None of the rubber products tested, cured or uncured, exceeded proposed TCLP regulatory levels. Most compounds were detected at trace levels (near the method detection limits).

The organic and inorganic compounds resulting from the exposure of waste tires in roadbed fill applications that were exposed to different leachate chemicals were then analyzed (Twin City Testing Corporation. J.L. Zelibor. March 26, 1991). Results of chemical analysis for metals indicated that metals were found at higher concentrations when the pH in the extraction fluid is low (acidic conditions). The study reported that only in extreme

environments, such as acid mine drainage water, would have a pH as low as 3.5 as used in the study (Twin City Testing Corporation. J.L. Zelibor. March 26, 1991). The study results indicated that neutral (pH 7.0) or slightly basic conditions (pH 8.0), metal values fell within established standards for Minnesota. The extraction fluids for total petroleum hydrocarbons and polynuclear hydrocarbons indicated that the highest concentrations were observed using ammonia hydroxide (pH 8.0). Ammonia hydroxide is an unlikely component used in roadbed fill.

The Virginia Department of Transportation evaluated the leaching potential from scrap tires (November 18, 1992). Tires were shredded, and a TCLP analysis was conducted. Metals leached most readily at a pH of 4.0. The most abundant metal in the leachate was iron. Zinc was also readily leached at the low pH. At the higher pH levels (8.0), carbon black and some oily material was detected and was consistent with the Twin City findings (March 26, 1991). The results of the TCLP test indicated that the concentrations of metals in the leachates were well below the regulatory limits, consistent with past studies (Rubber Manufactures Association. September 25, 1989).

Leaching of metals was evaluated by analyzing two types of samples from constructed reactors, soil and water (University of Maine. August 26, 1996). Based on this study, chromium, copper, iron, and manganese could be expected to leach from tires since they are components of the steel tire core and bead wire. The samples were collected after a rigorous acid digestion (TCLP) and as a result, the concentration of metals were higher in the soils sampled. Metals leached to water samples after the acid digestion were chromium, iron, manganese, and zinc. Organic compounds were not found at concentrations above the federal drinking water standards for the compounds. The reactor sampling did not mimic field conditions. For the field trench study, iron was found to be elevated in the groundwater samples collected. The iron did not appear to migrate downgradient of the sites. Manganese was also detected but the concentration was below the drinking water standard. At one location (peat), chromium was detected but well below the drinking water standard.

Two field trials were constructed to investigate the effect on water quality of tire chips placed above the groundwater table (Humphrey Dana N., Lynn E. Katz, and Michael Blumenthal. 1997). There was no evidence that tire chips increased the level of substances that have a primary drinking water standard. Under some conditions, iron levels may exceed their secondary drinking water standard. Manganese may exceed the secondary level, however, as reported both manganese and iron are naturally occurring in groundwater. For organic compounds, all result were below the method detection limit for all compounds.

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One study summarized the impacts of used tires (Chelsea Center for Recycling and Economic Development. August 1998. Technical Report #2). Scrap tires are considered a major component of municipal solid waste and stock piling them can introduce serious issues. The study assessed the environmental findings of reuse and recycling scrap tires. In summary, concentrations of metals tend to appear at lower (acidic) pH conditions. Organics concentrations are detected under high (basic) pH conditions. Both the metallic and organic compounds were below the TCLP concentrations and scrap tires would not be a hazardous waste. When tire chips are spread over the ground, emission of volatile and semi-organic compounds (VOC and SVOC) can be emitted into the air when exposed to heat. Latex allergens have also been reported. Field studies (Minnesota Pollution Control Agency) did not identify significant differences between waste tire areas and control areas for soil samples and for a biological survey.

In a study in Maine (Humphrey Dana N. January 2, 1999), tire shreds did not cause the levels of metals to exceed the primary drinking water standard. The levels of organic and semi volatile organic compounds were all below the method detection limit.

In a second study in Maine (Humphrey Dana N. and Lynn E. Katz. March 16, 2001), tire shreds were placed above the water table and groundwater samples were collected. This study confirmed the result of the previous study. Most of the inorganic substances that can potentially leach from tires are naturally occurring at low levels in groundwater. There was some evidence that tire shreds could increase the concentrations of iron and manganese, but the shreds paced above the groundwater table had little impact on water quality for the near-neutral pH conditions. Organic compounds were below the method detection limits.

In a field study of tire shreds that were placed below the groundwater table (Humphrey Dana N. and Lynn E. Katz. November 2001 and Humphrey Dana N. and Michael Swett. November 29, 2006), the results showed a negligible effect on the concentration of metals with primary drinking water standards. Furthermore, concentrations of iron, manganese, and zinc were elevated but concentrations decreased to near background 0.6 to 3 meters downgradient from the test site. Trace concentrations of a few organic compounds were detected, but concentration were below the method detection limit for virtually all the samples collected from downgradient wells. The study concluded "tire shreds placed below the water table appear to have a negligible off-site effect on groundwater quality".

A study conducted by the Virginia Department of Transportation (Hoppe, Edward J., and Grigg Mullen. April 2004) concluded the use of shredded tires in highway embankments does not create an adverse environmental impact on groundwater quality.

Crumb rubber was studied to determine the toxicity from exposure in playgrounds and artificial turf playing fields (Ledoux, Thomas. June 2007). The study concluded with the exception of possible allergic reactions among individuals sensitized to latex, rubber and related products present no obvious toxicological concerns that would cause health effects in the normal population. This result was also reported in USA Today (Perez, A.J. June 3, 2009) where tests indicated the presence of inorganic chemicals, including lead, zinc, and benzene, but all below the federal safety standards. The article reported the results developed by the New York State Department of Environment Conservation and the New York Department of Health.

The inhalation hazard from artificial turf fields made from recycled crumb rubber (often derived from waste tires) was studied (Calrecycle accessed October 2010) (<u>www.opa@calrecycle.ca.gov</u>). The results of the California Office of Environmental Health Hazard Assessment concluded that the inhalation hazard (particulates matter and volatile organic compounds) were either below the health screening levels or similar to background concentrations in the surrounding area.

An aquatic testing study (Sheehan, P.J., J.M. Warmerdam, D.N. Humphrey, and S.M. Patenaude. Undated) indicated that for sites where the dissolved oxygen is greater than 2.0 mg/L and the pH is greater than 5.8, a buffer distance of tire shreds and adjacent surface water of 10 feet is sufficient to limit potential aquatic toxicity in streams. Dispersion and infiltration modeling show that at site where these geochemical conditions are not met, a buffer zone of 35 feet is adequate to limit potential aquatic toxicity for nearly all soil and groundwater conditions.

A literature review was conducted by the U.S. Environmental Protection Agency (EPA) (U.S. EPA. Wastes-Resource Conservation-Common Waste & Materials - Scrap Tires. September 6, 2011) to assess the reuse of scrap tires as subgrade fill and/or embankments. According to the EPA, the summary referenced many of the citations above. Several environmental studies have been performed to assess the potential for toxics to leach from tires when placed in wet soils. According to the EPA, the impact of the tires on the environment varies according to the local water and soil conditions, especially pH value. When the tires are placed below the water table and the groundwater is near neutral, "tire shreds have only a small impact on groundwater quality".

#### Summary

Most studies of scrap tires have been conducted for shredded or pelletized (crumb rubber) tires components. The windbreaks are comprised of whole tires and tire tops; thus the surface area for exposure to leaching is much lower. Studies indicate that leaching of tire

shreds have resulted, in certain circumstances, in increased levels of iron, manganese, and sometimes zinc under acidic conditions. Organic compounds are typically not detected under field conditions, but can be leached under basic (pH 8.0) conditions. Soil conditions and groundwater in the area south of Gillette, Wyoming are typically neutral or slightly basic, not acidic. Therefore, the potential for leaching metals is low. The tires are not located near a surface water drainage and groundwater under the site is expected to be very deep. As such, no impacts to water (surface or groundwater) are anticipated.

Few studies have been conducted to assess the impacts on air quality, but an increase in particulates as the tires degrade and possible volatilization of organic and semi organic compounds is possible under very hot (especially fire) conditions. These compounds diffuse quickly into the atmosphere and would only be a potential but insignificant impact if there was a residence adjacent to the windbreaks. The windbreaks are located in a very low residential density and ranchland area, therefore, no residences are expected to be impacted. Also, the inhalation hazard (particulate matter and volatile organic compounds) from crumb rubber (typically used on artificial recreational fields) were either below the health screening levels or similar to background concentrations in the surrounding area. Thus, the inhalation hazard from whole or tire tops would also be negligible.

## 4.4 West Nile Virus

DEQ has expressed concerns (Guideline #21) that accumulation of water in the tires could result in breeding habitat for mosquito larvae that may carry the West Nile Disease. My expertise is not disease control, since I am not a medical doctor, however certain facts can be reported from literature.

Based on information provided by the Center for Disease Control (CDC) (CDC October 17, 2011) in the West Nile Virus Fact Sheet, the risk of infection from West Nile Disease is highest during mosquito season (until freezing temperatures occur). There is no specific treatment for the West Nile Disease virus infection. The CDC recommends first monitoring bird populations (since birds are most commonly affected) that are sick or have died. Second, control stagnant water, especially if it is nutrient laden. Third is the use of widespread mosquito control efforts, including the use of spraying and larvacide that can be effective.

The infection is carried from infected birds to people by mosquitos; there is no evidence for the transmission from people to people (Medicinenet. accessed 10/17/2011 (www.cdc.gov/ncidod/dvbid/westnile/wnv\_factsheet.htm; http://www.medicinenet.com/west\_nile\_encephalitis/article.htm).

Based on the CDC Fact Sheet, there are no confirmed cases of West Nile Disease in Campbell County, Wyoming (www.cdc.gov/ncidod/dvbid/westnile/USGS frame.html).

Water does accumulate in the inner core of some whole tires. Based on the site reconnaissance, whole tires comprise roughly ½ of the total tires at the windbreaks and approximately ½ of the tire inner rims contained some standing water. But standing water is also found in existing ponds, reservoirs, streams (when flowing), livestock watering tanks, and irrigation ditches when flowing. A review of the two U.S. Geological Survey Topographic Quadrangle maps surrounding the subject property (Scaper Reservoir and Appel Butte) representing an area of 72 square miles, indicated approximately 69 identified stock ponds, reservoirs, or coal bed methane ponds. It is assumed that a majority of these ponds and reservoirs have been approved by the DEQ itself. These standing water sources are also potential mosquito larvae breeding habitat in the area.

Based on this review of the most recent CDC information, there were no reported cases of the West Nile Disease virus reported in Campbell County and there are many existing sources of standing water for breeding mosquitos in the area. There is a potential for standing water is some of the tires in the windbreaks, however, based on the prevalence of other water sources in the area, the tires present an insignificant level of breeding habitat for mosquitos. In the event abatement would be required, options are presented in "POTENTIAL REMEDIES".

## 4.5 Fires

Under certain circumstances, used tire windbreaks do present a minor increase in fire hazard, however, the windbreaks are on private land within secured and fenced areas in livestock grazing and grassed areas. There are no structures in the immediate vicinity of the windbreaks. For the tires to ignite, they would have to be directly ignited by a lightning strike or be deliberately sabotaged. It is possible, but doubtful, a grass fire would be hot enough to ignite the tires. It would seem the potential to ignite the reused tire windbreaks and to impact any structures would be remote and the impact is insignificant.

### 5.0 SITE RECONNAISSANCE

A site reconnaissance was conducted on September 30, 2011. Mr. Brian Morgan, former lessee, and Ms. Mary Throne, attorney, accompanied me on the reconnaissance of the five

windbreak areas. A photographic log is provided as Appendix B-1. All five windbreak locations were examined, along with the proximity to natural water bodies and ephemeral stream channels. The integrity of the tires was examined and appeared to be in good condition. One incomplete windbreak pile of tires (locations # 05) was observed. Based on the discussion with Mr. Morgan, the windbreak completion was discontinued when the 2008 Letter of Violation was received from DEQ and the tires remain on-site.

## 5.1 Interview with Former Lessee

An interview was conducted with Mr. Morgan prior to the site reconnaissance. Mr. Morgan contracted with Envirotank to build the windbreaks. Mr. Morgan stated that the landowner provided permission to build windbreaks. All the windbreaks were constructed between November 2004 and November 2007 (DEQ NOV and Order 2011). Three were completed as windbreaks, and one as a windbreak/corral. In addition, one was not completed but the tires were delivered to subject property and only a few tires were stacked.

The placement of the windbreaks were based on practical applications. Mr. Morgan observed that cattle typically huddled at the southeastern corner of a field, since the wind is predominantly from the northwest and north Thus, they were constructed at the southeast corner of fields and downwind to maximize protection of the cattle. Four of the five locations are within site of the Bell Road or improved ancillary access roads, and easily accessible. One site (Windbreak locations #2) is located approximately ¼ mile west of the Bell Road and can be accessed during dry weather conditions, from a primitive ranching road.

Mr. Morgan indicated that the tires work well as a windbreak, and he was not aware of any noticeable problems with the four constructed windbreaks on the subject property or other windbreaks in the area on other properties.

He indicated that Envirotank did not complete Windbreak location #5, since Envirotank received the Letter of Violation (July 2008) from DEQ and they stopped work accordingly, pending resolution of the issue.

## 5.2 Site Reconnaissance Observations

Each of the five windbreak locations were examined and a photolog was developed during the site reconnaissance activities (Photolog B-1). The windbreaks were constructed and were operational at four of the five locations. At Windbreak location #5, the tires were delivered to the site but the windbreak had not been fully constructed.

The tires appeared to function as designed. In fact, vegetation percent cover downwind from the windbreaks appeared to be slightly enhanced, most likely the result of acting as a snow fence and providing additional soil moisture during the initial growing season (April and May). This observation was confirmed by Mr. Morgan.

Windbreak #1 was designed as a windbreak and a corral. The tires include whole and tire tops stacked 4 to 6 high to a height of roughly 5 to 7 feet above the ground surface and on relatively flat topography. The site also includes corral fencing and gates. The windbreak was 100 percent in-tact and in good condition. There was no staining (red for iron or black for manganese) in the soils adjacent to the tires. The tires were exposed and not covered with soil. The windbreak is visible from Bell Road. In fact, during the site reconnaissance, the corral was being used by local ranchers as viewed on horseback (see photolog B-1, photo # 4).

Windbreak #2 was designed as a windbreak only. The tires include whole and tire tops stacked four to six high to a height of roughly five to seven feet above the ground surface and relatively flat topography. The windbreak was 100 percent in-tact and in good condition. There was no staining (red for iron or black for manganese) in the soils adjacent to the tires. The tires were exposed and not covered with soil. The windbreak is not visible from Bell Road.

Windbreak #3 was designed as a windbreak only. The tires include whole and tire tops stacked four to six high to a height of roughly five to seven feet above the ground surface and relatively flat topography. The windbreak was 100 percent in-tact and in good condition. There was no staining (red for iron or black for manganese) in the soils adjacent to the tires. The tires were exposed and not covered with soil. The windbreak is visible from an ancillary private access road west of Bell Road.

Windbreak #4 was designed as a windbreak only. The tires include whole and tire tops stacked four to six high to a height of roughly five to seven feet above the ground surface and relatively flat topography. The windbreak was 100 percent in-tact and in good condition. There was no staining (red for iron or black for manganese) in the soils adjacent to the tires. The tires were exposed and not covered with soil. The windbreak is visible from Bell Road.

Windbreak location #5 consists of primarily used tires not yet constructed as a windbreak. A few of the tires had been stacked as a windbreak but the windbreak had not been fully constructed. The used tires that were stacked include whole and tire tops stacked three to four high to a height of roughly four to six feet above the ground surface and relatively flat topography. There was no staining (red for iron or black for manganese) in the soils

adjacent to the tires. The tires were exposed and not covered with soil. The windbreak is visible from Bell Road.

Based on the site reconnaissance, whole tires comprise roughly ½ of the total tires at the windbreaks and approximately ½ of the tire inner rims contained some standing water. All five windbreak areas are within fenced livestock grazing areas on private land. The four completed windbreaks were in-tact and in good condition. There was no staining (red for iron or black for manganese) in the soils adjacent to the tires. There was no soil rilling, downcutting, or erosional features emanating from the windbreaks.

## 5.3 Soil Type and Runoff Potential

The basic soil types in the vicinity of the windbreaks were identified from the U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey and Map for Southern Campbell County, Wyoming, February 12, 2010. The predominant soils are identified as:

166 - Jaywest Ioam223 - Ucross Ioam224 - Ucross-Iwait Ioams225 - Ucross-Iwait-Fairburn Ioams

These soil types all are well drained, a range of low to high infiltration capacity, show no frequency of flooding, and have a depth to groundwater exceeding 80 inches (6.67 feet). In addition, the Ucross loam and Ucross series has a restrictive feature that bedrock is encountered at a depth of 20 to 40 inches.

This assessment indicates that the soils are not in a flood zone, groundwater is deep, and the bedrock is encountered in the Ucross series at a relatively shallow depth. The runoff potential varies (based on the infiltration capacity), but is limited.

Based on the site reconnaissance, there was no soil rilling, downcutting, or erosional features emanating from the windbreaks. Based on the flat topography and soil types, there is little potential for concentrated surface water runoff. Therefore, it was assumed that, based on the low annual precipitation in the area, no erosional features, and distance from the surface water features, that surface runoff was not generated in the vicinity of the windbreaks that would be capable of reaching the surface water features.

## 5.4 Potential Flow Path to Surface Water Receptors

All four windbreaks and the unassembled pile of tires are located in an area that is relatively flat, within the confines of a livestock grazing fenced area. Bluegate Creek and Moser Draw are the most prominent surface water features in the area. These channels are ephemeral, and flow in response to precipitation and snowmelt runoff. Neither Creek had flowing water during the site reconnaissance activities.

The five areas are sufficiently far away from the ephemeral drainages or tributaries to be protective of surface water quality. Based on the topographic map (Figure1) and observations, the minimum distances to the stream channels are as follows:

Windbreak #1: 75 to 100 feet from Bluegate Creek Windbreak #2: 50-60 feet from the ephemeral tributary to Bluegate Creek Windbreak #3: Private access road prohibits runoff to the tributary to Bluegate Creek and is approximately 50 feet from the Creek Windbreak # 4: 90 to 100 feet from Moser Draw Windbreak #5 (unassembled): 110 to 120 feet from Moser Draw

Based on the distance from the creeks and tributaries, soil types (loam), and the site observations that there are no defined channels or erosional features emanating from the windbreaks, there is no significant threat to surface water quality from the tires.

## 5.5 Potential Flow Path to Groundwater Receptors

Along ephemeral stream courses tributary to and including Bluegate Creek, shallow groundwater could be encountered seasonally at depth of less than 20 feet. This potential groundwater would be confined to the local alluvial/colluvial deposits themselves, identified as less than 100 feet in width in the vicinity of the windbreaks. Based on the review of the Groundwater Atlas of The U.S. (U.S. Geological Survey, accessed 10/2011), there are no significant alluvial aquifers in the vicinity of the subject property and the presence of shallow groundwater, based on the composition of the ephemeral drainages, soil types, and distance from the drainages, at the windbreak locations in not likely.

Groundwater is encountered in the area in Lower Tertiary aquifers and in some locations along the edges and outcrops of the Powder River Basin, in the lower geological unit that is located stratigraphically below the Lower Tertiary, the Upper Cretaceous aquifers (U.S. Geological Survey, accessed 10/2011). For the Lower Tertiary formation, the aquifers consist mainly of sandstone beds and localized coal seams in the Fort Union Formation. The Fort Union also includes interbedded fine grained sediments (shale) that exhibits a very

low permeability and is an aquatard to downward movement of water. Wells in the underlying aquifers are typically 300 to 900 feet deep. Wells in the Upper Cretaceous aquifers can be completed at depths of less than 300 feet in interbedded sandstone but typically are only along the edges of the Powder River Basin where the coal is burned at the surface (known as clinker). The aquifers associated with the Upper Cretaceous are typically saline in their deeper parts (U.S. Geological Survey, accessed 10/2011). The subject property is located approximately in the geographic middle of the Powder River Basin. Therefore, groundwater in these aquifers is deep and infiltration is limited due to the predominance of interbedded shale.

Based on the distance from the limited lateral and vertical extent of the alluvium/colluvium associated with the creeks, limited infiltration capacity from fine grained sediments (shale), the distance from the creeks, and the depth of underlying aquifers, there is no threat to groundwater from the tires.

Based on the soil types, observations during the site reconnaissance, distance from creeks and tributaries, and the apparent lack of groundwater underlying the windbreaks, there is no or an insignificant potential for the tires to impact water at the site. Any impacts to soils would be local and insignificant and no discoloration of the soils were identified during the site reconnaissance.

## 6.0 REUSE OF TIRES

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In my opinion, the reuse or recycling of used tires, as stated in the NOV by DEQ, is not "storage and management of a solid waste material" and would be outside the scope of the permit requirements for a solid waste management facility. Alternatively, the tires are being reused and if a permit is required, the windbreaks would qualify for an exemption as a beneficial use, as defined SWMRR Chapter 1, Section (I) (xxi).

After conducting the site reconnaissance, I surveyed other uses of whole tires south of Gillette and north of Bill, Wyoming. The results are provided in Photolog B-2. I found that used whole tires are being reused in day-care center playgrounds (two locations), for protective barriers, for stock watering and feeding, and for other agricultural uses. In most applications, whole tires or tire tops were reused. The survey focused only on the area along and near State Highway 59, from Gillette to Bill, Wyoming. It was obvious, that with mining prevalent in the area and the desire to reuse materials that would otherwise end up as a waste (and landfilled or shipped out of state), local ranchers and residents are seeing the tires as valuable and safe. These other applications of used tires are similar to the

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reuse of whole or tire tops for windbreaks or corrals, except for the number of tires used in the windbreaks.

In preparation of this expert report, the disposal of used tires in a mining application was examined. This was an important finding since mines are closely scrutinized by the DEQ and operate under approved permits. We found that mines typically discard the tires at the floor of the mine or in the mined out pit, with no regard to groundwater or other conditions. In the case of the mine permit application dated April 2010 Section MP-3.7 and approved by DEQ, the Black Thunder Mine (233 Permit to Mine) south of Gillette has reported "Disposal in the solid waste dump is appropriate for a large percentage of the wastes generated at the Black Thunder Mine. Large Off Road Vehicle Tires may be disposed on the pit floor, as described under subsection MP-3.7.3 below". Section 3.7.3 identifies the preferred method of disposition of off-road vehicle tires is to reuse or recycle the tires, to take advantage of the resource. Tire may be disposed, when there is no reuse option, on the pit floor after salvageable coal is removed and covered in a timely manner, either by cast blasting or by haul trucks covering them with backfill. Final burial depth will be no less than 75 feet of backfilled overburden.

This practice of dealing with used tires is commonly approved by DEQ. There was no stipulation that the tires be placed above the groundwater table, just that the tires be placed in the floor of the pit. Since this practice appears to be commonly accepted by DEQ, we have assumed that the DEQ does not believe that the disposal of used tires will have an impact on post-mining groundwater quality.

In the adjacent state, Colorado, the Colorado Department of Public Health and Environment (CDPHE) allows the reuse of tires under the CDPHE Hazardous Materials and Waste Management Division (HMWMD) (6 CCR, 1007-2) regulations for solid waste sites and facilities. Section 8, Recycling, 8.2.1 indicates "The Department recognizes that many materials that are found in the solid waste stream have the potential to be recycled or reused in commerce." As such, CDPHE allows the administrator to allow other uses of tires, rather than landfilling and disposal as a solid waste. In an e-mail communication between Envirotank and the CDPHE (September 26, 2011) Mr. David Snapp explained that the CDPHE HMWMD has determined that the reuse of tires is authorized by responding that "the use of waste mining tires as windbreaks and livestock feeders to be a beneficial use when there is an actual need for those items. Care should be taken to prevent ponding of water within the waste tires and to prevent the waste tires from catching on fire. Also, the proposed uses must be allowed by the local governing authority". In Colorado, the reuse of tires is considered a beneficial use.

When not managed properly, waste tires can present a hazard. Tire Mountain located north of Hudson, Colorado is an example of poor management of used tires. As reported by the Denver Post (October 20, 2011), Tire Mountain is one of the if not the largest waste tire pile in the country. Attempts to sell the tires for fuel to foreign countries has repeatedly failed and the owners are being investigated for fraud. It would seem that the reuse as a windbreak would be a more appropriate use than disposal or storage for future use as a fuel. Campbell County reportedly transports it's used tires from the landfill to North Dakota for use as a fuel in an incinerator. It was not reported if the net fuel consumption for the transport of the tires was more or less than the fuel value of the tires themselves at the incinerator.

It would seem that the reuse of tires for windbreaks, corrals, or snow fences would be a more appropriate beneficial use than for fuel or disposal in a landfill.

## 7.0 POTENTIAL REMEDIES

The large off-road used tires are a beneficial use. Envirotank was asked to construct the windbreaks at the five locations by the lessee. The cost of removal of the tires was estimated, by Envirotank, to be on the order of \$350,000, plus the cost of labor and materials to load the tires at the five locations for transport. This would be an undue cost to Envirotank.

Over the past 20 years, recycling and reuse has been emphasized in the country, but it has always been at the core of the Wyoming ranching and farming communities. Our Subtitle D permitted solid waste disposal landfills have space and capacity limitations and are filling up. Many, such as Campbell County, do not accept tires for disposal. Rather, they employ costly and exotic methods to rid themselves of the nuisance (such as transporting tires to Colorado and North Dakota).

The windbreaks are located away from surface water bodies and groundwater is presumed to be too deep to be impacted. Abatement for the control of mosquito larvae breeding habitat could be considered and in fact, the DEQ previously approved the drilling of holes in the whole tires that could abate the accumulation of standing water (approval by DEQ 2008). Other mosquito larvae control could be considered.

I do not believe that the DEQ has identified other impacts from the windbreaks on human health and the environment. Based on my opinion, there is no indication, from my literature review and site observations, that there are any significant impacts.

## 8.0 SUMMARY AND OPINIONS

Based on the literature reviewed, there were 290 million used tires generated in 2003 and estimates for 2011 are over 300 million. Our solid waste disposal facilities are filling up and space is a valuable asset. In fact, the Cheyenne, Wyoming landfill is trucking its solid waste, including used tires, to Colorado due to space restrictions. Campbell County is transporting its used tires to North Dakota to be burned in an incinerator. Today, there is an increased emphasis in recycling by the solid waste management industry, particularly to recover the reusable products (such as paper, plastics, aluminum, and other compounds) and to maximize the space of existing landfills. In fact, these materials are recycled at my house, curbside, and to make it convenient and accessible, there is little need to segregate these wastes. As such, all of my neighbors support and participate in curbside recycling. Permitting new landfills is a costly enterprise, and in a way, the waste disposal facilities are maximizing their return on investment by recycling, while meeting the needs and desires of the public.

Reusing tires, especially large off-road mining and large equipment tires, is a beneficial use. The ranching community in Wyoming has found various uses for the tires, including windbreaks, corrals, stock watering tanks, playgrounds, and protective barriers. These uses are appropriate and are innovative.

In reviewing the decisions of the DEQ and subsequent guidance on used tires (Guideline # 21), in my opinion, it appears that the DEQ may have exceeded its authority in dictating a NOV for the reuse of the tires as windbreaks without considering the beneficial reuse derived. The mere title of the guideline "Standards for Scrap Tire Management" implies the tires are a waste to be handled as such. In fact, the DEQ Administrator has the authority to determine that the tires used as windbreaks are a beneficial reuse.

It is understandable that some residents may deem the windbreaks unsightly. When touring around Wyoming, I see many ranching and farming remnants that may also seem unsightly but I respect that ranchers' and farmers' right to put used products to beneficial reuse. There is also significant coal mining development, oil and gas development, and recently coal bed methane development in the region that some may consider to be unsightly.

No significant impacts to human health and environmental impacts have been reported. The windbreaks are located on relatively flat ground and there was no staining of soils that was identified during the site reconnaissance. The locations of the windbreaks are adequately removed from surface water features and there was no evidence that runoff from

the windbreaks discharged to any surface water bodies. Shallow groundwater is typically only associated with the actual stream alluvial/colluvial sediments, and would be localized and seasonal. Aquifers under the subject property would be deep and infiltration of water is restricted by underlying fine sediments (shale) of the Fort Union Formation. Studies on the impacts of crumb (pelletized) rubber at recreational field have indicated that the inhalation hazard would be negligible. Air quality impacts would also be negligible, since there are no receptors in the vicinity of the windbreaks and any contaminants would disperse easily. There would be a minor increase in fire hazard, but it is unlikely since the windbreaks are located far away from structures or inhabited dwellings.

Whole tires can retain ponded water after a rainfall or snowmelt runoff event. Standing water can contribute to mosquito larvae breeding habitat and the possibility of the West Nile Disease virus. There are many larger sources of standing water in the area. Many of these sources are stock ponds and reservoirs that have been approved by the State of Wyoming for the intended use. By far, these other sources of standing water present far more breeding habitat for the virus. Luckily, there have been no reported CDC cases of West Nile Disease in Campbell County. In any event, there are remedies that could be considered.

It is my opinion, that the constructed windbreaks are a reuse of off-road tires, and not disposal of a solid waste to a solid waste management facility. In any event and at a minimum, the windbreaks would qualify as a beneficial use under the Wyoming solid and hazardous waste regulations previously referenced.

It is my opinion that the reuse of whole or rubber tire tops from large off-road vehicles is an appropriate beneficial reuse of the tires. The condition of the windbreaks was good and all four of the constructed locations were in-tact. The conditions of the windbreaks could be inspected by DEQ periodically if the long term viability is a concern. Envirotank should construct the Windbreak location #5 or remove the tires, since this could be interpreted by DEQ, as time elapses, as inappropriate dumping of a solid waste.

Human health and environmental impacts (to land, water, and air), based on the site observations and literature reviewed, are assumed to be negligible. For the control of mosquito larvae breeding habitat and West Nile Disease, the water could be drained from the tires by drilling holes in the whole tires or the application of a larvacide to the inner portions of the whole tires could be considered. With all the other source of mosquito larvae breeding habitat (standing water) in the area, especially with the expansion of coal bed methane development and produced water issues, it would seem that any remedy required by DEQ would have no impact on the mosquito population in the area.

It is my opinion that the windbreaks should remain in-place as they provide a valuable reuse of the large off-road tires that are typically generated at construction sites and at the coal mines in the area.

Sincerely, Aquaterra Environmental Solutions, Inc.

Jim Bowlby Senior Hydrologist Regulatory Expert

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U.S. EPA. September 6, 2011. Wastes-Resource Conservation-Common Waste & Materials- Scrap Tires. <u>www.epa.gov/epawaste/conserve/materials/tires/civil\_eng.htm</u>

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AQUATERRA

Expert Witness Testimony Report Envirotank, Inc. Throne Law P.C. October 2011

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Virginia Department of Transportation. November 18, 1992. Final Report on the Leachable Metals in Scrap Tires. VDOT Materials Division.

EXHIBIT "A"

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APPENDIX A

EXPERT WITNESS RESUME

# James F. Bowlby, Jr.

#### EDUCATION

Graduate Studies, Hydrology/Watershed Sciences, Colorado State University, 1977

B.S. Hydrology/Watershed Sciences Colorado State University, 1975

#### EXPERTISE

- Hydrology/Hydrogeology
- Permitting
- Agency Negotiation
- Regulatory Compliance and
- Compliance Audits
- Environmental Assessments
- Due Diligence
- Expert Witness Testimony
- Watershed & Storm water
- Management
- Remedial
- Design/Implementation
- Mitigation Measures & Best Management Practices

#### WORK HISTORY

Adaptive Environmental Solutions, Principal 2010 - 2011

LFR, Inc. Principal Scientist, Operations Manager 2008 – 2010

*Tetra Tech EM Inc.*, Program Manager, 1999 – 2008

ENSR, Senior Program Manager, 1995 – 1999

Brown & Caldwell Environmental Services Manager, 1992 – 1995

Geraghty & Miller, Inc. Senior Scientist, 1989 – 1992

Peter Kiewit Sons, Inc.; Chief Hydrologist 1977 – 1989

U.S. Forest Service, Research Assistant, 1976 – 1977

# PROFESSIONAL EXPERIENCE

Mr. Bowlby has more than 34 years' experience, 22 in consulting and 12 with private industry. He has been operations manager, department manager. chief hydrologist. environmental services manager, ARCS program manager, Air Force base-specific contract manager, project manager, and principal-in-charge on a broad array of environmental and capital improvement projects. His technical experience includes regulatory compliance, permitting, and agency negotiation; expert witness testimony; design and implementation of hydrogeological, hydrological, and sedimentation studies; watershed management projects; stormwater management; wetlands delineation and permitting; and reclamation/remedial design and implementation. Mr. Bowlby has also managed Phase I and II site assessments, compliance audits, and due diligence projects for manufacturing, construction, oil field, and mining properties; and property for transfer and mergers. He has led investigations and remedial evaluations for numerous private industry clients, State of Colorado municipal clients, U.S. Army, U.S. Air Force, U.S. Navy, and U.S. Environmental Protection Agency (EPA) Region 8.

# PROJECT EXPERIENCE

Mr. Bowlby's project experience includes the following:

## SITE ASSESSMENTS DUE DILIGENCE/UNDERGROUND STORAGE TANKS/NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COMPLIANCE/ACM AND LBP

Expert Witness Reports and Testimony. Waas Campbell Rivera Johnson & Velasquez. The case involved the condemnation of two properties from Quadrant Properties LLC formerly known as the Denver Toluene Site (DTS) and Rocky Mountain News (RMN) printing site in Denver, The Regional Transportation District (RTD) Colorado. condemned the properties as part of the Burnham Yard Lead project just south of the Auraria college campus. Expert reports and testimony were focused on site history, regulatory status (including State of Colorado Voluntary Clean-Up Program [VCUP] status), groundwater and soil contamination issues (primarily residual costs of tetrachloroethene), and the potential and redevelopment of the properties.

- Expert Witness Report and Testimony. Behre Dolbear on behalf of Featherstone Petrie DeSisto LLP. The case in federal court involves a former uranium open pit mine located in the Pacific Northwest in the State of Washington that has been identified by U.S. EPA as a Superfund Site under CERCLA. The expert testimony involves the environmental permitting and compliance status of the mine located on Native American Tribal Lands, from the mid-1950's to the early 1980's. The open pit mine was permitted under the U.S. Department of Interior Bureau of Indian Affairs. The client is seeking insurance recovery for reclamation of the mine site pits, waste rock stockpiles, and the stockpiled ore. Acid rock drainage is one concern at the closed site.
- Regulatory Compliance and Permitting Specialist. Pincock Allen & Holt. Participated on a team assessing the regulatory status and cost implications for a confidential rare earth open pit mining and ore processing project in California. The mining company was seeking financial support from an international bank for start-up operations to support the 2010 public offering. The mine received county approval to resume mining in November 2010 and facilities upgrades are planned for 2011.
- Regulatory Compliance and Permitting Specialist. Pincock Allen & Holt. Participated on a team assessing the current regulatory status and reclamation bond cost implications for an existing open pit gold mine in Colorado. The objective of the annual confidential analysis was to certify the mine was in compliance with applicable federal, state, and local rules and regulations. A certification report was prepared for the mining company.
- Regulatory Compliance and Permitting Specialist. Pincock Allen & Holt. Participated on a team assessing the regulatory status and cost implications for an open pit coal mine located in southeastern Wyoming. In order to submit a competitive bid, the perspective confidential purchaser requested a review of the existing permitting and compliance status and an evaluation of the reclamation bond cost estimate. The mine site has been active prior to existing surface coal mining and reclamation federal and state regulations and an assessment of proposed and completed reclamation activities are being assessed prior to preparation of the bid package.
- Regional Representative, Bank of America. Provides technical and project management oversight for an array of projects including mold indoor air quality investigations and remediation, asbestos building inspections and abatement oversight, LEED certification, training, and other related regulatory compliance activities. Region includes New Mexico, Colorado, Utah, Arizona, and Texas. Contracting and oversight of subcontractors and internal resource personnel. Interfaces with BoA corporate personnel and CB Richard Ellis Facility Management partner for Boa.
- Technical Manager, Defense Access Road (DAR) EA. Pueblo Chemical Depot. Completed an EA with public meetings for the DAR for the Pueblo Chemical Deport in southern Colorado (in-progress). The sponsoring agencies are the CDOT and FHA. The decommissioning of mustard gas in compliance with International Treaties will require the treatment and disposal of hazardous waste. The DAR will be constructed for transport of the waste off-site.

- Project Manager and Client Director, State of Colorado Voluntary Cleanup Program (VCUP) Plan. Quadrant Auraria Partners. Developed a VCUP for the former Rocky Mountain News site south of Colfax Avenue and the Auraria College Campus and submitted to the CDPHE in February 2007. Additional monitoring wells were drilled and registered with the State of Colorado. The investigation included an investigation trench and sampling existing monitoring wells on the site and adjacent and downgradient of the site. The VCUP included an interim remedial plan that includes a permeable chemical reactive barrier. Implementation of the VCUP was completed in 2009 and a No Further Action letter received from the State of Colorado.
- Technical and Task Manager, IUSA (Denison Mines) Tony M Mine EA and EA Checklist. Completed the NEPA Checklist for the reopening of the underground uranium mine in southern Utah. The sponsoring agency is the U.S. DOI BLM Hanksville Field Office. The checklist was prepared under BLM Utah protocols. The EA (in-progress) will assess the impacts of the reopening of the mine, reactivation of the evaporation pond, new vents, and new facilities. The EA will rely on the Operations Plan submitted to the Utah DOGM and BLM. Included oversight of the cultural resource assessment. Uranium ore will be transported to the mill operated by IUSA.
- Technical Lead Energy Fuels Corporation, EA for Underground Mine in western Colorado. Provided expert assistance with an Environmental Assessment for the Bureau of Land Management for an underground mine located in western Colorado to be reopened under existing regulations. Technical resource and expert for the hydrology, hydrogeology, water quality, air resources, and transportation sections of the EA. Evaluated the mine Spill Prevention Control and Countermeasures Plan under U.S. Environmental Protection Agency requirements and Storm water Management Plan requirements under the Colorado Department of Public Health and Environment.
- Compliance Assessor. Confidential Construction Company. Mr. Bowlby conducted compliance assessments of gravel pit and asphalt batch plants in Colorado under client confidentiality protocols. The internal assessments were precipitated by a Department of Justice injunction against the company in a region outside of Colorado. The compliance assessment evaluated all air, water, and waste permitting issues and provided suggestions for program improvements.
- Project Manager. The Industrial Company (TIC). Provided support with a hydrocarbon release to soil and groundwater. Included the sampling soils in the release zone; and installation of additional monitoring wells, well sampling, and obtaining well permits with the State of Colorado. All assessment work was completed in compliance with the State of Colorado Division of Oil and Public Safety (OPS). Assisted the client with negotiations with the OPS.
- Technical Lead, Due Diligence and Regulatory Compliance Assessment-Confidential International Oil and Gas Company. Assessed liabilities and compliance issues for an international oil and gas company for sites in Utah, Texas, Wyoming, and Oklahoma. The client had sold several drilling and storage facilities to a company that had declared bankruptcy and the client's legal counsel was interested in assessing its potential liabilities and the compliance status of the facilities under client confidential conditions. The assessment

was completed over a two-month period of time for approximately 100 facilities. Data were limited since site-specific data had been t5ransferred with the sale of the properties.

- Technical Lead, Due Diligence and Regulatory Compliance Assessment-Confidential National Gas Company. Assessed the compliance status of approximately 80 gas compressor stations and gas plants located in Utah, Texas, and Oklahoma prior to purchase for a Gas Company. The project included an intensive records review, aerial photography interpretation, sampling soils, subsurface drilling, and sampling surface water and groundwater to determine the potential environmental issues at these sites. In addition, the regulations in these states were evaluated against the current status of the sites to determine the compliance status of the facilities. A remedial cost estimate was provided and applied against the sale price. The project was completed over a two-month period of time under extremely tight schedule demands of the seller.
- Technical Advisor and Quality Control, Buckley Air Force Base on Behalf of Hunt Brother Construction. Completed an Environmental Baseline Survey (EBS) for an area within the Buckley Air Force Base that was to be redeveloped with private residential housing.
- Program Manager, USDA Natural Resources Conservation Service. Provided oversight
  and technical review support for the completion of Comprehensive Nutrient Management
  Plans for Area Feedlots (AFO's) in western and northeastern Colorado. The CNMP's were
  completed using NRCS guidance and protocols and were used in the planning for design
  and implementation of runoff controls.
- Program Manager, USDA Natural Resources Conservation Service. Provided program and contract oversight for the implementation of designs and runoff control structural for AFO's in eastern Colorado. Grants were provided to the producers under the federal government EQUIP program. Runoff control structures were designed for cattle and for dairy feedlots. The design support included floodplain analysis, runoff prediction analysis, and monthly reporting. All plans were reviewed by staff Professional Engineer and are to be stamped by NRCS State Engineer P.E.
- Project and Technical Manager, Confidential Manufacturing Client. Numerous Phase I ESA's under the ASTM Standard Practice E 1527-00 and E 1527-05. Several Phase II assessments evaluating floor and storm drain connectivity; subsurface conditions such as soil and groundwater contamination, and other process related acted activities in support of the purchase of manufacturing and distribution facilities. Including non-ASTM issues such as floodplains, wetlands, asbestos, lead-based paint and radon.
- Project and Technical Manager, Confidential Investment Client. Numerous Phase I ESA's under the ASTM Standard Practice E 1527-00 and 1527-05. Several Phase II assessments evaluating floor and storm drain connectivity; subsurface conditions such as soil and groundwater contamination, and other process related acted activities in support of the purchase of manufacturing and distribution facilities. Including non-ASTM issues such as floodplains, wetlands, asbestos, lead-based paint and radon. Also provided preliminary opinion on workers health and safety issues such as noise and confined space, as well as mold.

- Technical Assessor, The Trust for Public Lands. Evaluated several claims and previously
  mined areas in southern Colorado for transfer of land not currently under a State Attorney
  General Decree to the U.S. Forest Service. The Trust is a non-profit organization that is
  acting as an unbiased intermediary between the mining company and the USFS. Assessed
  historical documents at the local mining office located in Ouray, CO and county records for
  historical information. Reviewed historical topographic maps and aerial photographs and
  conducted site reconnaissance activities. Collected limited samples from surface runoff and
  existing tailings piles and analyzed samples for potential contaminants. The properties were
  recommended for transfer, with additional sampling proposed at some select locations.
- Project Manager, U.S. Air Force Academy. Project manager for conducting a Cadet Area Tunnel Asbestos Study for the U.S. Air Force Academy. Mr. Bowlby has lead the effort in to conduct an asbestos survey, including bulk sampling and labeling of all suspect asbestos-containing material (ACM) within the utility tunnels associated with the Cadet Area of the Air Force Academy for four phases of study over a 5 year period of time. Personal air sampling and analysis by Transmission Electron Microscopy (TEM) has also been collected during assessment and sampling activities. Tetra Tech developed a Quality Program Plan (QPP) which included the Work Plan (WP), the Health and Safety Plan (HSP), and the field Sampling and Analysis Plan (SAP). Tunnel Orientation Plan. Based on information provided in Academy drawings, Tetra Tech conducted an asbestos survey of over 15,000 LF of tunnels in two phases. Two additional phases of work have been completed for the heat plant and selected mechanical rooms in the Cadet Area. Samples were analyzed in layers by Polarized Light Microscopy (PLM) methods by an accredited laboratory. The Final Reports include a summary of findings and laboratory data provided in acceptable format to the Air Force Academy's RAPb database. Curr3ently conducting Phase V of the project.
- Project Manager and Client Director, The Nature Conservancy. Providing technical oversight and project management for an array of due diligence projects typically to reassign large parcels of land as conservation easements.
- Project Manager and Client Director, Peter Kiewit Sons-Kiewit Western Company. Providing corporate Kiewit personnel support in assessing existing vendors and potential vendors liabilities under the corporate Kiewit approval process. Several sites evaluated in IL, IN, TN, and KY.
- National Pork Producers Council-Compliance Audits. Conducted audits in eastern Colorado for confidential clients to determine compliance with the NPPC Environmental Assessment Program.
- Technical Resource/Reviewer and Asbestos Inspector, D.R. Horton Pillars of Fire Westminster, Colorado. Conducted a screening level asbestos and lead-based paint assessment of 5 buildings on the property. Interviewed site personnel concerning potential environmental liabilities and reviewed the Phase I report. Reviewed and assessed geotechnical subsurface soil borehole drilling and prepared sand isopach and structure contour maps to evaluate potential and existing upgradient contaminant migration on-site.

- Technical Resource, D.R. Horton Catellus Property, Commerce City, Colorado. Conducted a peer review of existing documents and regulatory determinations for this property. Plans include the development of single or multiple housing at this property that is underlain by a contaminant plume of a by-product of nerve gas that was produced by the Rocky Mountain Arsenal (RMA) in the 1950's. TCE solvent has also been detected in the groundwater under the site. The RMA has established a North Boundary treatment system adjacent to the property. Concerns include health and safety, as well as plume migration and mitigation. Also provided technical review of the Phase I ESA conducted for this site.
- Project Manager, City of West Valley, Utah Auto Properties Salvage Brownfields Redevelopment. Managed the Phase II assessment activities at this Brownfields potential redevelopment site at the intersection of the proposed western beltway west of Salt Lake City. Installed 8 temporary wells and collected groundwater samples. Developed a "developers" brochure that identified the relevant issues at this site, including analytical data, to be distributed to potential redevelopers at site. Financial support for the project was from State of Utah development grants.
- Project Manager, NPDES Groundwater Assessment Work Plan and Sampling and Analysis Plan (SAP) - Nebraska Public Power District. Completed a Work Plan and SAP for a groundwater assessment for this active RCRA permitted facility. The assessment was required by the Nebraska Department of Environmental Quality (NDEQ) for the RCRA permitted ash disposal facility's proposed dike extension. The study included soil and groundwater sampling, including well installation and monitoring well permitting. The implemented study emphasizes the study of infiltration and communication potential to an underlying and regionally significant aquifer. The parameters were used in a HELP model simulation. A hydrogeologic assessment report was submitted to the NDEQ for review.
- Technical Oversight, NEPA Transmission Line Project Basin Electric Power Cooperative. Provided technical oversight on a Proposed 230kV Transmission Line ER/EA near Rapid City, South Dakota for the Rural Utilities Service. Provided guidance to field teams and oversight of the technical aspects of the project. Included a PUC permit application to the Public Utilities Council.
- Technical Expert, Testimony preparation for Power Utilities Commission and Flood Plain Study for Pennington County, South Dakota, Basin Electric Power Cooperative. Prepared expert witness testimony for the Public Utilities Commission for the Rapid City DC Tie Project. Also prepared a 100-year floodplain study using the ACE HEC-2 flood model for Rapid Creek near Rapid City, South Dakota.
- Technical Manager, NEPA Support for a 230 kv Transmission Line from Teckla to Carr Draw, Campbell County, Wyoming. Basin Electric Power Cooperative. Environmental Assessment for the U.S. Forest Service Douglas, Wyoming for a 73.3-mile long power transmission line east of Gillette, Wyoming. Includes an assessment of the sensitive and management indicator species in the Forest Plan.

- Technical Manager, Providing a Biological Assessment/Biological Evaluation for the Teckla to Carr Draw 230 kv Transmission Line in Campbell County, Basin Electric Power Cooperative. Biological Assessment/Biological Evaluation for the U.S. Forest Service in cooperation with the U.S. Fish and Wildlife Service. Includes Threatened and Endangered Species, Sensitive Species, and Forest Management Species evaluation. Field surveys included winter raptor survey, swift fox survey, black-tailed prairie dog survey, and multiple mountain plover surveys.
- Technical Oversight and Assistant Project Manager, NEPA Combustion Turbine and Microwave Tower Project – Basin Electric Power Cooperative. Provided project management and technical oversight on a proposed ER/EA project for the Rural Utilities Service project in Campbell County, Wyoming. The project included 3 combustion turbines at different locations and two ancillary microwave towers to provide power to the local grid and to support coal-bed methane development power needs in the basin. Provided technical guidance to field teams, conducted field surveys, and provided oversight of the technical aspects of the project.
- Technical Oversight, NEPA and Macro-Corridor Study Basin Electric Power Cooperative. Provided technical oversight on a proposed ER/EA project with scoping for the Rural Utilities Service project in Campbell County, Wyoming. The project includes a 70-mile long 230 kV transmission line and converter station east of Gillette, Wyoming. The transmission line will provide power to the local grid and to support coal-bed methane development power needs in the basin. Provided guidance to field teams, conducted field surveys, will conduct public meeting in the winter of 2001, and provided oversight of the technical aspects of the macro-corridor project, including technical review.
- Technical Reviewer, NEPA Support for an 80-100 MW Simple Gas Turbine in Eastern South Dakota. Basin Electric Power Cooperative. Environmental Assessment for the U.S. Department of Energy Western Area Power Administration (RUS Cooperating Agency). Included an EA and Biological Report.
- Technical Manager, Environmental Assessment for Defense Access Road, Pueblo Colorado. Development of reader-friendly EA and decision document for road extension and improvements in support of US Army Pueblo Chemical Depot weapons demilitarization program. Leads interagency team including representatives from Pueblo Chemical Depot, Pueblo County Public Works, Colorado Department of Highways. Responsible for scoping, agency interaction, public communication process, and FHWA acceptance of EA leading to Finding of No Significant Impact. This project will generate the first reader-friendly visual EA ever produced in Colorado and the third in the US.
- Project Manager, Numerous Phase I and II Site Assessments in the Western U.S. -Various Private Sector, Property Management and Lending Institutions. Managed the assessment of numerous Phase I site assessments under American Society for Testing and Materials (ASTM) standards. Many of the site assessments included asbestos sampling, radon and a few included lead issues (lead-based paint and lead in drinking water). Several of the sites required additional Phase II assessments, primarily addressing subsurface soil and groundwater issues. Projects were usually low cost and quick turnaround.

- Assistant Project Manager, Nance/Brown Alluvial Valley Floor Environmental Impact Statement (EIS) - Ashland, Montana. Managed the exchange of coal under the Tongue River Alluvial Valley Floor for Federal Coal under Bureau of Land Management (BLM) control for the Miles City, Montana BLM Area Office. Site was adjacent to the Northern Cheyenne Tribal Boundary along the Tongue River. The project was proposed as a Third-Party EIS for a private entity Montco.
- Program Manager, Global Engagement Environmental Assessment (EA) US Air Force Academy. Managed Environmental Assessment for an in the field class instruction of wartime engagement of the enemy. Includes landing site development, patrols, and wartime simulations along the Front Range in Colorado. Issues include erosion and sedimentation, noise, and threatened and endangered species. Noise monitoring activities were conducted during and after the training activities to assess the potential noise impacts to local residents.
- Program Manager, Jack's Valley Update Environmental Assessment (EA) US Air Force Academy. Oversaw the development of this Environmental Assessment Update to Jack's Valley at the U.S. Air Force Academy. Jack's Valley is the primary training area for cadets. A detailed Ecological Simulation Model (EDYS) was used to quantitatively assess the various impacts from more than 100 training activities and outside users of the valley. This project included the oversight of the modeling subcontractor and coordination of the Jack's Valley Users Group that was organized to determine the Academy's required end point uses and acceptable environmental consequences of the uses in the valley.
- Project Manager, Water Supply Improvement and Assessment Project, Nebraska Public Power District Sheldon Station, Nebraska. Conducted pumping tests and water quality sampling for nine existing 18-inch diameter production water supply wells at this electric generating power station. These studies were initiated to improve the produced quality of water and improve well efficiency. The testing also included video inspection on a number of the wells and conversion of two of the wells to submersible pumps. In addition, six pilot holes were drilled to a depth of approximately 300 feet and packer tests conducted at specific intervals to evaluate the water quality of this aquifer. Two additional production wells were drilled and completed in a specific zone of this aquifer where the water quality was optimal. Pumping tests and water quality sampling was conducted to calculate the specific yield of the wells for pump sizing and influent water quality during pumping.
- Project Manager, Asbestos and Lead-Based Paint Assessment Program Fort Carson, Colorado. Pilot study for Army post under a Tulsa U.S. Army Corps of Engineers contract. Delivered asbestos and lead-based paint work plans and base-wide management plans. Conducted a pilot study for ACM and lead-based paint, developed and organized a database, and completed more than 30 additional full Asbestos Hazard Emergency Response Act (AHERA)/State of Colorado certified ACM inspections and abatement cost estimates.
- Chief Hydrologist, Property Assessments to Evaluate Regulatory Compliance Issues -Peter Kiewit Sons' Company. Responsible for evaluating numerous existing properties and prospective properties for regulatory compliance. The screening process was similar to Phase I environmental transactional screens and site assessments with the particular intention of avoiding costly compliance programs prior to purchasing properties. Involved in providing litigation support in numerous issues involving water-related issues.

- Principal-In-Charge, Phase I Site Assessment Ball Aerospace, Boulder, Colorado. Provided oversight of a Phase I site assessment to enable properties to be sold or leased.
- Chief Hydrologist, Environmental Assessment (EA)/Environmental Impact Statements (EIS) - S&G Mining Company, Montana and Nevada. Conducted an EA and provided oversight for the development of an EIS to comply with NEPA for various mining properties.
- Project Manager, Site Assessment Colorado National Bank, Larimer County, Colorado. Provided oversight for the installation of wells and sampling of groundwater and soil for a property downgradient of the Larimer County Landfill. Coordinated activities with county personnel and provided oral testimony in Larimer County Court on behalf of the client.
- Project Manager, Site Assessment/Risk Assessment Essex Group, Inc., Hoisington, Kansas. Conducted a site assessment and preliminary risk assessment of a leaking process water pond containing metal wastes (primarily copper) and sludge.
- Project Manager, Phase II Environmental Site Assessment PPG Industries, Inc., Denver, Colorado and Kansas City, Missouri. Conducted Phase II site assessments at two facilities. The results indicated that free diesel fuel product on the groundwater table was found at one facility located in Colorado. The other facility located in Kansas involved an asbestos abatement issue.
- Site Assessor, Phase I Environmental Site Assessments Confidential Client, Colorado, Wyoming, and Nebraska. Worked with legal counsel to help a confidential client interested in divesting itself of numerous properties across the United States. Conducted Phase I site assessments on properties containing underground storage tanks (USTs), solid waste disposal facility, oil and gas wells, oil and gas transmission lines, abandoned surface and underground coal mines, farm wastes, and other environmental issues.
- Technical Reviewer, Phase I and II Site Assessment Chevron U.S.A., Western United States. Reviewed numerous environmental site assessments for technical completeness for various retail outlets (gas stations).
- Field Assistant, UST and Contaminated Soil Removal/Disposal Walter Industries, Aurora, Colorado. Provided site assistance and oversight with UST removal and soil removal/disposal for this gasoline and diesel fuel contaminated site.
- Project Manager, Phase II Environmental Site Assessment Young Electric Sign Company, Denver, Colorado. Completed well installation, soil sampling, and groundwater sampling for this site. The site previously contained an UST and was located in a business park along Sand Creek.
- Research Assistant, Assessment of Housing Development and Grazing Activities on Mountain Streams North of Woodland Park, Colorado - U.S. Department of Agricultural Forest Service, Rocky Mountain Experiment Station. Collected surface water samples, measured streamflow, conducted laboratory analysis, and completed a groundwater monitoring well in this mountain region northwest of Colorado Springs, Colorado.

- Chief Hydrologist, Rocky Mountain Region Peter Kiewit Construction Company. Conducted hydrogeological investigations, including drilling, aquifer pump tests, and groundwater quality sampling for production water wells for various construction projects.
- Project Manager, UST Compliance Program and Database Martin Marietta, Waterton Facility. Developed a database of approximately 100 past and present USTs to assist with compliance with the State of Colorado UST Program.
- Project Manager, UST Inventory and Database Fort Carson. Developed an UST database for Fort Carson, Colorado for use in inventory and assessment reporting and tracking. Database was compiled in Excel.

# STORM WATER

- Technical Advisor/Quality Control Oversight, Storm Water Pollution Prevention Plans, Hunt Building Company (2004-2005). Storm water pollution prevention plan preparation for the Buckley Air Force Base Housing Privatization Project. The SWPPP for this project encompassed local CDPHE requirements, EPA Region 8 requirements, US Air Force requirements, and the City of Aurora, Colorado requirements.
- Technical Advisor, Storm Water Pollution Prevention Plans Colorado, Arizona, and Wyoming - Federal Express. Completed storm water pollution prevention plans for 20 Federal Express facilities subjected to the storm water regulations from outside storage, fueling, or truck washing facilities. The facilities were located in Colorado, Wyoming, and Arizona, and services included a dye tracer study at one facility and completion of Notice of Intent.
- Technical Advisor/ Quality Control Oversight, Storm Water Management Plans DR Horton (2004-2005). Fourteen storm water management plans for DR Horton, Continental and Melody series. These storm water management plans are consistent with CDPHE requirements and multiple municipal separate storm sewer (MS4) programs throughout Colorado's Front Range.
- Technical Advisor/Quality Control Oversight, Storm Water Management Plans, Construction Site Inspections, and Training – Remington Homes (2004-2005). Provided technical oversight for the completion of seven storm water management plans for Remington Homes. These storm water management plans are consistent with CDPHE requirements and multiple municipal separate storm sewer (MS4) programs throughout Colorado's Front Range. In addition, the team conducted 14-day and post weather event inspections and trained on-site inspectors for Remington Homes.
- Technical Advisor/Quality Control Oversight, NPDES Municipal Separate Storm Sewer Annual Reporting and Program Implementation (2004-2005) Douglas County School District and Academy 20 School District. Annual reports and coordinated program implementation for these school districts to ensure compliance with CDPHE's municipal separate storm sewer requirements.
- Municipal Industrial Discharge Permitting and Site Sampling, DR Horton Continental Series (2003-2005) Technical Advisor/Quality Control Oversight. Completed permit

writing and industrial discharge sampling for the Alpers Farm infill home construction site in Littleton, Colorado. In addition to providing technical services for this project, Mr. Bowlby completed a wetlands assessment, 404 permit, species consultation with the Colorado Division of Wildlife, and asbestos building inspection.

- Project Manager, Storm Water Permit Applications for Several Industrial Facilities -City of Colorado Springs, Colorado. Completed individual storm water permit applications for facilities owned or operated by the city, including a maintenance shop, small landfill, bus terminal, sludge/fly ash disposal facility, and three electric power generating facilities. Prepared storm water sampling protocols and conducted internal training for city personnel. Proposed several storm water drainage modifications to reduce storm water pollution potential.
- Project Manager, Storm Water Group Permit Application Coors Ceramics Company. A storm water group permit application was prepared under a very tight deadline. The sites were located primarily in Colorado, Tennessee, and in the southeast. A storm water sampling protocol was prepared and internal training conducted so plant personnel could collect samples. The application and storm water pollution prevention plan was coordinated with and implemented by facility personnel.
- Project Manager, Sitewide and Flowing Adit Storm Water Permit Applications Parcel, Mauro, Hultin & Spaanstra/Confidential Gold Mining Client. Two storm water permit applications were prepared for this high altitude gold mine site located in southern Colorado. The first application was for a site wide storm water permitting and incorporated best management practices and monitoring already in place at the site. The second application was for discharges from two abandoned adits. It was argued that the flow increased substantially during snowmelt and precipitation runoff and was therefore representative of a storm water event. Of particular concern were low pH and metals concentrations that discharged to a cold-water fishery.
- Project Manager, Storm Water Permit Application Evaluations Martin Marietta, Various Facilities. An evaluation was conducted of several Martin Marietta facilities to evaluate whether storm water permits were required. Some facilities met the requirements of the regulations, and others did not. Information was compiled to determine that no permit application was required. For instance, one site in Colorado (Deer Creek) required a permit application, while a second site (Broadway) did not, since all storm water was contained on site.
- Project Manager, Storm Water Assessment and Sampling Programs Martin Marietta, Waterton Facility. A detailed storm water assessment was conducted 1 year before the Colorado regulations were promulgated. More than 75 storm water outfalls were identified. A sampling protocol was developed, and representative outfalls were sampled using grab and automatic sampling and flow monitoring equipment. A storm water permit application was prepared. During the evaluation, a few sites were discharging during the dry weather survey. Intrusive methods, such as dye testing, video inspection, and smoke testing, were used to identify the source of the discharge. As a result, the pipelines were either plugged or the source (usually cooling water condensate) was rerouted to the sanitary system. The cooling

water was a concern because of residual chlorine in the water and the potential harm to biota in the receiving waters.

- Technical Advisor, Storm Water Audit Monsanto, Dayton, Ohio. Conducted a storm water audit of this chemical manufacturing facility. The results of the audit were incorporated into the facility's storm water permit application and pollution prevention plan.
- Project Manager, Storm Water and Compliance Audit Detroit Diesel, Cambridge, Ohio. A storm water and compliance audit was conducted at this diesel engine manufacturing facility. The audit included locating storm water outfalls and review of existing best management practices and housekeeping at the site. The results were incorporated into the storm water permit application and pollution prevention plan. The application was used as a template for other Detroit Diesel facilities.
- Technical Advisor, Storm Water Training General Signal Company, Stamford, Connecticut. Prepared documentation and training materials for corporate and facility personnel. The 1 day storm water training session was conducted at the corporate headquarters in Connecticut and included regulatory considerations, pollution prevention plans, and sampling protocols and procedures.
- Technical Advisor, Storm Water Permit Applications Hewlett Packard, Colorado Springs, Colorado. Storm water permit applications were prepared for this components manufacturing facility in Colorado Springs, Colorado. A sampling protocol for facility personnel was prepared. The applications included pollution prevention plans for the facilities.
- Trainer, Storm Water Training to Facility Managers Kimberly Clark, Roswell, Georgia. Prepared documentation and training materials for corporate and facility managers. The oneday training session was conducted at the corporate headquarters in Georgia and included an overview of various state and federal regulations, pollution prevention plans, and sampling protocols and procedures.
- Technical Advisor, Storm Water Audit and Permit Application Rhone Polenc, Cranbury, New Jersey. A storm water audit was conducted for this New Jersey facility. A storm water sampling protocol was prepared for facility personnel. A storm water permit application was prepared and submitted. The application included sampling data and a pollution prevention plan for the facility.
- Technical Advisor, Storm Water Audit Alcoa Aluminum, Davenport, Iowa. A storm water audit was conducted for this aluminum manufacturing facility in Iowa. The results of the audit were incorporated in the facility's storm water permit application and pollution prevention plan.
- Project Manager, Group Storm Water Permit Application and Sampling Program -Safety Kleen Nationwide. A group storm water permit application was completed for approximately 200 Safety Kleen hazardous waste storage and transportation facilities nationwide. A storm water sampling protocol was developed. Internal training was conducted for sampling approximately 25 facilities that involved 20 consulting offices. The internal training was conducted in Denver, Colorado, and included all aspects required for the

application, including outfall location, sampling techniques and demonstration, and pollution prevention audits. Automatic sampling and flow monitoring equipment was provided and used at most facilities.

- Project Manager, Storm Water Permit Applications in Missouri Safety Kleen. Individual storm water permit applications were prepared for six Safety Kleen facilities in Missouri that were restricted by regulation from participating in the group application. The application included monitoring results and a storm water pollution prevention plan for each facility.
- Principal-In-Charge, Storm Water Permit Application Wright & McGill. Prepared a storm water permit application for this fish hook manufacturing facility. A storm water sampling protocol was developed for facility personnel, and a pollution prevention plan was prepared and included in the application.

## MINING

- Technical Manager, Granite Gravel Quarry near Laramie, Wyoming Martin Marietta Corporation. Evaluated and assisted with the permitting of a gravel quarry operations in southeastern Wyoming. The evaluation determined that the underlying geology would prevent the migration of contaminants to groundwater. Included an assessment of best management practices for reclaimed areas and other permitting issues required by the Wyoming Department of Environmental Quality.
- Chief Hydrologist, Community Liaison: Private Water Well and Water Supply Issues Kiewit Mining and Engineering Company. Evaluated water well complaints from private residents concerning impacts of blasting, water quality issues, and general well construction issues. Provided advice to private residents concerning improving water well yield, water quality treatment, and in some cases, installed new water wells for domestic, irrigation, or stock watering purposes.
- Technical Expert, Expert Testimony before the Wyoming Department of Environmental Quality – Big Horn Coal Company. Provided expert testimony before the Water Quality Control Board of the Wyoming DEQ regarding the impacts of blasting on private water wells. In addition, provided testimony on the post-mining impacts of mining on groundwater quality. The application to mine was challenged by the Powder River Basin Resource Council and a few private residences in the vicinity of the mine. The permit application was granted by the DEQ and mining proceeded. The Big Horn Mine continued to respond to private landowner complaints concerning blasting and investigated and successfully resolved approximately 10 additional complaints.
- Chief Hydrologist, Drinking System Compliance for Several Mines Peter Kiewit Sons' Company. Provided Safe Drinking Water Act compliance and technical support for remote mine sites in the western United States. This effort ranged from the study and installation of wells (including well permits) and pumps to the establishment of sampling and reporting systems to comply with SDWA.
- Chief Hydrologist, Coal Mining Permit Applications, Regulatory Compliance, and Reclamation Activities - Black Butte, Rosebud, Big Horn, Decker Coal Mines and Developing Properties. Managed coal mining permit applications, regulatory compliance

and negotiation issues, and reclamation at several coal-mining properties located primarily in Wyoming, New Mexico, and Montana. Permit applications and permit compliance including monitoring well permitting and appropriations, pre-mining baseline studies, duringmining impact analysis, and post-mining reclamation and groundwater impact analysis. More than 500 monitoring and production wells were installed and monitored. Pre-mining studies involved assessment of all aspects of the hydrologic balance, particularly surface water and groundwater quantity and quality. Alluvial valley floor assessments were particularly emphasized where agriculture could be impacted. During-mining assessments ranged from blasting impacts to pit dewatering and discharge. Post-mining assessments included reclamation revegetation and erosion control, drainage reconstruction, and groundwater impact analysis from spoils. Other special projects such as final impoundment design and impact analysis to reduce reclamation costs and to provide recreation opportunities were also conducted.

- Chief Hydrologist, Gold Mining Permit Application, Water Supply, and Heap Leach Design Rawhide Mining Company Near Fallon, Nevada. Assisted in preparation of a permit application for a heap leach gold mine near Fallon, Nevada. The project was a joint venture with Kennecott. Also investigated potential water supplies for this remote mine site and installed pilot wells, appropriated well permits, designed production wells, conducted water quality sampling/analysis, including aquifer pumping tests, and a step-drawdown test. The operation required a minimum of 1,000 gallons per minute for the heap leach and office complex. Assisted with the design of the heap leach pad leak detection system and other environmental issues.
- Chief Hydrologist, Testimony in Federal Claims Court Holland and Hart, Washington D.C. The Montana Department of State Lands required the Decker Mine to change mining methods and pit dimensions from a strictly dragline operation to a dragline/shovel operation. This change and realignment increased the cost of mining and created a significant groundwater inflow problem to the pits. The existing contracts were challenged as a result of this unanticipated action and resulted in testimony before the Federal Claims Court in Washington, D.C.
- Chief Hydrologist, Gravel Mine Permit Applications and Impact Analysis at Two Sites in Southeastern Wyoming. Peter Kiewit Construction Group. Provided oversight with the application for a permit with the Wyoming Department of Environmental Quality at two sites in southeastern Wyoming. Gravel from the sites was used for highway construction. Also, studied the impact from the mining activity on adjacent landowners, with particular attention to groundwater.
- Chief Hydrologist, Alluvial Valley Floor Coal Exchange Peter Kiewit Sons' Company, Whitney Benefits Project, Wyoming. Worked on the alluvial valley floor BLM coal exchange. Evaluated existing and potential water quality, hydrology, and hydrogeology issues and potential liabilities, and evaluated potential mine plan alternatives.
- Hydrologist, Regulatory Compliance Activities Phillips Petroleum Company. Installed surface water monitoring system near Gillette, Wyoming. The system included the installation and renovation of parshall flumes and weirs, surface water flow, and quality

monitoring instrumentation in ephemeral and intermittent tributary streams to the Powder River.

- Chief Hydrologist, Coal Mining Permit Applications, Regulatory Compliance, and Reclamation Activities - Black Butte, Rosebud, Big Horn, Decker Coal Mines and Developing Properties. Managed coal mining permit applications, regulatory compliance and negotiation issues, and reclamation at several coal mining properties located primarily in Wyoming, New Mexico, and Montana. Permit applications and permit compliance including pre-mining baseline studies, during-mining impact analysis, and post-mining reclamation and groundwater impact analysis. More than 500 monitoring and production wells were installed and monitored. Pre-mining studies involved assessment of all aspects of the hydrologic balance, particularly surface water and groundwater quantity and quality. Alluvial valley floor assessments were particularly emphasized where agriculture could be impacted. During-mining assessments ranged from blasting impacts to pit dewatering and discharge. Post-mining assessments included reclamation revegetation and erosion control, drainage reconstruction, and groundwater impact analysis from spoils. Other special projects such as final impoundment design and impact analysis to reduce reclamation costs and to provide recreation opportunities were also conducted.
- Project Manager Providing Assistance with Negotiating and Implementing a Compliance Agreement with the Colorado Attorney General's Office - Parcel, Mauro, Hultin & Spaanstra. Managed negotiation and implementation of the compliance agreement in association with client's counsel for a confidential gold mining client. The negotiation included several interim and final reclamation and remediation issues under a very tight schedule. Under the agreement, the client was required to improve active wastewater treatment, evaluate passive treatment, implement interim corrective measures for acid mine drainage, improve runoff control, evaluate options to remediate the valley fill heap leach, and reclaim the site. Site conditions permitted access for reclamation activities only four to five months of the year. Permit and work plan acceptance by the agencies and the attorney general's office. On-site work activities were closely controlled and monitored.
- Chief Hydrologist, Testimony in Federal Claims Court Holland and Hart, Washington D.C. The Montana Department of State Lands required the Decker Mine to change mining methods and pit dimensions from a strictly dragline operation to a dragline/shovel operation. This change and realignment increased the cost of mining and created a significant groundwater inflow problem to the pits. The existing contracts were challenged as a result of this unanticipated action and resulted in testimony before the Federal Claims Court in Washington, D.C.
- Technical Advisor for Evaluation of Groundwater, Hydrological, and Permitting Implications of a Potential Purchase of a Copper Mine in Chile - Magma Copper. Provided technical assistance to Magma Copper with the evaluation of the hydrological and hydrogeological implications of the purchase. Also, evaluated potential water supplies for the project.
- Chief Hydrologist, Aquifer Testing for Groundwater Inflow Containment NERCO Mining near Decker, Montana. Conducted aquifer testing for groundwater inflow containment for an active NERCO mine in southeastern Montana. The study included aquifer pump tests and evaluation of aquifer hydraulic properties to assist with the design of pit inflow and groundwater containment structures.

- Chief Hydrologist, Gravel Mine Permit Applications and Impact Analysis at Two Sites in Southeastern Wyoming - Peter Kiewit Construction Group. Provided oversight with the application for a permit with the Wyoming Department of Environmental Quality at two sites in southeastern Wyoming. Gravel from the sites was used for highway construction. Also, studied the impact from the mining activity on adjacent landowners, with particular attention to groundwater.
- Chief Hydrologist, Evaluation of the Potential Environmental Impacts Prior to Considering the Purchase of Mining Properties in the U.S., Peter Kiewit Sons' Company. Evaluated environmental consequences and state regulatory climate for the potential purchase of surface and underground coal mining properties in the western and eastern United States, gold mining properties in Montana and Nevada, and oil shale properties in Colorado.
- Project Specialist, Abandoned Mine Reclamation, Montana Department of State Lands, Abandoned Mine Lands Division. Worked on the design and assessment of spoil pile stabilization and mine adit discharge control near Red Lodge, Montana. The project included the removal of spoil piles located in critical floodways and stabilizations by reconfiguring, applying suitable growth media, and reseeding spoil piles. The project also included an assessment of the impacts of flowing adit groundwater discharges on receiving water quality and an assessment of the potential to close and stabilize adits. The project included construction oversight and field verification.
- Chief Hydrologist, Mining Regulatory Compliance Olinghouse Gold Mine, Peter Kiewit Sons' Company. Worked on various compliance issues for this gold mine near Reno, Nevada. The projects included waste handling, permitting, and preliminary environmental impact assessment.
- Chief Hydrologist, Alluvial Valley Floor Coal Exchange Peter Kiewit Sons' Company, Whitney Benefits Project. Worked on the alluvial valley floor BLM coal exchange. Evaluated existing and potential water quality, hydrology, and hydrogeology issues and potential liabilities, and evaluated potential mine plan alternatives.
- Technical Expert, Expert Testimony Before the Wyoming Department of Environmental Quality – Big Horn Coal Company. Provided expert testimony before the Water Quality Control Board of the Wyoming DEQ regarding the impacts of blasting on private water wells. In addition, provided testimony on the post-mining impacts of mining on groundwater quality. The application to mine was challenged by the Powder River Basin Resource Council and a few private residences in the vicinity of the mine. The permit application was granted by the DEQ and mining proceeded. The Big Horn Mine continued to respond to private landowner complaints concerning blasting and investigated and successfully resolved approximately 10 additional complaints.
- Chief Hydrologist, Drinking System Compliance for Several Mines Peter Kiewit Sons' Company. Provided Safe Drinking Water Act compliance and technical support for remote mine sites in the western United States. This effort ranged from the study and installation of wells and pumps to the establishment of sampling and reporting systems to comply with SDWA.

## **TELECOMMUNICATIONS**

- Regional Manager, Comcast Communication. Regional manager and project manager for several work orders in the region for Comcast, including SPCC plans, Tank permitting, Air APEN permits, Asbestos Building Inspections, Mold oversight, and other regulatory permitting tasks. Provides technical resource and technical review and oversight to a vast array of projects.
- Project Manager/Regional Manager, Confidential Telecommunications Client. Rapid response to a site in Pueblo, Colorado where the subcontractor had excavated fill material that would not be accepted by the local landfill for disposal. responded, Soil/fill materials were collected for analysis from the waste pile, contracted with a backhoe company and excavated a trench. In the trench, samples were screened with a PID, a depth to groundwater was measured in an adjacent well, and samples were collected for the trench. Assisted client in getting approval from the local landfill for disposal, arranged for the transport of the materials, and assisted with a thorough analysis of potential liabilities associates with the installation of a tower at this location.
- Contract Manager, Qwest, April 2004 2008. Contract manager for Qwest national contract. Projects typically include regulatory compliance; building assessments for asbestos, LBP, and other issues; corporate template development; small cleanup projects such as drains and sumps; and risk assessment. Negotiating new national contract for 5 year contract extension. Worked with all Qwest regional environmental managers and corporate real estate personnel on a broad array of projects including asbestos building inspections, SPCC plans, vault cleanouts, UST/AST permitting and leak detection system installation, rapid response, commuter trip reduction program, carbon emissions inventory, and various state and federal permitting assistance.
- Project Manager/Regional Manager, Confidential Telecommunications Client. Completed SPCC plan for a new Above-Ground Storage Tank at a switch located south of Denver. The tank was installed without pre-construction approval from the South Metro Fire District and provided assistance in gaining approval. Conducted spill response and SPCC annual training for facility personnel and established the monthly inspection procedures and documentation. Also, obtained a permit from the State Agency for the AST. Completed a Chemical Safety Plan for this tank in compliance with the Uniform Fire Code and the South Metro Fire Rescue.
- Project Manager/Regional Manager, Confidential Telecommunications Client. Assisted client with Vaulted AST permitting issues at switches located south and north of Denver, Colorado. Conducted confined space entries at two sites, removed and disposed diesel fuel-contaminated rainwater from the vaults, inspected the tanks, and developed plans and specifications since existing drawings could not be found by client. Assisting client with various permitting issues for these tanks and is in the process of completing SPCC plans for the vaulted tanks. Developed emergency evacuation plans for these facilities. Assisting client by overseeing contractors that will install leak detection instrumentation in compliance with State Tank Regulations and assisting with the modification of landscaping at these sites to eliminate the source of water to these vaults.

- Project Manager/Regional Manager, Confidential Telecommunications Client. Conducted inspections at over 70 city and county of Denver cellular sites for the Denver Fire Department. Completed Hazardous Materials Inventory Statements and Hazardous Materials Management Plans for these sites in compliance with the Uniform Fire Code and local ordnances. Provided spill response and notification training for client's cellular site technicians responsible for these sites and integrated quarterly inspections during the technicians regularly scheduled maintenance activities for these sites.
- Project Manager/Regional Manager, Confidential Telecommunications Client. Conducted inspections for 44 south and over 30 west Denver-metro cellular sites for the South Metro Fire Rescue. In the process of completing Chemical Inventory Statements and Chemical Safety Plans for these sites in compliance with the Uniform Fire Code, International Fire Code and local ordnances. Also designed and implemented a similar program in the Salt Lake City-metro area. Developed and implemented training program for cellular site technicians responsible for these sites.
- Project Manager/Technical Reviewer, Confidential Telecommunications Client. Conducted due diligence Phase I site assessments at numerous sites in Wyoming, Colorado, Idaho, and Utah. Completed NEPA checklist and agency reviews under NEPA for these sites. Presently working on two Phase II site assessment follow-ups and compliance issues with the State Historical Society.
- Project Manager/Asbestos Inspector, AirTouch Cellular. Rapid response to a site located in downtown Denver where the contractor for client responsible for retrofitting the basement of an apartment complex for a cellular site encountered suspicious-looking thermal system insulation. The contractor encountered these suspicious materials and the materials were sampled for and contained asbestos. The asbestos was apparently removed by the owner of the apartment. Also, sampled contractors roll-off for asbestos-containing materials and provided advice to the contractor on disposal options.
- Technical Advisor/Reviewer, Commet/AirTouch Cellular. Completed Tier II reports for over 350 sites formerly owned by Commnet. Commnet was acquired by AirTouch Cellular prior to the merger. These sites were located in 16 states in the western and mid-western U.S. Completed the Tier II reports for these sites in 20 days and submitted the reports on time. Also, developed a Microsoft Access database for the Tier II reports to assist client with reporting in subsequent years.
- Regional Manager, Confidential Telecommunications Client. Provided regulatory support for a number of miscellaneous issues, including local fire ordnances, waste disposal, confined space and OSHA issues, and state and federal permitting issues. Provided various pollution prevention strategies and provided advice on the location of future cellular sites. Assisting with the evaluation of other related compliance issues.
- Assistant Contract Manager/Regulatory Specialist, Qwest. Provided regulatory review of several federal regulations for corporate staff at a national telecommunications company. The reviews are used in establishing corporate policies and procedures.

- Technical Reviewer/Asbestos Inspector, Nextel and Qwest. Conducted numerous Phase I and II site assessments for two national telecommunications companies. Conducted NEPA reviews at these sites. Conducted a limited asbestos survey at one of the facilities.
- Assistant Contract Manager/Technical Expert, USWEST. Assisted the corporate EH&S group at a national telecommunications company in establishing their national SPCC program. Included establishing a template to be used by all company personnel, inspections at over 20 facilities, development of SPCC plans at these facilities, and development of action items for regulatory compliance at these facilities. Assisted in developing a SPCC training program for company personnel, with emphasis on spill response.

# WATER AUDITS AND ASSESSMENTS

- Chief Hydrologist, Various Coal and Gold Mines in Wyoming, Nevada, and Montana. Conducted complete hydrologic balance assessments of several active and proposed mines in these western states. Included provided an influent potable water source by installing groundwater production wells, water well permits and appropriations, assessing shop and office water needs, monitoring for Safe Drinking Water Act compliance, and predicting and monitoring discharges under an NPDES discharge permits. Included installing flow monitoring devices, including weirs or flumes, to measure effluent flows. Evaluated containment pond efficiencies, including florescent dye studies and instituted pond modifications to eliminate retention short-circuiting. Land application practices were also implemented to reduce discharges and the impacts to vegetation, soil, and groundwater were preliminarily evaluated.
- Project Manager, Sutherland Ethanol Plant. Evaluated water inflow, plant water usage, and outflows at an ethanol production plant in Nebraska. Potable water was provided by a water well and the focus of the audit and evaluation was to eliminate discharges. Plant processes included personnel use, boilers and blow down, and cooling towers. Effluent was discharged to two unlined ponds. The effectiveness of the unlined ponds, evaporative rates, and potential leakage to groundwater was assessed.
- Project Manager, Wright McGill. Potable influent water and discharge to the Denver Metro
  wastewater facility was assessed for this fishhook manufacturing facility. Monthly potable
  water bills and influent quantity was compared to effluent quantity. Process use for
  manufacturing was also determined. The audit determined that the effluent quantity was
  over predicted, due to the improper installation of a Palmer Boules flume and a new flume
  was installed. The result was a significant savings in discharge fees and compliance with
  Denver Metro pre-treatment regulations.
- Technical Water Lead, Confidential Timber Mill. The uses and discharge of water were assessed for this South Dakota timber mill. The processing of coniferous pine trees into wood products utilizes a significant amount of water. The assessment focused on water conservation and removing potential sources of discharge to the near-by perennial stream.
- Project Manager, Nebraska Public Power District. Conducted water audit and assessment for a coal-fired power plant south of Lincoln, Nebraska. Included assessment of the plants potable groundwater supply, processes including blow down and cooling

towers, discharge retention pond, and other potential water losses at the plant. Since the plant depended on 9 existing production water wells that were installed in the 1960's, water conservation was essential. Replaced one of the process wells with a 18-inch diameter well, evaluated efficiencies in the cooling process, and evaluated various other methods of detainment since discharges did not consistently meet in-stream standards during the duration of in-stream low flow conditions.

- Project Manager, Aquilla (formerly West Plains Energy) Power Plant in Liberal, Kansas. Assessed influent water and discharges to an unlined pond system. Water was utilized in cooling towers and the recycling of cooling water was essential to conserve water and to reduce the quantity of effluent. The focus of the study was to reduce the quantity of water discharged to the unlined retention pond. Water was discharged to the pond and the potential toxicity of the cooling tower water was assessed.
- Project Manager, Parcel, Mauro, Hultin & Spaanstra. Conducted inflow versus effluent
  water assessment for a confidential gold mine in Colorado. Influent water included surface
  water run-on to the site, pit water, and process water. The assessment focused on reducing
  influent water by diverting clean water run-on and by reducing the quantity of process water
  generated in the processing of the gold. Since the wastewater treatment plant was near
  capacity, the reduction of the quantity of water was paramount to the success of meeting
  effluent standards without replacing the existing wastewater treatment facility.
- Regional Manager, Confidential Telecommunications Client. Existing lawn and landscaping watering activities was entering vaulted diesel tanks through the manhole covers and saturated soil infiltration. The water in these vaults had to be periodically pumped to a vac-truck and treated at an off-site facility, at considerable expense. To effectively remove the source of the water and to conserve water, the landscaping was modified and redistributed, to remove the source of the water in the vaults.

# CLEAN WATER ACT

- Technical Lead, Colorado Discharge Permit System (CDPS) Storm water Permits and Storm water Management Plans. Various Private Developers. Assisted with the development of permits and SWMP's for several development sites in Colorado, particularly along the Front Range. Plans incorporated drainage plans and erosion control BMP's provided by civil design firms, management of solid and hazardous materials, inspection requirements, reporting requirements, and various other related permit compliance issues.
- Technical Lead, CDPS Municipal Separate Storm Sewer System (MS-4) permits, annual reports and compliance activities. Douglas County School District and Academy School District. Developed annual reporting requirements and actions to meet the MS-4 requirements of the school district's MS-4 permits for the school campuses over 1000 students. The State has prepared a list of 5 compliance areas and assisted the school district with each area of compliance. Included site-specific activities such as storm sewer identification, specific BMP's for chemical and fertilizer usage, and school curriculum requirements.

- Project Manager, NPDES Compliance and Production Well Monitoring Program West Plains Energy, Mullegren Station, subcontractor to Regulatory Management Inc. Developed Work Plan to implement a NPDES Compliance program. The implementation of the Work Plan includes sampling the stream and discharge to evaluate the impacts of discharges during low flow conditions and improvements to the production well influent quality. In addition, the wastewater streams form the plant and cooling towers was sampled and evaluated. The algorithm for pumping the well field was modified to take advantage of better influent quality wells geographically and by modifying the duration of pumping and pumping rate. Production wells are sampled the changes in quality are being evaluated to further improve influent quality for the well field.
- Project Manager, NPDES Compliance and Production Well Monitoring Program -Nebraska Public Power District Sheldon Station. The effluent wastewater streams from the cooling towers and other wastewater sources were sampled and data evaluated to identify the water quality of each waste stream prior to discharge to a holding pond and discharge to Salt Creek upstream of Lincoln, Nebraska. Once the quality was determined, specific activities were implemented to improve the effluent quality. These activities included product substitution, operational changes, and improvement of influent water quality. The improvement of influent water quality from the production well field included changing production well algorithms to only utilize wells with acceptable guality and modifying the duration of pumping in several of the existing wells, the redevelopment of one well, installation of grout in the lower portion of the screened interval of a second well, and the construction of one addition production well using current well installation practices and screening only a portion of the water bearing zone, including well permitting and re-appropriations. To date, the facility has been successful in meeting WET tests and has met discharge quality limitations in their existing NPDES permit.
- Project Manager, National Pollutant Discharge Elimination System (NPDES) Compliance and Criteria Manual - Martin Marietta, Waterton Facility. Worked on various NPDES discharge permits issues including interpretation of key elements of the permit, evaluation of acceptable and unacceptable treatment alternatives, and development of an internal criteria manual for use by treatment plant operators. The manual addressed compliance and operations and maintenance issues to help internal operations and ensure compliance.
- Chief Hydrologist, NPDES Permit Application and Compliance Big Horn Coal Company. Reviewed and prepared responses to EPA's proposed NPDES permit applications every 5 years for this mine site in Wyoming. Worked with mine personnel to ensure compliance with the permit and assisted with negotiating specific terms of the permit with the Wyoming DEQ. Installed all monitoring equipment required for compliance. Also evaluated impacts to the receiving perennial stream by collecting data regularly from the discharge points and stream and assessing mass balance upstream and downstream of the discharges.

- Chief Hydrologist, NPDES Permit Application and Compliance Decker Coal Company. Reviewed and prepared the response to the NPDES permit applications every 5 years for these mine sites in Montana proposed by the State of Montana, Water Quality Bureau. Of particular concern to the company State of Montana, Water Quality Bureau proposed was the state's nondegradation provisions. In addition, negotiated acceptable mass loadings for various constituents (particularly selenium and mercury) with the agency. Installed all monitoring equipment required for compliance. Also evaluated impacts to the receiving Tongue River Reservoir, which is used for irrigation and as a warm water fishery, by collecting data regularly from the discharge points and stream and assessing mass balance upstream and downstream of the reservoir.
- Project Manager, NPDES Compliance and Feasibility of Land Application Parcel, Mauro, Hultin & Spaanstra/Confidential Gold Mining Client. In support of an attorney general's negotiated compliance program, managed the feasibility studies for land application and passive wetlands treatment for this confidential high altitude mine site in southern Colorado. The existing wastewater treatment facility was unable to consistently comply with water quality standards for silver and copper. The feasibility of land application was explored with limited success. The feasibility of passive wetlands construction was feasible during warm weather; however, the feasibility was not promising during cold winter months. A combination of wastewater plant efficiency improvements, along with land application and limited bench scale tests for constructed wetlands, was proposed and partially implemented at this site.
- Project Manager, Spill Prevention Control and Countermeasure Plan Martin Marietta, Deer Creek Facility. To comply with this provision of the Clean Water Act, a Spill Prevention Control and Countermeasures (SPCC) plan was developed for this site. The plan included a leak detection plan, secondary containment, spill control procedures/equipment, and general housekeeping measures. The overall cost to the client was minimal for compliance, and internal training was conducted to ensure readiness and compliance.
- Project Manager/ Principal-In-Charge, NPDES Compliance Regarding Discharges from Plant and Remediation Wastewater Treatment System - Eagle-Picher Industries, Inc. Provided technical negotiation, and compliance support for the process wastewater and remediation wastewater treatment systems. Wastewater at the site is treated before being discharged to the publicly owned treatment works (POTW). Of particular concern in the process wastewater was sulfate and metals and in the remedial system pH adjustment. Nitrate was a concern from both systems. The support also included sampling the sewer line pipe system from the plant to the POTW to ascertain the level of natural denitrification in the system and to identify other unknown sources in order to obtain higher discharge loadings in the permit.
- Project Manager, NPDES Compliance and Groundwater Monitoring Program West Plains Energy, Judson Large Station, subcontractor to Regulatory Management Inc. Provided regulatory compliance and agency negotiation support with provisions of the power plant's NPDES permit. The plant utilizes treated groundwater as cooling water. It was in the best interests of the client to maintain a no surface water discharge status at the plant. A groundwater monitoring program and modifications to the plant's total containment lagoon system was required to demonstrate compliance with the state pond liner policy. Wells were

drilled and sampled, and aquifer tests completed to demonstrate that the underlying alluvial and Ogallala aquifers were not affected.

Project Manager, Assistance with Pretreatment Compliance from Industrial Wastewater Treatment Facility - Wright & McGill Co., Commerce City, Colorado. Provided compliance and negotiation support with the local wastewater utility pretreatment compliance group. Process wastewater from the electroplating operation is treated and discharged to the POTW. The facility received a notice of violation for quantity of flow and constituent mass loading. Installed a new flow monitoring device under restrictive conditions, conducted an internal water balance study, and demonstrated compliance with the existing pretreatment permit and persuaded the municipal agency to waive all actions against the client. Also managed several minor modifications to the pretreatment plant in order to comply with the permit conditions.

# WASTEWATER

- Project Manager, Evaluation of the Effectiveness for the Removal of Silver and Copper from Existing Wastewater Treatment Facility - Parcel, Mauro, Hultin & Spaanstra/Confidential Mining Client. Managed the study of, and modifications to the wastewater treatment system at this high elevation mine site. The existing standard polymer and settling system was periodically unable to reduce metal concentrations (particularly silver and copper) below discharge limits. The treated wastewater discharged into a cold-water fishery. The minor modifications included physical changes to the system, development of an operations and maintenance program, and operator training. The changes improved the overall operation of the system and consistency in meeting NPDES permit requirements; however, other means of meeting standards for metals (land application, constructed wetlands, major plant modifications, and changes to the in-stream classification based on metals speciation) were evaluated to increase compliance.
- Project Manager, Operations and Maintenance for Existing Wastewater Treatment Facility - Martin Marietta, Waterton Facility. Managed development and refinement of an operations and maintenance manual for this industrial and domestic wastewater treatment system. This system treated domestic wastewater using activated sludge/trickling filters from the facility with an employee population of up to 10,000 people. Industrial wastewater from various sources such as a chem mill, groundwater interceptor system, and drummed waste were also treated by batch treatment and combined with the domestic discharge. An operations and maintenance manual was prepared to improve plant efficiency and to provide operator training. The manual included items such as regular maintenance, equipment change out, effluent quality compliance, and other issues specific to the treatment process needed.
- Project Manager, Phosphorus Removal Study Martin Marietta, Waterton Facility. Managed the study of phosphorus sources to the domestic and industrial sections of the wastewater treatment plant and potential improvements to the treatment process. The treated effluent was discharged into a tributary of the South Platte River upstream from Chatfield Reservoir. The Denver Regional Council of Governments sponsored a study of phosphorus sources upstream of the reservoir that led to increasingly more stringent limits to point sources of phosphorus. We evaluated product changeout that would result in less phosphorus in the wastewater streams, improvements to plant efficiency, and improved treatment technology

(such as the induction of dissolved oxygen at various locations in the plant). Many of the recommendations were implemented, which resulted in compliance with phosphorus limits imposed in the NPDES permit.

- Project Manager, Hazardous Waste/Industrial Wastewater/Sludge Compliance Program

   Martin Marietta, Waterton Facility. Provided services to support management of the
   industrial and domestic wastewater treatment program for the Waterton facility. Services
   included NPDES compliance, disposal of listed hazardous waste sludge, plant efficiency
   improvements for removal of phosphorus, and tracking and segregation of wastewater
   containing hazardous constituents into the industrial wastewater or hazardous waste
   storage/disposal waste streams. Measured flow in domestic and industrial sewer lines and
   developed water balances. Also, evaluated sludge removal options from the previous used
   aeration basin and potential for contaminant leakage into underlying soils.
- Project Manager, Provide Assistance with 503 Sludge Disposal Program City of Colorado Springs, Colorado. Provided technical assistance to the city before and after the submittal of a 503 permit application to EPA Region 8. In the 1980s, a Denver consultant designed the sludge disposal facility. After the facility was completed, the city constructed a total containment dam to contain surface and groundwater on site. Subsequent studies by the U.S. Geological Survey-Pueblo (USGS) determined that the dam leaked and that nitrate concentrations in groundwater upgradient of the dam were more than 100 times greater than background. Assisted the city in preparing the 503 sludge disposal permit application and, as a subcontractor to a Denver geotechnical firm, designed and implemented a barrier trench remedy to minimize the potential for future groundwater leakage off site.
- Project Manager/ Principal-In-Charge, Compliance and Assistance with Existing Plant and Remediation System Wastewater Treatment System - Eagle-Picher Industries, Inc. Assisted facility personnel by providing technical assistance with implementation of a groundwater extraction treatment system. The system included completion of the extraction well, well permits, and water appropriations for the pumped water to be treated. The system was designed to adjust pH, provide sedimentation/flocculation treatment, and stripping of PCE. Provided periodic assistance with removal of metals from the process wastewater treatment system. Also provided assistance with the efficiency of nitrate treatment in the process wastewater system.
- Project Manager, Facilities Operations Plan, Mullergren Station West Plains Energy. Developed a facilities operations plan for a groundwater treatment system. The system was designed to treat groundwater for boiler cooling water and blowdown. The operations plan included a specific treatment operations protocol, operations and maintenance, waste disposal, and training requirements. Brine from the treatment process was discharged to an evaporation pond. The sludge (mostly waste lime) was removed periodically and dried and stored on site. The plan also discussed waste handling practices.

# RCRA/CERCLA

 Project Manager, Dike Extension Permit Application - Nebraska Public Power District. Completed a Work Plan and SAP for a groundwater assessment for an active ash disposal RCRA permitted facility. The assessment was required by the Nebraska Department of Environmental Quality (NDEQ) for the RCRA permitted ash disposal facility's proposed dike extension and included the installation of monitoring wells, implementation of pumping tests and water quality sampling, and evaluation of fate and transport of contaminants from the clay-lined disposal facility. The study emphasized infiltration and communication potential to an underlying and regionally significant aquifer. The parameters were used in a HELP model simulation. A hydro-geologic assessment report was submitted to the NDEQ for review.

- Project Manager, Hazardous Waste, PCB, Lead Based Paint (LBP), and Asbestos Management Plans Fort Carson, Colorado. Developed the format and worked cooperatively with Fort Carson personnel to assemble the data to develop these four management plans. The overall intent of these plans was to identify responsibilities and to guide Fort Carson personnel in the handling and management of these materials and wastes to ensure compliance with federal, state, and Army regulations (Regulation 200-1). Each plan was reviewed internally by all Fort Carson personnel who will be responsible for implementing them and comments were incorporated to expedite buy-in from all parties involved.
- Project Manager, Hazardous Waste Management Plan Martin Marietta, Waterton Facility. Worked with regulated materials, compliance, and wastewater departments to design an implementable hazardous waste management plan that would eventually result in waste storage on site for less than 90 days. The primary hazardous wastes generated include hydrazine, hexavalent chromium, metals, and volatile organic compounds. Waste stream identification, waste management, and contingency planning were emphasized.
- Project Manager, Resource Conservation and Recovery Act (RCRA) Part A/B Permit Application - Martin Marietta, Waterton Facility. Worked with facility personnel to develop a Part A/B Permit Application to comply with RCRA requirements. The facility included a container storage unit for the storage of hazardous waste.
- Project Manager, Annual Groundwater Quality Assessment Reports and Remediation Oversight for Regulated Facilities - Martin Marietta, Waterton Facility. Developed hazardous waste contingency plan for RCRA-regulated facilities including two surface water impoundments that stored volatile organic compounds, chlorinated solvents, and metal wastes. Leaks from these facilities contaminated underlying groundwater downgradient of the facilities. The annual report addressed trends in groundwater quality and quantity downgradient of the facility. Both facilities have since been remediated and closed under RCRA.
- Project Manager, Hazardous Waste Contingency Plan Martin Marietta, Deer Creek Facility. Developed a hazardous waste contingency plan for the Deer Creek facility.
- Project Manager, RCRA Part A/B Permit Application U.S. Air Force Plant PJKS. Developed a Part A/B permit application. The facility included a hydrazine waste storage unit and an abandoned Open Burning/Open Detonation unit.
- Project Manager, Hazardous Waste Management Plan U.S. Air Force (USAF) Plant PJKS. Worked with Martin Marietta and USAF to develop a hazardous waste management plan that concentrated on waste stream identification and contingency planning.

- Project Manager, Closure Plans for Open Detonation/Open Burning and Hydrazine Storage Units - U.S. Air Force Plant PJKS. Developed closure plans for two RCRAregulated impoundments and facilities. The design emphasized the need for close health and safety supervision because of the potential explosive nature of the wastes.
- Project Manager, Hazardous Waste Storage Unit Closure Plan Martin Marietta, Waterton Facility. Developed a closure plan to close and remediate a storage unit that did not fully meet RCRA requirements. Proposed new storage unit using existing on-site facilities.
- Project Manager/Principal-In-Charge, RCRA Corrective Measures Remedial Action Plan Study - Eagle-Picher Industries, Inc., Colorado Springs, Colorado. Project oversight of a remedial action plan to address groundwater and soils contamination. The groundwater plume consisted of caustics, metals, and nitrate contaminants. An overlapping tetrachloroethene (PCE) plume was considered in the remedial design. The project included groundwater modeling using MODFLOW, installing a groundwater pump and treat system, and negotiating with EPA and the Colorado Department of Public Health and Environment. Also provided assistance with soil sampling and negotiating soil cleanup standards (Ni and Cd) to achieve clean closure for siting the wastewater treatment system building. The groundwater discharges to a community drinking water supply.
- Project Manager/Principal-In-Charge, Annual Groundwater Quality Assessment Plan -Eagle-Picher Industries, Inc., Colorado Springs, Colorado. Project oversight of Annual Groundwater Quality Assessment Plan Reports for review by the State of Colorado and EPA. Project included evaluating the effectiveness of the remedial system to reverse groundwater gradients and extract groundwater for treatment.
- Principal-In-Charge, Internal Laboratory Audit and Recommended Actions -Eagle-Picher Industries, Inc. Project oversight of an internal laboratory audit at this Ni-Cd battery manufacturing facility to evaluate the potential to improve product quality and to assess the potential of using existing resources to analyze quarterly groundwater samples for RCRA compliance. Many of the recommendations are being implemented.
- Project Manager, RCRA Part A/B Permit Applications Safety Kleen. Provided assistance and developed Part A/B permit applications in various states, particularly Missouri, for this hazardous waste recycling company.
- Program Manager, Superfund Subcontractor to URS Consultants EPA Region 8. Acted as company liaison with URS for ARCS contract with EPA Region 8. Specific oversight was for Sand Creek Superfund Site soil vapor extraction (SVE), preliminary assessments (PA), site inspections (SIP), and hazard ranking system projects.
- Task Manager, Closure Plan Total Petroleum/Colorado Refining Company. Developed a closure plan for existing wastewater treatment lagoons to avoid RCRA compliance. The plan included waste removal, storage, and treatment and conversion of the facility to a non-RCRA application. The lagoons treated facility wastewater and storm water runoff before discharging into Sand Creek.

#### REMEDIATION

- Project Manager, Colorado Voluntary Cleanup Plan (VCUP) and Interim Groundwater Treatment Measures. Quadrant Properties. Submitted a VCUP to the State of Colorado for the former Rocky Mountain News property near the Auraria campus in Denver, Colorado. Received approval of the VCUP in April 2007 and constructed an interim groundwater treatment in September 2007. The interim groundwater treatment selected was a permeable reactive barrier trench. BOS 100 carbon-impregnated iron was installed in the zone contaminated with PCE and TCE. Implemented groundwater monitoring to access the reactive barriers ability to control the off-site release of shallow contaminated groundwater. The VCUP was approved and a No Further Action Determination letter received in 2009.
- Project Manager, Dam Cutoff/Groundwater Compliance City of Colorado Springs, Colorado, Subcontractor to Haley & Aldrich. Managed the preliminary study, groundwater elements of the final design, and the compliance monitoring aspects for installation of a bentonite slurry to provide a barrier to groundwater flow off site. The slurry wall was constructed along the upstream face of a total containment dam structure. The area upgradient of the structure was designed to store fly ash and to provide a dedicated-land disposal site for sewage sludge injected into soils. The groundwater barrier was constructed to bedrock to prevent groundwater migration which contained elevated concentrations of nitrate and other constituents, off site.
- Chief Hydrologist, Reclamation, Final Impoundment Design, Groundwater Interception/Control, and Groundwater Remediation - Big Horn Coal Company, Sheridan, Wyoming. Managed reclamation and closure of the Big Horn Coal Mine in northeastern Wyoming. Unique features of reclamation included relocation of the Tonque River, a perennial tributary to the Yellowstone River, and the design of two large final impoundments that were to be hydraulically connected to the Tongue River (to be used as a future recreation site). Surface and groundwater were modeled, and groundwater through the spoils and into the final impoundments was controlled and studied to ensure adequate long-term water quality for the intended use. Reclamation also included terrace and diversion ditch design, contouring, soil replacement, and revegetation to minimize erosion. Also managed the design and construction of groundwater interception and control drains, sumps, and detention pond systems to control groundwater inflow during mining. Evaluated spoil quality using various paste and leaching column procedures to determine ultimate spoil water quality. These techniques were used to segregate unsuitable spoil to ensure adequate post-mining groundwater quality.
- Chief Hydrologist, Reclamation, Final Impoundment Design and Groundwater Interception/Control - Black Butte Coal Company, Rock Springs, Wyoming. Managed reclamation of several pits at the Black Butte Mine located in southwestern Wyoming. Reclamation of a groundwater regime that did not preclude groundwater flow was complicated by the nature and dip of the existing geologic formations. A surface impoundment was studied and designed to provide a water supply to support wildlife and domestic cattle grazing. These studies included modeling and prediction of long-term water quality to support the intended use.

- Chief Hydrologist, Groundwater Interception/Control Rosebud Coal Sales, Hanna, Wyoming. Managed design and implementation of groundwater interception and control systems at this coal mining site in south-central Wyoming. Also evaluated the post-mining spoil water quantity and quality in relation to undisturbed groundwater to determine whether special mining and spoil handling procedures must be used.
- Chief Hydrologist, Reclamation and Groundwater Interception/Control Decker Coal Company, Decker, Montana. Managed various reclamation activities at the Decker Mines in southeastern Montana. Evaluated spoil quality using paste and leaching column procedures to determine the potential post-mining quality of spoil groundwater and to assess the impact to off-site groundwater domestic water supplies. Worked with the Montana Geological Survey to evaluate the regional impacts of mining on groundwater. Also assisted with the design of reclamation, including surface configuration/contouring; spoil and soil replacement; revegetation; and erosion control systems. Installed and monitored erosion/sedimentation monitoring plots and watersheds to compare pre- and post-mining conditions. Assisted in the identification, design, and implementation of groundwater inflow control systems. This included the feasibility of grout curtains; French drains; pre-dewatering systems; and inflow control diversions, detainment, and pumping systems.
- Project Manager, Interim Corrective Measures for Acid Mine Drainage, Groundwater Interception, and Heap leach Pump-Back System Parcel, Mauro, Hultin & Spaanstra/ Confidential Gold Mining Client. Managed design and implementation of interim corrective measures to contain, control, and treat acid mine drainage at this site in south central Colorado. The measures included the construction of a containment system and a lime storage and distribution system to increase the pH to acceptable levels. Studied and designed a groundwater interception system to intercept uncontaminated groundwater before it reached the site. The interceptor trench was backfilled with gravel, and the intercepted groundwater was pumped to a surface water diversion ditch systems. Also assisted with improvements to the heap leach pump back system. The liner of the heap leach was breached as a result of poor construction controls and the cyanide-laden water seeped to the underlying shallow groundwater system. The pump-back system was designed to pump intercepted groundwater to the wastewater treatment plant and included piping and pump improvements and the design of a secondary backup system in the event of system failure to prevent migration of pregnant water to the Whitman Fork drainage.
- Hydrogeologist, Hydrocarbons Recovery and Groundwater Extraction/Treatment System Design - City of Colorado Springs, Colorado. Assisted in design of the interceptor and groundwater extraction system at the City of Colorado Springs, Colorado, maintenance shop. The system was designed to deflect and change the direction of groundwater flow and to intercept contaminated groundwater before it discharged to Fountain Creek.
- Project Manager/Principal-In-Charge, Groundwater Pump and Treatment System Design and Installation - Eagle-Picher Industries, Inc. Managed the study, design, and implementation of a groundwater recovery system under an approved RCRA Remedial Action Plan. The caustic plume contains elevated levels of nitrate and pH in the range of 12 S.U., and the plume is commingled with an adjacent PCE plume. The adjacent site had installed a recovery and groundwater reinjection system; therefore, the groundwater regime was modeled (MODFLOW) to ensure proper location of the caustic plume recovery system. A

continuous recovery well was installed, and groundwater recovery could be intermittently augmented by a series of existing monitoring wells and dedicated pumping systems. Groundwater was pumped to a groundwater treatment system and discharged to the POTW under an NPDES permit. The impacts of the treated groundwater to the POTW and wastewater collection and sampling program, conforming to confined space regulations, influent to the POTW treatment were evaluated.

- Project Manager, Pump and Treatment System Efficiency Evaluation/Reporting Martin Marietta, Waterton Facility. Two groundwater interception and pumping systems were installed at the Waterton Plant to intercept groundwater prior to discharge to the South Platte River. The effectiveness of this system to contain and control trichloroethene (TCE), trichloroethane (TCA), hydrazine, and metal-contaminated groundwater was conducted and reported to Colorado.
- Principal-In-Charge, Process Pond Removal, Plant Modifications, and Reinstallation of a Fire Suppression Pond System - Essex Group, Inc., Hoisington, Kansas. Provided oversight for removal of a process water pond liner and distribution system and installation of a new liner and fire suppression pond system. This project involved removal of the existing system, modifications of the plant to convert contact water quenching systems to internal systems, and the installation of a new noncontact fire suppression pond system. Wastewater and waste sludge were removed and disposed of. The old liner was removed, the new pond system regraded, and a new single pond liner installed. The project was done as a design-build in cooperation with a local contractor. Although soils under the existing liner appeared to be contaminated with barium and copper, negotiated with and convinced the agency (KDHE) that underlying groundwater was not significantly affected and that the risk to downgradient groundwater users was minor.
- Program Manager, as a Subcontractor to URS Consultants, Sand Creek Superfund Soil Vapor Extraction System Design - ARCS Region VIII, Located Near Denver, Colorado. Several concurrent tasks were on-going at the site and coordination of consulting and contracting activities was essential. Also provided the design services and letting of contracts for a soil vapor extraction system for Operating Unit 1.

#### SOLID WASTE

- Program Manager, Lime Waste Closure Plan and Reclamation Design West Plains Energy. Managed the evaluation and design of a closure plan for a lime waste storage facility. The lime waste sludge was generated from the treatment of groundwater which is used in electric generating boilers. The closure of the storage facility included an element of recycling for agricultural uses and grading and revegetation to stabilize the pile. Drainage was controlled with an existing storm water detention pond system.
- Chief Hydrologist, Conversion of Gravel Quarry to Solid Waste Facility near Guernsey, Wyoming - Peter Kiewit Construction Company. Evaluated and assisted with the design of a gravel quarry operations potential conversion to a solid waste facility at a site in southeastern Wyoming. The evaluation determined that the underlying geology would prevent the migration of contaminants to groundwater.

- Chief Hydrologist, Permit and Design of Mine Solid Waste Facilities Big Horn, Decker, Black Butte, and Rosebud Coal. Managed and provided technical assistance in design and permitting of various solid waste facilities located at active mine sites. The designs generally included clay liners and caps and were located to prevent migration of potential contaminants to groundwater.
- Project Manager, Design of RCRA Subtitle D Burnt Mill Solid Waste Facility City and County of Pueblo, Colorado. Managed the investigations and design of the proposed Burnt Mill City and County Landfill south of Pueblo, Colorado. The groundwater investigation indicated no or minimal impacts were anticipated. Liner and caps were designed in conformance with Subtitle D requirements. A leachate collection and extraction system was designed for maximum efficiency. Storm water diversion and detention systems were designed to control runoff. Included HELP model simulations. Periodic meetings with the city council and county commissioners were held and public comments were addressed.

## Safe Drinking Water Act

- Principal-In-Charge, Assistance with Testimony Before the Water Quality Control Commission for Groundwater Protection Area - Eagle-Picher Industries, Inc. Assisted with testimony before the Colorado Water Quality Control Commission. The commission was considering establishing a groundwater protection zone in the Widefield Aquifer south of Colorado Springs, Colorado. We provided client advocacy by asserting the state had used improper methods to define the limits of the protected groundwater resource and overestimated the impact of groundwater discharges to the Widefield.
- Technical Resource and Committee Participant, Evaluation of Treatment / Distribution of Drinking Water System, Sheridan County, Wyoming Joint Powers Water Board. Appointed by the mayor of Sheridan to the Technical Resource Committee of the Joint Powers Water Board. The existing treatment and distribution systems were not in compliance with EPA regulations due to a potential source of giardia contamination. In order to obtain property easements, the county had provided free water taps to landowners along the pipeline system prior to the installation of a treatment system. The technical task was to oversee the design of a new mini-treatment and city/county distribution system that would benefit the residents of Sheridan County. The committee also solicited public comments and provided assistance with the procurement of grants and loans to complete the system. The committee also provided technical support during meetings with the EPA.
- Chief Hydrologist, Design and Installation of Groundwater Drinking Water System, Heat Sump, and Safe Drinking Water Act (SDWA) Compliance Decker Coal Company, Decker, Montana. Designed and installed a groundwater well field that was used for drinking water and a heat pump to cool facility buildings at a mine site in southeastern Montana. The wells were completed with stainless steel casing and screen, pumps installed, and water discharged to a reverse osmosis treatment system. Brine water was treated and discharged to a containment/evaporation lagoon. Established a Safe Drinking Water Compliance System for sampling and reporting and interfacing with union representatives to explain the work force that the supply was safe for consumption.

 Chief Hydrologist, Drinking System Compliance for Several Mines - Peter Kiewit Sons' Company. Provided Safe Drinking Water Act compliance and technical support for remote mine sites in the western United States. This effort ranged from the study and installation of wells and pumps to the establishment of sampling and reporting systems to comply with SDWA. Installed water supply wells; and obtained permits and water appropriations for the groundwater water supply for domestic and/or production.

### **REGISTRATIONS/CERTIFICATIONS**

- AHERA and State of Colorado Asbestos Building Inspector/Management Planner: Colorado Certification 6604
- National Association of Environmental Professionals
- Home Builders Association Storm water Committee and Education Chair
- International Council of Shopping Centers
- OSHA 40 hour Hazardous Materials Training
- OSHA Site Safety Officer Training
- OSHA Confined Space Training
- National Pork Producers Association EAP Program: Certified Assessor
- Colorado Association of Commerce and Industry: Technical Committee Support
- State of Colorado, Division of Oil and Public Safety: Assessor

APPENDIX B

PHOTOGRAPHIC LOGS

**B1 PHOTOGRAPHIC LOG OF THE WINDBREAKS** 

PI		Windbreaks and C graphic Record	orrals
Client: Throne Law, P.C.		Project Number: 04	992.10
Site Name: Expert Witness	Testimony	Site Location: South	n of Gillette, Wyoming
Photograph 1			
Date: 9/30/11			
Direction: West			
Comments: Windbreak location #1 from inside the ROW fence			
Photograph 2 Date: 9/30/11		1	
Direction: NA		A de	
Comments: Looking down into interior of tire pile at Windbreak location #1			

1

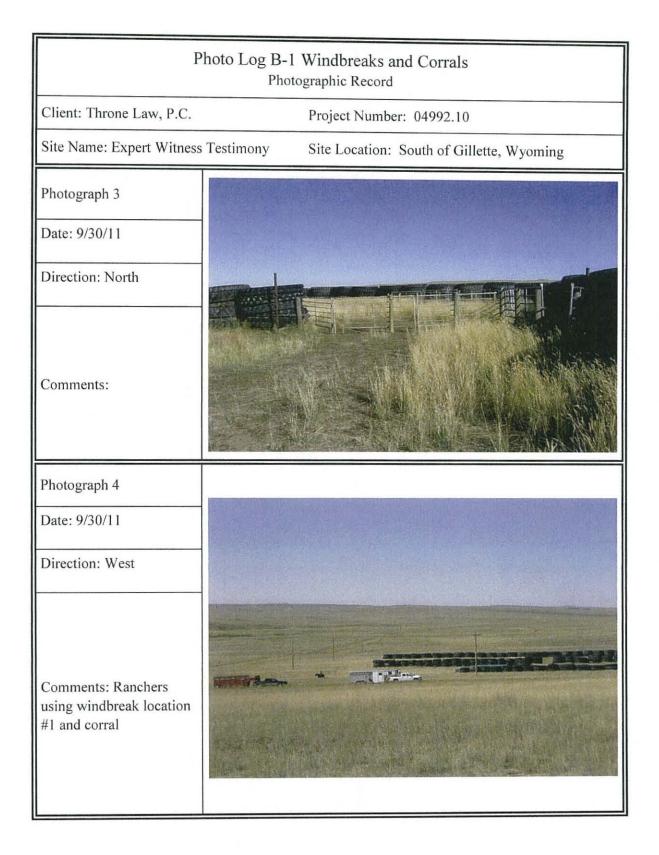


Photo Log B-1 Windbreaks and Corrals Photographic Record		
Client: Throne Law, P.C.		Project Number: 04992.10
Site Name: Expert Witnes	s Testimony	Site Location: South of Gillette, Wyoming
Photograph 5		
Date: 9/30/11		
Direction: North		
Comments: Windbreak location #2 from ranch access road		
Photograph 6		
Date: 9/30/11		AP.
Direction: West		Por series
Comments: Windbreak location #2		

P		Windbreaks and Corrals ographic Record
Client: Throne Law, P.C.		Project Number: 04992.10
Site Name: Expert Witness	s Testimony	Site Location: South of Gillette, Wyoming
Photograph 7	K	
Date: 9/30/11		J.
Direction: Northwest		
Comments: Windbreak location #3		
Photograph 8		
Date:		
Direction: Southwest		
Comments: Windbreak location #3 toward closest residence (Walker)		

4

Pl		Windbreaks and Corrals ographic Record
Client: Throne Law, P.C.		Project Number: 04992.10
Site Name: Expert Witness	Testimony	Site Location: South of Gillette, Wyoming
Photograph 9	Port Horn	
Date: 9/30/11		
Direction: North- Northwest		
Comments: Windbreak location #3 from inside the fence ROW		
Photograph 10		
Date: 9/30/11		1
Direction: North		
Comments: Windbreak location #4 close-up		

Р		Windbreaks and Corrals
Client: Throne Law, P.C.		Project Number: 04992.10
Site Name: Expert Witnes	s Testimony	Site Location: South of Gillette, Wyoming
Photograph 11	Mars.	
Date: 9/30/11		
Direction: East		
Comments: Windbreak #4 looking back at the Bell Road		
Photograph 12		
Date: 9/30/11		
Direction: West		
Comments: Windbreak #4 from inside the fence ROW		

Photo Lo	og B-1 Windbreaks and Corrals Photographic Record
Site Name: Expert Witness Testime	ony Site Location: South of Gillette, Wyoming
Photograph 13	
Date: 9/30/11	
Direction: West	
Comments: Tire piles at Windbreak location #5	
Photograph 14	
Date: 9/30/11	
Direction: N	
Comments: Looking at stacked and unstacked tires at Windbreak location #5	

Photo Log B-1 Windbreaks and Corrals Photographic Record		
Client: Throne Law, P.C.		Project Number: 04992.10
Site Name: Expert Witness	s Testimony	Site Location: South of Gillette, Wyoming
Photograph 15		
Date: 9/30/11		the let the let the
Direction: NA	States 6	The CLARKERSTE
Comments: Close-up of damaged tire		
Photograph 16		
Date: 9/30/11		
Direction: NA		A LO VERSION AND A LO V
Comments: Standing water in one whole tire		

#### APPENDIX B

#### PHOTOGRAPHIC LOGS

# B2 PHOTOGRAPHIC LOG OF OTHER REUSES OF TIRES IN THIS AREA OF WYOMING

Photo Log B-2 Photographic Record		
Client: Throne Law, P.C.		Project Number: 04992.10
Site Name: Expert Witnes	s Testimony	Site Location: Hwy 59 Gillette to Bill, Wyoming
Photograph 1		
Date: 9/30/11		
Direction: West		
Comments: Typical tin windbreak in the area		
Photograph 2		
Date: 9/30/11		
Direction: West		
Comments: Windbreak location #1 used by ranchers		

Photo Log B-2 Photographic Record		
Client: Throne Law, P.C.	Project Number: 04992.10	
Site Name: Expert Witness	Testimony Site Location: South of Gillette, Wyoming	
Photograph 3		
Date: 9/30/11		
Direction: East		
Comments: Whole tires used at Wright Day Care Center		
Photograph 4		
Date: 9/30/11		
Direction: Southwest		
Comments: Whole tire used as protection (possible well head) south of Wright		

	Photo Log B-2 Photographic Record
Client: Throne Law, P.C.	Project Number: 04992.10
Site Name: Expert Witnes	s Testimony Site Location: South of Gillette, Wyoming
Photograph 5	
Date: 9/30/11	
Direction: North	and the second s
Comments: Whole tires used as stock watering or feeders Road 450 toward Thunder Basin Coal Company	
Photograph 6	
Date: 9/30/11	
Direction: West	
Comments: Whole tires used to protect gas pipeline	

	Photo Log B-2 Photographic Record
Client: Throne Law, P.C.	Project Number: 04992.10
Site Name: Expert Witness	s Testimony Site Location: South of Gillette, Wyoming
Photograph 7	
Date: 9/30/11	
Direction: East	i interest i
Comments: Whole tire used for stock watering 8 miles north of Bill along State Highway 59	
Photograph 8	
Date: Northeast	
Direction: Northeast	
Comments: Tire top used as stock water for multiple livestock grazing fields I mile south of Bill, Wyoming	

	Photo Log B-2 Photographic Record
Client: Throne Law, P.C.	Project Number: 04992.10
Site Name: Expert Witnes	s Testimony Site Location: South of Gillette, Wyoming
Photograph 9	
Date: 9/30/11	
Direction: West	
Comments: Whole tires used at children's playground at Bill, Wyoming	
Photograph 10	
Date: 9/30/11	
Direction: Southwest	1
Comments: Whole tires used for stock watering 1 mile south of Bill, Wyoming	

FIGURE 1:

**TOPOGRAPHIC MAP** 

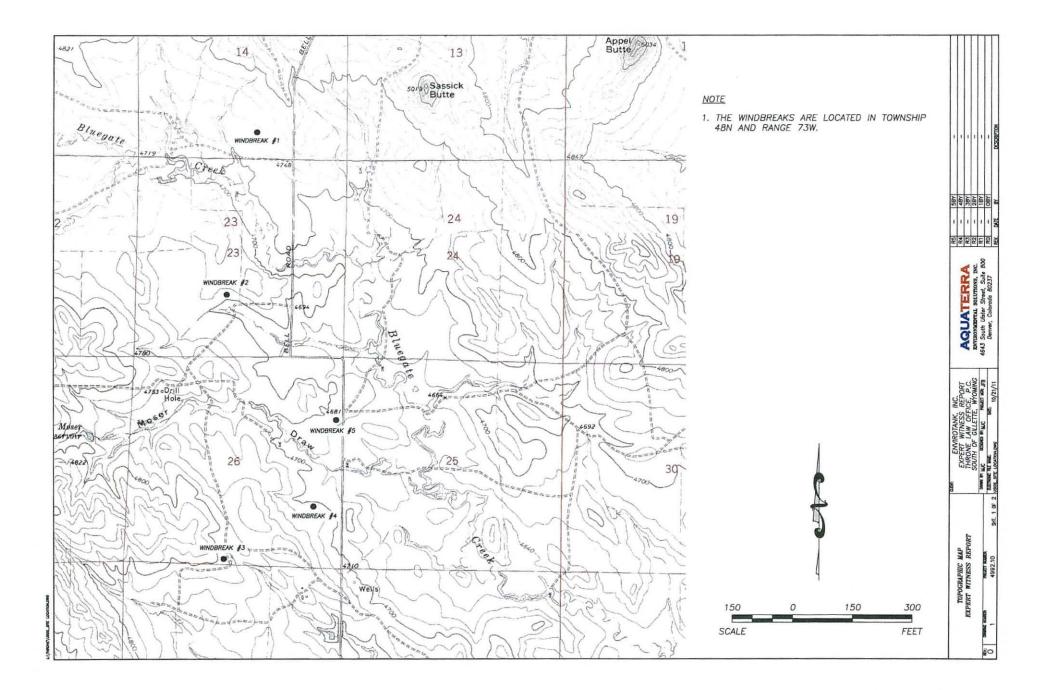
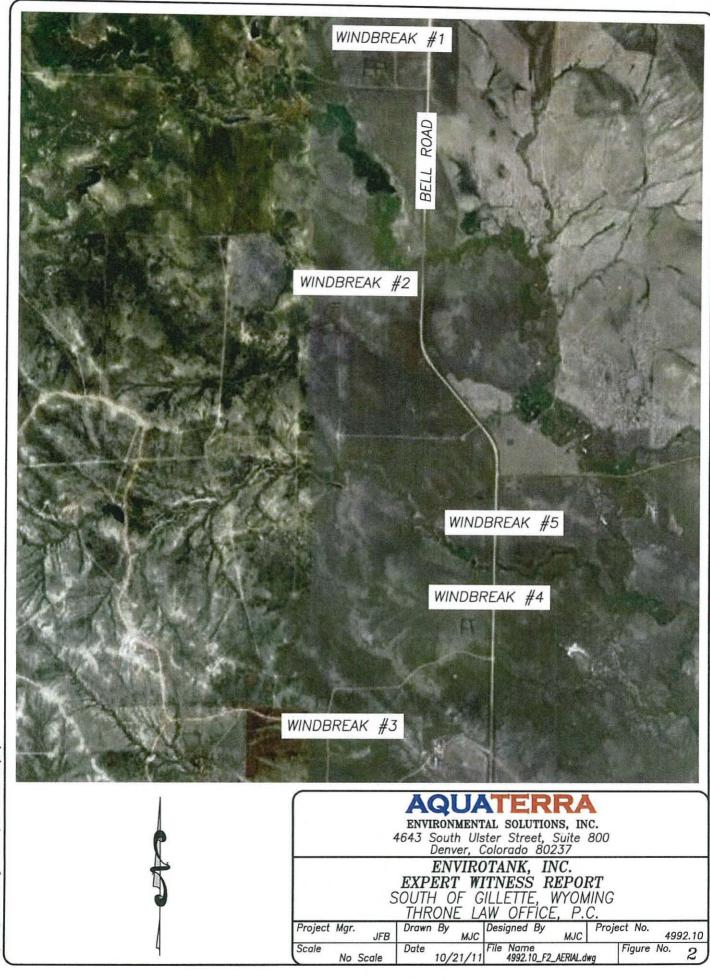


FIGURE 2:

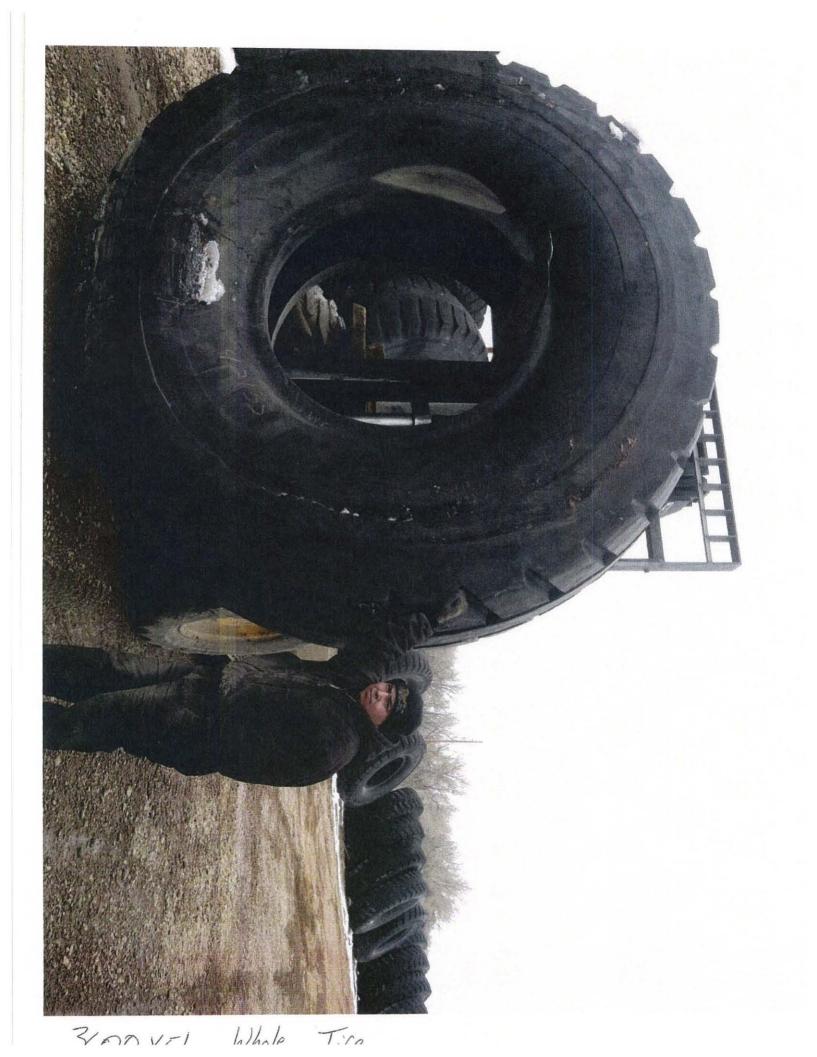
**AERIAL PHOTOGRAPH** 



L:\Throne\Aerial Photo.dwg October 21, 2011 8:49.21 am (mcr)

ENVIROTANK EXHIBIT #3







REMAXEL From Which Samble ( 1 10.5 Ft. Sidewall

ENVIROTANK EXHIBIT #4

## **GRAZING LEASE AGREEMENT**

THIS GRAZING LEASE effective the 1st day of April, 2007, by and between Sandra Kay Lange, as Trustee of the Sandra Kay Lange Trust, a Trust Indenture dated June 28, 1994, and as authorized agent for Mildred Rae Broyles and Peggy A. Sullivan, 270 Esterbrook Road, Douglas, Wyoming, 82633, hereinafter referred to as "Lessor", and Brian Morgan and Elizabeth Morgan, husband and wife, of 227 Bell Road, Gillette, Wyoming, 80831, hereinafter referred to  $S_{2} > 1/6$  as "Lessees".

#### WITNESSETH:

WHEREAS, Lessor is the owner of certain real property located in Campbell County, Wyoming, more particularly described on Exhibit "A" attached hereto and by this reference made a part hereof, hereafter referred to as the "Ranchlands"; and

WHEREAS, Lessor desires to lease to Lessees and Lessees desire to lease from Lessor the Ranchlands.

NOW THEREFORE, for and in consideration of mutual covenants and agreements herein set forth, it is agreed as follows:

1) LEASE

Lessor shall lease to Lessees and Lessees shall lease from Lessor the Ranchlands.

2) TERM

The term of this Agreement will begin on April 1<sup>st</sup>, 2007, and unless other wise extended in writing by the parties, shall expire of its own terms on March 31<sup>st</sup>, 2010. If not extended or if terminated, Lessees shall surrender peaceable possession to Lessor on the termination date.

3) FEES

· · · · 3) FEES

4

Lessees shall pay unto Lessor the sum of Four Thousand, Five Hundred Dollars (\$4,500) per year, payable in advance. Said payments shall be made on or before April 1<sup>st</sup> of each year, with the first payment being due on or before April 1<sup>st</sup>, 2007. All fees shall be paid to Lessor at the address contained in Paragraph 10.

1

#### 4) POSSESSION

. .

Lessees shall be entitled to entrance upon and use of the Ranchlands on April 1, 2007, and shall continue in peaceful possession thereof during the term of the Lease. Lessees shall be permitted to conduct their ranching operations on said property in accordance with reasonable and prudent agricultural standards and practices in the area. Lessees shall have the right to use all improvements thereon.

#### 5) LESSEES' RESPONSIBILITIES

Lessees shall be responsible for the following:

- a) Lessees shall be responsible for providing all labor for any general maintenance and capital improvement projects on the Ranchlands.
   Lessees shall obtain Lessor's verbal permission prior to beginning any capital improvements upon the Ranchlands.
- b) Lessees will maintain a liability policy on the Ranchlands, naming Lessee upon said policy, in an amount of One Million Dollars (\$1,000,000);
- c) Lessees shall pay any taxes due on any of their personal property;

#### 6) LESSOR' RESPONSIBILITIES

Lessor shall be responsible for the following:

- a) Lessor shall be responsible for providing all materials for general maintenance and capital improvements upon the Ranchlands, so long as Lessees have received prior verbal authority to proceed with the capital improvements.
- b) Lessor shall pay all property taxes on the Deeded Lands.

## 7) SURFACE USE DAMAGE, ACCESS, AND RENTAL PAYMENTS

- mprovona.
- b) Lessor shall pay all property taxes on the Deeded Lands.

#### 7) SURFACE USE DAMAGE, ACCESS, AND RENTAL PAYMENTS

Lessee shall not be entitled to any payments, or portions thereof, for surface use damages, access, rental or water discharge payments.

#### 8) HUNTING AND FISHING RIGHTS

Lessees shall have the right to control all hunting upon the property, excepting that Lessor and Lessor's family shall have the right to hunt upon the Ranchlands. In the event Lessees receive any money from allowing hunting to take place upon the Ranchlands, Lessees shall provide Lessor with one-half (1/2) of those proceeds.

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#### 9) INSPECTION

Lessor may inspect the property at any time with or without notice to Lessees.

#### 10) MISCELLANEOUS

- a) Lessees shall not permit any mechanic's or materialmen's liens to be levied against the leased premises, but shall be entitled to defend such claims if they dispute them in good faith;
- b) Each party shall indemnify and hold the other party harmless from any and all claims, demands, actions and causes of action arising out of the negligent performance hereof on the part of the party involved.
- c) In the event of default by Lessees in the performance of the covenants and agreements herein contained on their part to be performed, Lessor shall notify Lessees of such default in writing and Lessees shall have thirty (30) days after receipt of such notice within which to correct the same; failing which, at the option of Lessor, this Agreement may be terminated and the Lessor shall have all other remedies afforded by law for such breach hereof;
- d) The parties agree that, if they so wish, a Memorandum of this Grazing Lease Agreement may be acknowledged by them and recorded in the county that the Ranchlands are located. However, the terms and conditions of the lease, excepting the parties and the time period, shall remain confidential.
- e) All notices or other correspondence hereunder shall be given to the parties at the following addresses, unless changed in writing and forwarded to the other party:

Lessor:Sandra Kay Lange<br/>270 Esterbrook Road<br/>Douglas, WY 82633Lessees:Brian and Elizabeth Morgan<br/>227 Bell Road<br/>Gillette, WY 82718

Lessees:

Brian and Elizabeth Morgan 227 Bell Road Gillette, WY 82718

### 11) ASSIGNMENT

This Agreement may not be assigned by Lessees nor Lessees may sublease without the written consent of the Lessor being first had and obtained. An assignment of the lease by Lessees to an entity that Lessees own and control shall not be deemed to be a violation of this clause unless and until Lessees no longer own or control the entity.

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#### 12) SUCCESSORS AND ASSIGNS

This Agreement shall be binding upon and insure to the benefit of the parties and their respective heirs, legal representatives, successors and assigns. Neither party shall assign this Agreement without the written consent of the other party.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the \_\_\_\_\_ day of March, 2007.

#### LESSOR:

Sandra Kay Lange Trust, a Trust Indenture date June 28, 1994; Mildred Rae Broyles; and Peggy A. Sullivan

By:

Sandra Kay Lange, Trustee and Authorized Agent

LESSEES:

Brian Morgan

Elizabeth Morgan

#### EXHIBIT "A"

Township 48 North, Range 73 West, 6<sup>th</sup> P.M. Section 14: W1/2; NE1/4; W1/2SE1/4 and that part of the NE1/4SE1/4 lying west of what is commonly known as the Bell Road.

Section 22: E1/2SE1/4

SW1/4; W1/2NW1/4; SE1/4NW1/4;SW1/4SE1/4 Section 23:

Section 26: W1/2; NE1/4; N1/2SE1/4

Containing 1,500 acres, more or less

ENVIROTANK EXHIBIT #5



Dave Freudenthal, Governor

# Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



John Corra, Directo

7/28/2008

Michael Bulger, Owner/Operator EnviroTank Inc. 4210 Combine Place Brighton, CO 80601

Brian Morgan 227 Bell Road Gillette, WY 82718

Sandra Lange Trust 270 Esterbrook Road Douglas, WY 82633

Certified Letter#7005 1820 0005 1478 3793 Return Receipt Requested



Letter Of Violation (LOV) RE: Unauthorized Storage/Management Of Large Heavy Equipment and Off-Road Tires Off Bell Road, Campbell County, Wyoming

Dear Sirs:

On July 10, 2008, the department received a complaint concerning the unauthorized storage/management of large off-road scrap tires at various locations along Bell Road, Campbell County, Wyoming, located approximately 4 miles south of Gillette, off Highway 50. On the same date, SHWD inspector, Tim Link, conducted a follow up to the complaint and observed 4 locations directly off Bell Road where stockpiles of off-road scrap tires and tire tops had been placed onto private property and were being stored and/or being used. The department has gained knowledge that the owner of the large off-road scrap tire material is EnviroTank and the tire tops and whole scrap tires are being stored on land being leased by Brian Morgan.

The inspection revealed the majority of the scrap tire material consisted of tire tops but several of the piles also contained quantities of large whole off-road scrap tires.

It is stated in EnviroTank's current and approved permit application, that tire tops are "sold to be used in stacks for livestock windbreaks or for erosion control rip rap on dams and streambanks". The department has determined that the future continued usage of the scrap tire tops for livestock windbreaks needs to be approved by the department in accord with the new attached Scrap Tire Guideline #21 (see attached copy of guideline). Therefore, to assure the tops



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INDUSTRIAL SITING AIR QUALITY (307) 777-7369 (307) 777-7391 FAX 777-5973 FAX 777-5616

SOLID & HAZ, WASTE LAND QUALITY (307) 777-7752 (307) 777-7756 FAX 777-5973 FAX 777-5864

WATER QUALITY (307) 777-7781 FAX 777-5973



are being utilized in the proper approved manner, we are requesting a written request from you within thirty (30) days from the date of your receipt of this letter, including the information required in the new guideline, to obtain approval to continue to use the tire tops in this manner.

The usage of whole scrap tires as cattle windbreaks or for storage at the above locations, is not authorized under the EnviroTank permit. Therefore, EnviroTank is currently in violation of their permit and in violation of the SWRR.

To prevent further enforcement action being taken by the department, the scrap tires at the unauthorized locations must be removed within sixty (60) days of your receipt of this LOV. Written documentation (i.e., obtain copy of shipping documents for owner's protection, etc.) must also be provided confirming either the tires from the unpermitted locations are being hauled to a permitted location or that the owner of the tires and tops is in the process of seeking an approved management or reuse method as specified in Scrap Tire Guideline #21. (See attached copy of Scrap Tire Guideline #21) A department follow up inspection will be conducted in the future to confirm compliance with the SWRR.

Should you have any questions concerning our requirements, please feel free to contact me at 307-777-7164:

Sincerely,

Timothy Link Sink

Environmental Scientist I Wyoming Department of Environmental Quality Solid and Hazardous Waste Division

Enclosure: Copy of SWRR Guideline #21

Cc: Dale Anderson, SWP&CA, WDEQ/SHWD Casper Office, Casper→Bob Breuer, I&C Program Manager→Casper File 51.031

**ENVIROTANK EXHIBIT #6** 

# EUGENE J. HYNES

#### ATTORNEY AT LAW

321 Main Street, P.O. Box 18 Oshkosh, NE 69154-0018

Telephone: (308) 772-4566 Telecopier: (308) 772-3204

September 17, 2008

Timothy Link Wyoming Department of Environmental Quality Solid and Hazardous Waste Division Herschler Building 122 West 25<sup>th</sup> Street Cheyenne, WY 82002

RE: Envirotank, Inc.

Dear Mr. Link:

The principals of Envirotank, Inc. have met and will be in Gillette, WY to review the site and adopt a plan which we will forward to your office outlining their position.

The principals have owned Envirotank, Inc. for approximately one and a half years. All of the scrap tires referred to in your July 28, 2008, letter for removal were not placed there by Envirotank, Inc. Envirotank, Inc. is not the owner of the tires nor does it own or lease the real estate on which the tires are located. Some tires were placed on the property at the request of the owner or tenant for livestock use, fences, and to assist in the prevention of soil erosion.

A requirement for Envirotank, Inc. to remove all tires is something not within the financial ability of Envirotank, Inc. The cost of tire disposal equipment is \$490,000.00 which does not include the cost of a truck unit to haul it nor operating costs, labor and other disposal fees.

We wish to develop a solution acceptable to all parties. We are researching an idea of drilling holes in the tires to drain off all water to prevent the accumulation of mosquito's and other bugs which could cause diseases in animals or humans.

Envirotank, Inc. requests to amend or expand its approved permit to allow expanded functions for tire disposal.

We will advise further within one month of our progress.

Thank you.

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Very truly yours,

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# Eugene J. Hynes

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# Envirotank, LLC

PMB 439, 2610 South Douglas Hwy, Suite 180, Gillette, WY 82718 307-660-5379

September 23, 2008

Timothy Link Wyoming Department of Environmental Quality Solid and Hazardous Waste Division Herschler Building 122 West 25<sup>th</sup> Street Cheyenne, WY 82002

Dear Mr. Link,

Per your request, we are pleased to have the opportunity to present background information and a "Business" proposal, which hopefully will lead to a dialogue solution palpable to all parties facing the unique challenges of giant off the road tire (OTR) solid waste disposal.

In our 40+ years OTR Tire experience, we have never seen such extreme supply highs and lows as we have experienced the last few years.

The last quarter of 2007 and first quarter of 2008 saw a surge in giant OTR, new tire supply which triggered a spike in the supply of "Tank tires". This coupled with an unusual 2008 wet muddy spring, our loss of key employee Virgil Duha from a fatal heart attack, and other internal organizational problems contributed to our being out of compliance with our permit numbers.

We appreciate the personal meeting you afforded us last Thursday September 18, 2008. All summer we have been making progress, and stay with our commitment that all numbers will be in compliance by October 18, 2008. That being said, we are requesting an increase in our permit numbers to better handle the increased volume we have recently experienced. Details of this request are being forwarded to Dale Anderson, Casper, Wyoming.

Last, we want in the spirit of reasonable co-operation to work with Wyoming Department of Environmental Quality, Landowners, Lessee, et al to address the complaint of tires at "4 locations directly off Bell Road".

As new owners of Envirotank effective June 2007, we acknowledge having continued the practice of the previous Envirotank owners of placing tops and untankable whole tires for beneficial use as livestock windbreaks, working corrals and erosion control.

This practice has been ongoing for years with the tacit approval of tenant and landlord. However, no tires or tops have been moved to this Bell Road location since the July 11, 2008 issuance of Solid Waste guidelines #21. We are trying to re-construct verifiable records of our participation from June 2007 thru July 2008 and will gladly share this with all parties when available.

We have recently been advised that Campbell County Landfill will no longer accept whole tires. With this cost prohibitive disposal option closed, we are open to any suggestions for untankable whole tires other than beneficial agricultural uses.

Current whole tires placed at Bell Road during our ownership from June 2007 to present could be rendered non-water holding for mosquito control by simple drilling bottom sides for drains. Tires and tops could be re-positioned if all parties agreed to a plan.

Our conclusion with 40+ years Off The Road tire experience is that this commodity viewed as solid waste is unique and challenging.

We look forward to working with the Department of Environmental Quality and all other interested parties toward the solution to this challenge.

Sincerely,

Sphertert

LJ Weatherwax, C.E.O.

- Bulad

Michael Bulger, President

# ENVIROTANK, INC PO BOX 302 FORT LUPTON, CO 80621

October 13, 2008

Timothy Link Wyoming Department of Environmental Quality Solid and Hazardous Waste Division Herschler Building 1222 West 25<sup>th</sup> Street Cheyenne, WY 82002

Dear Mr. Link;

First, we are pleased to advise you that as of this date we are finally in compliance with all categories of our permit at Envirotank, Inc., 377 Clarkellen Road, Gillette, WY 82718.

To further address your July 28<sup>th</sup>, 2008 Letter Of Violation (LOV) we would appreciate your clarification of the following:

- 1. What are the timelines for "Departments September 15, 2008 Solid Waste Guideline #21, Standards for scrap tire management?" More specifically is the starting date of the new regulations July 11<sup>th</sup>, 2008 or September 15<sup>th</sup>, 2008? Is there any retroactivity, if so what is the time line?
- 2. How does the Department determine ownership? Possession? Monetary or other consideration? Intent? Or other?

Once again we would like to reiterate that we have only been owners of record with acknowledged responsibilities since Department approval on April 19, 2006. Furthermore, there has been no whole tire or top placement on Bell Road since July 2008 Departments issue of Solid Waste Guideline #21.

Our limited records indicate that since our April 19, 2006 ownership we had placed less than 6 loads of tops and whole tires at the Bell Road location with what we were assured of Landowner and Lessee approval for "beneficial agriculture" use which in this specific case is gated working cattle pens, calving/windbreak areas. (See attached picture)

The current working corral which was being constructed at the time of July 28, 2008 (LOV) complaint has a number of units delivered but not stacked to the design of the Lessee.

We are willing to finish this project up to the satisfaction of the Department and the Landowner/Lessee. We can begin immediately as soon as all parties would concur for us to begin and the weather cooperates. Estimated time to finish would be less than 10 working days.

Beyond this specific commitment, we would need the Department guidance as to the specific nature of the complaint and the Landowner/Tenant willingness to allow our help in corrective action to secure Departments "beneficial use" permit approval.

We are willing to meet with any and all interested parties at any time to get this issue resolved.

Your early response will be appreciated.

Sincerely,

Michael Bulger President



# Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



John Com, Director

10/24/2008

Michael Bulger, Owner Envirotank, Inc. (51.031) P.O. Box 302 Fort Lupton, CO 80621

Certified Letter #7008 0150 0001 1173 7098 Return Receipt Requested

## RE: Response To 10/13/2008 LOV Response

Dear Mr. Bulger:

The department has received and reviewed your letter dated 10/13/2008, in which you provided additional information to correct the problems of tire placement at the locations along Bell Road, Campbell County, Wyoming.

We have reviewed your proposal and that proposal is to use the 6 loads of tops and whole tires you had placed for a 'beneficial agriculture usa' which in this case is grated cattle pens and calving/windbreak areas. In your letter, you have proposed to finish the cattle corral project as per the design of the Lossee and as the weather cooperates. In the September 23, 2008, letter, addressed to Mr. Tim Link, you also proposed to drill holes in the bottom sides of the tires for water drains for mosquito control.

After review of your specific proposals, we have determined that completion of these activities will resolve this particular matter with the department.

To assure the beneficial use project has been properly completed, we are requesting that by January 1, 2009, you provide a project completion letter including site photos of the completed work and documenting the holes being drilled into the tires for mosquite vector control.

Should you have any questions concerning our determination, please feel free to contact me at 307-777-7164.

Sincerely,

Timothen Sink

Timothy Lin Environmental Scientist I Solid and Hazardous Waste Division



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LAND QUALITY (807) 777-7758 FAX 777-6864

SOLID & HAZ. WASTE (307) 777.7752 FAX 777-5973

WATER QUALITY

(307) 777-7781

FAX 777-6973



C: Brian Morgan, 227 Bell Road, Gillette, WY 82718
 Sandra Lange Trust, 270 Esterbrook Road, Douglas, WY 82633
 Heather A. Jacobson, Jacobson Law Office, LLC, 1839 Madora Avenue, Douglas, WY 82633
 LeRoy C. Feusner, P.E., BCEE, Administrator, SHWD, Cheyenne
 Dale Anderson, SWP&CA, WDEQ/SHWD Casper Office, Casper, WY→Bob Doctor,

SWP&CA Program Manager-+Casper File

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Bob Breuer, I&C Program Manager, WDEQ/SHWD Casper Office, Casper, WY 51.031

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# SOLID AND HAZARDOU WASTE DIVISION

OCT 3 1 2008

## JACOBSON LAW OFFICE, LLC ATTORNEYS AT LAW A Limited Liability Company 1839 Madora Avenue

Douglas, Wyoming 82633

Jill Jacobson

Telephone (307) 358-3180

Heather A. Jacobson

Fax (307) 358-3182

October 29, 2008

Envirotank, Inc. PO Box 302 Ft. Lupton, CO 80621

#### **RE: DEQ Violation**



Dear Mr. Weatherwax:

Thank you for your letter dated October 21, 2008. While it is also our hope that this situation can be resolved with cooperative effort, my client has a few concerns with the proposed course of action.

First, my client, Sandra Lange, was not aware of the plans for the corrals, thus the amount of scrap tires that are currently on the property are a bit of a shock. While Ms. Lange did approve one small windbreak, she did not have any further discussions with the Lessee regarding future plans and did not give permission for any other tires and/or scrap to be placed on the property.

Further, as you may be aware, this property located close to Gillette, Wyoming, a town with a constant desire for small acreage lots. Due to the property's proximity to Gillette, if at some future point my client decides to sell the property, its' highest value is as a subdivision. The tires and scrap on the land would serve to diminish the value of the property, rather than to enhance its value.

Finally, the final concern is the relationship with the neighbors. They have already complained about these tires and/or structures being located on the property. Who's to say that they will not complain again in six (6) months or a year? Ms. Lange does not want to deal with this issue again in the future.

Therefore, based upon the foregoing issues, she feels the only course of action is to have the tires and/or scraps removed from the property. She will not consent to any plan that does not call for the total removal of these materials from her property. This removal should take place as quickly and efficiently as possible. While we hope to work with you to achieve this goal, if you do not comply with our request, Ms. Lange will not hesitate to utilize every legal means available to her to restore her property to its previous condition. If you have any questions or comments, please feel free to contact this office at any time. Thank you.

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Sincerely, Jacobson Law Office, LLC

Heather A. Jacobson, Attorney

CC: Tim Link, DEQ Bryan Morgan, Lessee

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JACOBSON LAW OFFICE, LLC

Heather A. Jacobson

ATTORNEY AT LAW A Limited Liability Company 1839 Madora Avenue Douglas, Wyoming 82633

Telephone (307) 358-3180

Fax (307) 358-3182

February 2, 2011

Mr. John V. Corra Director Wyoming Department of Environmental Quality 122 West 25<sup>th</sup> Street Cheyenne, WY 82002

RE: Lange/Envirotank

Dear Director Corra:

This office represents Ms. Sandy Lange in regards to a dispute with EnviroTank and its dumping of thousands of large tires on the Lange property. We have involved your office since 2009 with the ongoing issues and requesting its assistance. Unfortunately, your office has failed to do anything at all about the situation to date: The official position seems to be encouraging the negotiation of a settlement between the parties, rather than enforcing your department's rules and regulations regarding the placement of these large tires and scrap. This has been incredibly frustrating to my client. Therefore, we are requesting an in-person meeting with yourself, the assistant attorney general currently handling the manner, and whichever DEQ employee that will be handling this specific issue. We hope that this meeting will allow the matter to finally proceed and gain the assistance of your office in pursuing the enforcement of the rules and regulations of the DEQ.

My client and I will make ourselves available to meet in Cheyenne whenever it is convenient for you to discuss the matter. If you have any questions or comments, please feel free to contact this office at any time. Thank you.

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Sincerely, Jacobson Law Office, LLC

Heather A. Jacobson, Attorney

CC: Lange Governor Mead

#### DEPARTMENT OF ENVIRONMENTAL QUALITY STATE OF WYOMING

IN THE MATTER OF THE ) NOTICE OF VIOLATION & ORDER ) ISSUED TO: ) ENVIROTANK, INC. (51.031) ) Docket No. 4824-11 P.O. BOX 302 ) FT. LUPTON, CO 80621 )

#### NOTICE OF VIOLATION AND ORDER

#### NOTICE IS HEREBY GIVEN THAT:

1. Envirotank, Inc. operates a scrap tire processing facility located on Clarkelen Road approximately 14 miles south of Gillette in Campbell County.

2. Envirotank, Inc. is an active Wyoming corporation which initially filed with the Wyoming Secretary of State 12/26/2001 (Filing No. 2001-000428258).

3. "Envirotank, Inc." with an initial filing date of 12/26/2001 and Filing ID No. 2001-000428258 is the only listing for "Envirotank" in the Wyoming Secretary of State's online business entity database.

4. Envirotank, Inc.'s current principal office is located at 377, Clarkelen Rd. in Gillette, Wyoming and its current mailing address is P.O. Box 302, Ft. Lupton, Colorado 80621.

5. Michael J. Bulger is currently listed as Envirotank, Inc.'s President in the Wyoming Secretary of State's online database.

6. The only changes in the "History" of Envirotank. Inc. during 2006 listed in the Wyoming Secretary of State's online database are Changes for the Name and Address of its Registered Agent on 4/13/2006.

7. Scrap tires are "solid waste," which is defined in W.S. 35-11-103(d)(i) as including discarded materials resulting from industrial, commercial, agricultural or community activities.

8. Envirotank, Inc.'s scrap tire processing facility is a "solid waste management facility," which is defined in W.S. 35-11-103(d)(ii) as any facility for the transfer, treatment, processing, storage or disposal of solid waste.

9. W.S. 35-11-502(a) requires a permit from the Wyoming Department of Environmental Quality (DEQ), Solid & Hazardous Waste Division (SHWD) for Envirotank, Inc. to operate a solid waste management facility.

10. By letter addressed to Mr. John Hull, Envirotank, Inc., dated November 15, 2004, the DEQ/SHWD issued Solid Waste Operating Permit #51.031 authorizing Envirotank, Inc. to operate in compliance with the terms of the approved permit application received by DEQ October 20, 2004 and the conditions specified in the DEQ's November 15, 2004 permit letter.

11. The approved final permit application received by DEQ October 20, 2004 (dated July 15, 2004) describes the Envirotank, Inc. facility as "a tire processing facility" and gives the following details for Envirotank's "Operating Plan":

- up to 30 "raw" tires held in inventory at any one time;
- tires are slit into two pieces on a rotary table;
- the lower pieces are sold to be used for stock watering tanks;
- the upper portion, the sidewall or top, is sold "to be used in stacks" for livestock windbreaks;
- the tops are sold in larger lots (a dozen or more) for windbreaks;
- normally the facility stores up to 75 finished tanks and 200 finished tops.

12. Permit Condition #6 states that "as listed in the [July 15, 2004 final permit] application," not more than 30 "raw" tires, 75 finished tanks, and 200 tops shall be stored at the facility at any one time.

13. On April 3, 2006, DEQ received an Application for Permit Transfer to transfer the permit for the "Envirotank Inc., SHWD File #51.031 . . . scrap tire processing" facility located at 377 Clarkelen Road, Gillette, from John Hull to Michael Bulger II, signed by both Transferor John D. Hull as "President" and Transferee Michael J.F. Bulger II as "Owner."

14. By letter dated April 19, 2006, DEQ approved the transfer from John Hull to Michael Bulger of Solid Waste Operating Permit #51.031 for Envirotank, Inc., as initially issued November 15, 2004, and gave notice that the new operator would be responsible for complying with the November 15, 2004 permit and with the terms of the permit application approved in that permit, and also with a new condition requiring the planting of trees to screen the facility.

15. • Envirotank, Inc. remains the entity authorized by the April, 2006 permit transfer as requested by the parties to the transfer and as approved by the DEQ.

16. Neither the operating permit DEQ initially issued to Envirotank, Inc. dated November 15, 2004 nor DEQ's April 19, 2006 approval for the transfer of that permit authorized Envirotank, Inc. to deposit any whole scrap tires or tire parts, other than tire tanks or tire tops as described in Envirotank's approved application, at any location away from Envirotank's permitted facility (except at another permitted facility).

17. The Lange Trust owns rural property located at 227 Bell Road south of Gillette in Campbell County (the Lange Trust site).

18. Since approximately November, 2004 ("prior to the first tires being placed on the property"), the Lange Trust has leased the site to Mr. Brian Morgan for ranching operations.

19. At some time after November, 2004, the Lange Trust, through Ms. Sandra Kay Lange, agreed to let the Trust's Lessee, Mr. Brian Morgan, arrange to have two windbreaks built with tires placed on the Lange Trust site.

20. Based on information requested by DEQ/SHWD provided by Envirotank, Inc. and/or the Lange Trust, it appears that Envirotank, Inc. and the Lange Trust's Lessee, Mr. Brian Morgan:

a) agreed to Envirotank, Inc.'s placement of a total of approximately 725 non-earth-filled whole tires of various sizes at the Lange Trust site between November, 2004 and November, 2007, of which approximately 350 whole tires were placed there after April 19, 2006; and b) agreed to Envirotank, Inc.'s placement of a total of approximately 1,574 half tires to be used to make windbreaks and 50+ 'rings" at the Lange Trust site between November, 2004, and November, 2007, of which approximately 260 tire "tops" were placed there after April 19, 2006.

21. Envirotank, Inc.'s placement at the Lange Trust site between November, 2004 and November, 2007 of approximately 725 non-earth-filled whole tires of various sizes and any scrap tire materials other than the lower halves used for stock water tanks or the upper portions ("tops" or sidewalls) for use in stacks for windbreaks, was not authorized by Solid Waste Operating Permit 51.031, and was not exempted from the permit requirement, and therefore was in violation of Solid Waste Operating Permit 51.031 and W.S. 35-11-502(a).

#### ORDER

#### IT IS HEREBY ORDERED THAT:

1. Within 90 days from the date this NOV & Order are served, Envirotank, Inc. shall remove from the Lange Trust site all whole tires and tire parts that are not either the lower half of a whole tire used for stock watering tanks or the top half / sidewall of a whole tire for use in making livestock windbreaks, as described in Envirotank, Inc.'s approved final permit application dated July 15, 2004.

2. Envirotank, Inc. shall take all whole tires and tire parts removed from the Lange Trust site to a facility authorized to receive them.

3. Envirotank, Inc. shall obtain and provide DEQ/SHWD with copies of receipts and/or other signed documents specifying dates, name and location of receiving facilities, and numbers of whole tires and volume of tire parts in each shipment to confirm that all tires and tire parts Envirotank, Inc. removes from the Lange Trust site are taken to a facility authorized to receive them.

Under W.S. 35-11-701(c)(ii), this ORDER is final unless not later than ten (10) days after the date the notice is served, the person(s) named therein request, in writing, a hearing before the Wyoming Environmental Quality Council. The Request for Hearing shall be mailed by certified mail, return receipt requested, to the Chairman, Wyoming Environmental Quality Council, Room 1714 Herschler Building, 1<sup>st</sup> Floor West, 122 W. 25<sup>th</sup> Street, Cheyenne, WY 82002, with a copy mailed to the Director of the Wyoming Department Environmental Quality, Herschler Building, 4<sup>th</sup> Floor West, 122 W. 25<sup>th</sup> Street, Cheyenne, WY 82002.

DATED this 18 day of April, 2011.

Carl Anderson

Administrator, Solid & Hazardous Waste Division

John Y. Corra Director, Department of Environmental Quality



Dave Freudenthal, Governor

The State of Wyoming



Department of Environmental Quality

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November 25, 2003

Notice to Affected Parties

Re: Decision on Permit Requirements for Beneficial Use of Tire Bales in Wyoming

Recently, the Wyoming Department of Environmental Quality's Solid and Hazardous Waste Division has had numerous inquiries regarding the beneficial use of tire bales and, in particular, the use of tire bales as wind breaks and fences for livestock.

The Department acknowledges that properly managed tire bales can be beneficial when used as a wind break for livestock, or as a fence. However, the Department has the following concerns with allowing tire bales to remain exposed to the weather, as they are when used as wind breaks or fencing:

- Tire bales may collect, hold and warm rainwater and snow melt, increasing breeding grounds for mosquitos. With the West Nile virus spreading throughout Wyoming and becoming more of a public health risk, the Department is concerned that not enough is known about the water storage potential of tire bales which remain exposed to the elements. More time is needed to evaluate this potential risk.
- 2) Tire bales that have been inspected by the Department show varying degrees of baling quality. Since the integrity of the bales is critical to the effectiveness of the beneficial use, and since loose tires create risks of tire fires and pose real risks for the transmission of the West Nile virus because they create mosquito habitat, the Department needs to evaluate the best practices and materials to ensure the long term integrity of the tire bales. Without the safeguards provided by a solid waste storage or disposal permit, including having fire prevention measures, and having bonding in place to insure adequate funds for proper disposal of tires when the wire ties holding these bales together fail, there may be a longer term risk to human health and the environment.

Based on the reasons given above, effective immediately, the Wyoming Department of Environmental Quality will no longer continue to exempt the beneficial use of tire bales within

the State of Wyoming from solid waste permitting requirements, pending further study by the Department of this issue and its impacts on human health and the environment. Prior to this decision, the Department had exempted the use of tire bales as fences and wind breaks from solid waste permitting requirements under the authority of Chapter 1, Section 1(l)(xiv) of the solid waste rules. Effective today, any tire bales placed on public or private land, other than at a permitted disposal facility, will be subject to removal at the landowner's expense. Intact tire bales that have been placed for the purpose of beneficial use prior to the effective date of this decision will not be affected and need not be removed.

This decision does not affect beneficial uses of waste tires which include provisions for completely filling the interior of the tire with earthen materials, such as use of tires for rammedearth structure construction, or use of earth-filled tires for fences or wind breaks. These types of beneficial uses continue to be exempt from solid waste permitting requirements.

This decision also does not prohibit retail business facilities from storing fewer than 1,000 scrap tires on their premises at any one time. Storage without a permit of fewer than 1,000 scrap tires at retail businesses, whether loose or baled, is continuing to be allowed under the authority of Chapter 1, Section 1(1)(xiv) of the Wyoming solid waste rules and regulations.

After today's decision, the Department will consider written requests from individual landowners with special circumstances who may wish to be excluded from solid waste permitting requirements, and thus allowed to continue to place tire bales on their property for some type of beneficial use. Special circumstances which would justify the Department's exemption of an individual's use of tire bales from solid waste permitting requirements are: (1) situations where the landowner has, prior to the effective date of this decision, entered into an irrevocable written contract for the purchase of a specified number of tire bales for a legitimate beneficial use; (2) situations where the landowner proposes to use a durable means to shield the tire bales from accumulating water from rain or snow melt; and (3) situations where the landowner agrees to bonding or other form of financial assurance to guarantee that tire bales do not pose a long term threat of becoming mosquito habitat when the bailing wires fail and the bale no longer retains its integrity.

If you have any questions, please feel free to contact Bob Doctor at (307) 473-3450 or Joel Frost at (307) 777-7752.

Sincerely,

David A. Finley Administrator Solid and Hazardous Waste Division

# WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY SOLID AND HAZARDOUS WASTE DIVISION

# SOLID WASTE GUIDELINE #21

# Standards for Scrap Tire Management

#### 1.0 Introduction

This document provides guidance for the management of scrap tires in Wyoming. It summarizes current Wyoming Department of Environmental Quality (Department) permitting requirements and provides examples of management activities for which a permit may not be required. This guideline may be revised periodically.

Scrap tire generators, such as mines, heavy equipment companies, and retail tire businesses, are responsible for the proper management of the tires they generate and must ensure that their tires are managed or disposed at a site permitted or otherwise authorized by the Department. Scrap tire generators should contact the Department for information about facilities currently permitted to receive scrap tires or companies permitted to process scrap tires at the site where they are generated. Generators who do not manage their scrap tires properly are subject to enforcement action and potential penalties. Persons who accept scrap tires from other generators without prior Department authorization may also be subject to enforcement action and penalties.

The Department has concerns with whole scrap tires, and tire bales that are allowed to remain exposed to the weather, as they are when used as wind breaks or fencing. Accumulations of tires have been a source of historic public complaints and problems for Wyoming. These problems have been varied and include complaints about the unsightly appearance of tire piles, potentially uncontrollable tire fires, and the spread of West Nile virus from the mosquito habitat accumulated tires provide. An example would be an accumulation of tires with claims or plans for use on a large scale for wind breaks and fences. After the date of this guideline, the Department will not approve whole scrap tires, tire shreds, or tire bales for use in windbreaks, fences or other exposed applications.

Before addressing more details later in this guideline, it may help to keep in mind the distinction between beneficial re-use of a reasonable number of scrap tires vs. unacceptable accumulation of scrap tires. Generally speaking, permits are not required when tires are beneficially re-used by their original owners on their own property for small scale farm/ranch or personal use without any accumulation beyond the reasonable, anticipated use. An example would be tractor tires cut in half for stock watering,

Solid Waste Guideline # 21: "Standards for Scrap Tire Management" Current Revision; September 12, 2008 Page 1 of 9

with customary spacing for the acreage involved. An example of larger scale re-use would be the Wyoming Highway Department (WYDOT) having a Department-approved staging area for larger quantities of scrap tires to be re-used as construction material for an imminent, approved road project.

Conversely, permits are often required when scrap tires are accumulated in any significant manner without imminent, on-going and approved re-use or when accumulated tires were not generated by the owner of the storage site. There may be exceptions to the general theme of the examples mentioned above but they serve as a guide for some of the simpler, more straightforward cases.

This guideline may not include all the factors needed to determine whether a solid waste permit or exemption is required for a particular scrap tire management activity. The Department will need to review a written beneficial use proposal and onsite visits and/or inspections may be necessary before permitting determinations are made. Scrap tire generators should contact the Department at the numbers listed at the end of this document for further information.

#### 2.0 General Information

A waste or scrap tire is generally defined as a tire which is no longer capable of being used for its original purpose and/or which in some cases has been managed in such a manner that it can not be used for any other purpose. A used tire is one that cannot be legally described as new, but which is structurally intact and has a tread depth greater than the legal limit. A used tire can be mounted on a vehicle's rim without repair.

Tires vary in size, but for management purposes are often placed into three groups by the Department; passenger and light truck tires, truck tires, and large heavy equipment and off-road tires. Passenger tires are those commonly used on passenger cars and light trucks with a rim diameter of 19.5 inches or less. Truck tires are generally tires with a rim diameter of 20 inches or larger. Large heavy equipment and off-road tires are those used on tractors, excavators, loaders, mine equipment, and similar equipment, which exceed approximately six (6) feet in diameter.

A passenger tire equivalent (PTE) is a measurement of mixed passenger and truck tires or parts thereof which are equivalent to the average weight of one waste passenger tire; approximately 20 pounds. In general, one truck tire is considered to be equal to five passenger tires.

#### 3.0 Prohibited Activities

Chapter 1, Section 1(h), Prohibited acts, states the following acts are prohibited:

(i) Open dumping;

(vi) No solid wastes shall be speculatively accumulated at a facility intended for use as a solid waste management facility without a permit.

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Chapter 1, Section 1(e)(i) defines "open dump" as an uncontrolled solid waste management facility at which solid wastes are placed on the land in such a manner that they present a real or potential hazard to public health and the environment. Open dump includes any solid waste management facility subject to the permitting requirements of the SWRR that does not have a current, valid permit.

§35-11-502(a) of the Environmental Quality Act (EQA) states that no person, except when authorized under the permit system established pursuant to this act, shall:

- (vi) Locate, construct, operate or close a solid waste management facility; or
- (vii) Modify the design, construction or operation of a solid waste management facility.

It is a violation of the SWRR and the EQA to operate a scrap tire transfer, treatment, storage, or disposal facility without a valid permit. Such violation is subject to a penalty not to exceed \$10,000 per day for each day during which violation continues as specified under 35-11-901 of the EQA.

#### 4.0 Permit Requirements

Scrap tires are considered a "solid waste" in Wyoming. Further, language in Chapter 1, Section 1 (1) (ii) of the Solid Waste Rules and Regulations (SWRR) indicates that tires at auto salvage and similar operations, even if on a vehicle, are considered scrap tires. A "solid waste management facility" is any facility for the transfer, treatment, storage or disposal of solid waste. Chapter 1, Section 1(e) of the SWRR defines solid waste "treatment facility" as any facility that treats solid waste. Treatment includes, but is not limited to; tire shredding/chipping, baling, incineration, and pyrolysis. A "storage facility" is any facility that stores solid waste for a temporary period, at the end of which time the solid waste is treated, and/or transported elsewhere for further treatment or disposal.

Chapter I, Section 1(f)(i) of the SWRR, states that a permit or a one-time or emergency disposal authorization is required for the location, construction, operation or closure of any new or existing solid waste management facility as specified by Chapter 1, Section 5, or by the applicable chapter(s) of the SWRR. Scrap tire management standards are contained in Chapter 8, Section 2, of the SWRR.

Permit requirements differ depending upon the specifics of a proposed operation or facility. In order for the Department to determine permitting requirements, facility operators may be required to provide detailed information regarding proposed activities and the Department may need to visit the proposed waste management site. If the Department determines that a solid waste permit is necessary, the permit requirements of the Solid Waste Rules and Regulations, summarized below, are applicable.

### 4.1. Low Hazard/Low Volume Transfer, Treatment and Storage Facility Permits

Under certain circumstances Low Hazard/Low Volume (LH/LV) permits may be issued under Chapter 6 of the SWRR. LH/LV permits use an abbreviated permit process which in some cases may be completed in approximately seven months, depending on the quality of the application. Chapter 1, Section 1(e)(i) defines "low hazard and low volume treatment, processing, storage, and transfer facility" as a solid waste management facility which accepts only solid wastes as described in this section, and which are:

-Mobile transfer, treatment and storage facilities. A tire processing unit (i.e., shredding or baling) that travels to sites where scrap tires are generated to process tires would be classified as a mobile treatment facility.;

-Transfer, treatment, storage and processing facilities managing less than 5000 scrap tires, if the scrap tires are being stored to be recycled, reclaimed, or reused.

A mobile treatment facility is a special type of low-hazard/low-volume facility (see Solid Waste Chapter 1, Section 1(e).) The permit application process for LH/LV facilities is outlined in Solid Waste Chapter 1, Section 2(j). Please contact the Solid Waste Permitting and Corrective Action Program staff for additional information.

4.2 Standard Transfer, Treatment and Storage Facility Permits

If the proposed waste management activity does not qualify for a LH/LV permit, a standard Chapter 6 application will need to be submitted. The permit application process is outlined in Chapter 1, Section 2(c) of the SWRR. Depending on the quality of the application and the complexity of the facility, twelve to eighteen months may be needed to obtain a standard permit. Please contact the Solid Waste Permitting and Corrective Action Program staff for additional information.

#### 4.3 Disposal Permits

Scrap tires may be disposed in permitted municipal and industrial landfills. Scrap tire generators need to contact landfill operators before delivering tires for disposal to see if the facility has any special conditions or restrictions. Anyone considering an application for a tire disposal facility should contact the Department for detailed permitting information.

#### 5.0 Permit Exemptions

Certain activities related to management of scrap tires may be eligible for an exemption from the need for a solid waste permit. Chapter 1 Section 1 (f)(ii) of the SWRR states that a permit or disposal authorization is not required for the facilities or activities specified in subsection (l) of this section. Chapter 1, Section 1(l) of the SWRR states in part:

Exemptions: The administrator may exempt the following from a permit or any requirement to obtain a waste management authorization under these regulations, provided that person engaged in activities which are otherwise exempted may be required to supply information to the administrator which demonstrates that the act, practice, or facility is exempt, and shall allow entry of Department inspectors for purposes of verification of such information:

In short, a permit is generally not required for the practices in Section (1). However, a permit or permit exemption may be required, depending on site-specific conditions. Please contact the Solid Waste Permitting and Corrective Action Program staff noted near the end of this document.

#### 5.1 General Exemption Standards

The following exemptions related to scrap tires are described in Chapter 1 Section 1 (I) of the SWRR:

(ii) Baling of used motor vehicles or scrap metals, and operation of metal smelters regulated by the Air Quality Division and storage for sale or reuse of used motor vehicles, motor vehicle parts, or scrap metals at auto salvage yards or scrap metal dealers as authorized under W.S. 31-13-112(a), provided that for used oil, used antifreeze, tires, and lead acid batteries the following storage accumulation limits are not exceeded:

(A) 1,000 scrap tires, excluding any scrap tires remaining on wheels attached to vehicles.

(iv) The collection, storage and disposal of household wastes generated by a single family unit or household on their own property in such a manner that does not create a health hazard, public or private nuisance, or detriment to the environment

(viii) The management of solid wastes, which in the judgment of the administrator, constitute de minimis quantities which are managed in a manner that does not create a health hazard, public or private nuisance, or detriment to the environment

(xi) Lands and facilities owned by a person engaged in farming or ranching and used to dispose of solid waste generated incidental to his or her farming and ranching operation

(xiii) Scrap tire storage units at permitted landfills which, in the ordinary course of operation, have fewer than 5,000 scrap tires in aboveground storage at any one time. Such landfills are subject to applicable landfill rules.

(xiv) Retail business facilities which have fewer than 1,000 scrap tires on the premises at any one time.

(xxi) The reuse of wastes in a manner which is both beneficial and protective of human health and the environment, as approved by the administrator.

Solid Waste Guideline # 21: "Standards for Scrap Tire Management" Current Revision: September 12, 2008 Page 5 of 9

# 5.2 Exemptions for Specific Scrap Tire Management Activities

As noted above, the Department may exempt the beneficial use of wastes from the need to obtain a permit. The beneficial use of scrap tires in a variety of applications has become a fairly common practice. The Department has not conducted an engineering analysis to evaluate the use of scrap tires. Additional information about the use of scrap tires may be obtained from the EPA, the Rubber Manufacturers' Association, the Scrap Tire Management Council, and other sources.

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The Department encourages the beneficial use of scrap tires when the proposed use is technically sound. Beneficial use will not be approved if there is a potential to create a public or private nuisance, odor, dust, litter, insect, or noise problem or if the use has the potential to have a detrimental effect on human health and the environment.

Department authorization must be obtained before beginning any beneficial use project. Scrap tire generators and others considering the beneficial use of scrap tires need to contact the Department to discuss the details of any proposed beneficial use project before tires are transported to the work site and any work begins on the project. Persons seeking a beneficial use or other exemption will generally be required to submit a detailed, written proposal to the Department. The proposal should describe the location of the proposed use, how waste will be stored and managed at the site, the quantity of waste to be used, information to demonstrate that the use meets commonly accepted technical standards and any other information considered necessary by the Department. If the person applying for a beneficial use exemption is not the property owner, documentation of landowner approval must also be submitted.

Note that if the approved beneficial use is changed or terminated, the user of the scrap tires and/or the property owner is responsible for the proper management of the waste. For example, if shredded scrap tires are used as structural fill under a roadway, the entity responsible for the road will need to manage the tires properly if the road is later excavated and the shredded tires are not reused for the same purpose.

#### 5.2.1 Whole Passenger and Truck Tires

The Department will consider engineered uses of whole tites on a case-by-case basis. After the date of this guideline, the Department will not approve the use of whole tites for use in windbreaks, feuces or other exposed applications. Scrap tire generators are responsible and accountable for the waste they generate. Scrap tire generators such as tire dealers, heavy and off-road equipment operators, may not transport or give away whole tires for unapproved uses to persons or facilities that have not been authorized by the Department to take the scrap tires.

#### 5.2.2 Tire Bales

Tire bale quality is often inconsistent and bales routinely fail to remain bound when used in uncontained applications such as windbreaks and fences. Therefore, after the date of this guideline, the Department will not approve tire bales for use in windbreaks, fences or other exposed applications. However, the Department believes that tire bales may be beneficially used in properly engineered applications such as structural fill in highway and other embankments where bales are contained and covered with soil and will not be in direct contact with surface water or groundwater. The Department will consider engineered uses of tire bales on a case-by-case basis.

#### 5.2.3 Shredded Tires

Shredded tires may be considered for use as subgrade fill and embankments, backfill for wall and bridge abutments, subgrade insulation for roads, landfill and septic system drain fields, etc. Guidelines published by the Scrap Tire Management Council may be used to assist with the design of projects utilizing shredded scrap tires as fill. Tire shreds may not be placed in direct contact with surface water or groundwater. The Department will consider engineered uses of shredded tires on a case-by-case basis.

#### 5.2.4 Large Heavy Equipment and Off-Road Tires

After the date of this guideline, the Department will not approve the use of whole large tires for wind breaks, fences or other exposed applications. Generators of large scrap tires are responsible and accountable for the waste they generate. Scrap tire generators such as tire dealers, mine operators, heavy and off-road equipment operators, may not transport or give away whole tires for unapproved uses to persons or facilities that have not been authorized by the Department to take the scrap tires.

The Department will consider common uses for large heavy equipment and offroad tires including stock tanks, feed bunks, and rubber scrapers. Rubber from these tires is often of a higher quality than passenger tires, therefore these tires are often reduced to various sizes for crumb rubber applications such as playground fall protection and running tracks. The Department will consider beneficial use proposals for large tires and tire derived materials on a case-by-case basis.

#### 5.2.5 Other Uses for Scrap Tires

Other potential uses for scrap tires are too numerous to mention in this document. Permitting and exemption standards will differ depending upon the specifics of a proposed use, operation or facility. The Department will consider other uses of scrap tires on a case-by-case basis.

#### 6.0 Temporary Scrap Tire Storage

Storage requirements for scrap tires are contained in Chapter 8, Section 2 of the SWRR. In general, a 50-foot fire lane/buffer zone should be maintained around all temporary storage piles to ensure

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separation from ignition sources, structures and property boundaries. Measures must be taken to prevent surface water run on and runoff. Scrap tire piles may not exceed twenty (20) feet in height, fifty (50) feet in width and have a base surface area greater than ten-thousand (10,000) square feet.

Speculative accumulation of scrap tires will not be authorized. Department authorization must be received before scrap tire storage and other management activities begin. The Department believes that, prior to beneficial use, the temporary storage of scrap tires or tire shreds from the equivalent of 1,000 whole passenger tire equivalents (PTEs), should not create a health hazard, public or private nuisance, or detriment to the environment. In general, this would limit the size of a pile of shredded tires to approximately 50 cubic yards; roughly 12 feet wide, 12 feet long and 10 feet high. The Department will consider proposals for the temporary storage of greater quantities of tires on a case-by-case basis, depending on site specific conditions and the nature of the project. In general, storage will be limited to the time and volume reasonably needed to put the scrap tires to use. A permit may be required for large quantity and/or long-term storage.

6.1 Large Scrap Tire Storage

The Department considers large scrap tires to be those which exceed approximately six (6) feet in diameter. In general, the temporary storage standards above apply to large scrap tires however; due to the large size of these tires, somewhat different management standards are warranted. Prior to processing for beneficial use, no more than ten (10) large scrap tires may be stored if the tires are stored in a manner that does not create a health hazard, public or private nuisance, or detriment to the environment. Tires may not be transported to the proposed use site without prior Department approval.

#### 7.0 Further Information

Copies of the rules, review forms and guidelines identified above can be obtained from the Department web page at <u>http://deg.state.wy.us/shwd/</u>, or in paper or electronic format by calling the following Solid and Hazardous Waste Division offices.

Casper:	Dale Anderson	(307) 473-3450
Cheyenne:	Maggie McKenzie	(307) 777-7752
Lander:	Patrick Troxel	(307) 332-6924

Web sites maintained by the EPA, the Rubber Manufacturers' Association, the Scrap Tire Management Council, and others may be helpful sources of additional information.

#### 8.0 Guideline Approval

I have reviewed and approved the policies and procedures described in this guidance document.

Signed

LeRoy C. Feusner, P.E., BCEE Administrator Solid and Hazardous Waste Division

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#### Guideline History

July 11, 2008: Original version September 12, 2008: First Revision

#### References

ASTM Standards: (D6270-98(2004)) Standard Practice for Use of Scrap Tires in Civil Engineering Applications

Civil Engineering Applications of Chipped Tires (1995) by Dana N. Humphrey, Department of Civil and Environmental Engineering, University of Maine.

Design Guidelines to Minimize Internal Heating of Tire Shred Fills (undated), Scrap Tire Management Council, Washington D.C.

Rubberized Asphalt Concrete Technology Center (RACTC) http://www.rubberizedeophalt.org

University of Maine hup by www unconcerd, research of MI Read Again has

USEPA Office of Solid Waste, Used Tires

Solid Waste Guideline # 21: "Standards for Scrap Tire Management" Current Revision: September 12, 2008



# Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



John Corra, Director

November 19, 2008

CERTIFIED #7008 0150 0001 1173 7302 RETURN RECEIPT REQUESTED

Mr. Billy Ward Ward Cattle Company LLC 5565 County Road 18 LaGrange, WY 82221

> RE: Application for use of baled scrap tires as wind breaks at Broken Box Ranch – letter dated October 22, 2008

Dear Mr. Ward:

This letter is being written in response to your request, referenced above, for authorization of the use of baled scrap tires as wind breaks at your ranch. Your letter was sent, on my advice, in order for the Wyoming Department of Environmental Quality, Solid & Hazardous Waste Division (department) to make a determination as to the suitability of baled scrap tires used as wind breaks as a beneficial use of solid wastes as set forth in Solid Waste Rules and Regulations (SWRR), Chapter 1, Section 1(1)(xxi). After careful consideration and detailed discussions with my staff, I am sorry to inform you that the department is not able to authorize the beneficial use exemption you proposed. The following discussions are being provided to describe the department's basis for denying your request.

SWRR, Chapter 1 requires that, in order for the reuse of a solid waste to be eligible for exemption from permitting or the requirement to obtain a waste management authorization, the proposed reuse must be evaluated by the department to ensure that it is beneficial and will be conducted in a manner that is protective of human health and the environment. To that end, *Solid Waste Guideline #21: Standards for Scrap Tire Management* was developed after thorough research of information compiled at both national and regional levels of reuse options for scrap tires that were documented to be both beneficial and protective. As is discussed in *Guideline #21*, the use of baled tires in windbreaks and other exposed applications has been shown to be problematic in that such applications provide habitat for mosquitoes and other pests, in addition to posing fire hazards. Because your proposed use is for exposed scrap tire bales, the criteria for granting the beneficial use exemption of being protective of human health and the environment would not be met. Therefore, the regulatory basis for granting the exemption is absent.

Please note that, although it is not recommended that exposed tire accumulations pre-dating the effective date of Guideline #21 (July 11, 2008) be left in place, the department, at this time is not requiring the removal of existing tire bales being used for fences or windbreaks. The decision





ward Cattle Company November 19, 2008 Page 2 of 2

regarding the ineligibility of tire bales for beneficial use exemption was initially made by Dave Finley (Solid & Hazardous Waste Administrator at the time) on November 25, 2003 because of evidence that such uses could not be conducted without presenting potential threats. Since that time, more information has been gathered by states in the region documenting that exposed tires in tire bales present a number of environmental and human health problems. Because of this, the decision has been made that, after July 11, 2008, placement of tire bales as wind breaks and other applications where scrap tires are exposed constitute unauthorized reuses of solid wastes and violate Section 35-11-502 of the Wyoming Environmental Quality Act.

If you have any questions regarding the contents of this letter, please contact Maggie McKenzie by telephone at (307) 777-3580 or by email at <u>mmcken@wyo.gov</u>. I do appreciate your patience and cooperation in this matter and hope that you can see that the department's decision is necessary in the fulfillment of its responsibility to ensure that human health and the environmental are protected.

Sincerely,

LeRoy C. Feusner, P.E., BCEE Administrator Solid and Hazardous Waste Division

Enclosures:

Cc:

Bob Doctor, DEQ/SHWD Casper Joel Frost -> Maggie McKenzie -> DEQ/SHWD Cheyenne SHWD File Goshen County General File (w/attachments)

ENVIROTANK EXHIBIT #16



# Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



John Corra, Director

Dave Freudenthal, Governor

June 3, 2009

# CERTIFIED MAIL #7008 0150 0001 1173 9535 RETURN RECEIPT REQUESTED

Mr. Jerry Shimic PO Box 128 Hawk Springs, WY 82217

> RE: Scrap tire bales located approximately three miles south of Hawk Springs, Wyoming at the intersection of US Highway 85 and 313 – SHWD File #61.100

Dear Mr. Shimic:

The purpose of this letter is to document the telephone conversation we had today regarding the tire bales located on your property which are currently being used as wind breaks. and the letter written to you by Mr. Joel Frost of the Department of Environmental Quality. Solid & Hazardous Waste Division (DEQ) dated May 14, 2009 regarding the need to address what constitutes an unauthorized solid waste management activity. We discussed the DEQ's current position regarding the use of scrap tire bales as wind breaks, and the concerns regarding mosquito habitat, fire potential and adverse visual effects presented by tire bales utilized in this manner. We also discussed the contents of DEQ's Solid Waste Guideline #21 (guideline) which is attached for your reference. As is stated in the guideline, DEQ has the responsibility for the management of scrap tires. The DEQ's position, as is described in the guideline, is that the use of exposed scrap tire bales as windbreaks does not meet the criteria for a beneficial use of a solid waste. Therefore, DEO is prohibiting accumulations of additional scrap tire bales for this use that occur after September 12, 2008. You stated during our telephone conversation that the tire bale windbreaks currently located on your property were placed two or three years ago, prior to September 12, 2008. Because the bales were placed before the adoption of the guideline, the DEQ is not requiring the removal of the tire bales at this time. However, for the reasons stated earlier in this letter, DEQ strongly recommends that the tire bales on your property be removed and properly managed. Authorized management options for scrap tires are discussed in the guideline.

Lastly, we discussed the fact that future accumulations of tire bales for windbreaks are prohibited. Such accumulations would constitute violations of the Wyoming Environmental Quality Act and rules and regulations adopted thereunder.





Mr. Jerry Shimic SHWD File #61.100 June 3, 2009 Page 2 of 2

If you have any questions regarding this letter or the requirements for managing scrap tires, please feel free to contact me by telephone at (307) 777-3580, by email at  $\underline{\text{mmcken}(\widehat{a},\text{wyo.gov})}$ , or by writing to me at the letterhead address.

Sincerely, ien ??

Maggié McKenzie ) District 1 Supervisor Solid Waste Permitting & Corrective Action Program Solid & Hazardous Waste Division

Enclosures: Solid Waste Guideline #21

Cc: Joel Frost, DEQ/SHWD, Cheyenne & SHWD File #61.100 Bob Doctor, DEQ/SHWD, Casper & SHWD File #61.100

ENVIROTANK EXHIBIT #17

Chapter 1, Section (f) Permit Required for New and Existing Facilities:

(f)(i) A permit or one-time emergency disposal authorization is required for the location, construction, operation or closure of any new or existing **solid waste management facility** as specified by Chapter 1, Section 5, or by the applicable chapter(s) of these rules and regulations. All facilities shall be located, designed, constructed, operated and closed in accordance with the permit or disposal authorization issued by the director or administrator.

(f)(ii)A permit or disposal authorization is not required for the facilities or activities specified in subsection(l) of this section.

Chapter 1, Section (l) Exemptions:

(1) The administrator **may exempt the following from a permit or any requirement to obtain a waste management authorization** under these regulations, provided that persons engaged in activities which are otherwise exempted may be required to supply information to the administrator which demonstrates that the act, practice, or facility is exempt, and shall allow entry of department inspectors for purposes of verification of such information:

(l)(xxi) The reuse of wastes in a manner which is both beneficial and protective of human health and the environment, as approved by the administrator.

ENVIROTANK EXHIBIT #18

#### CHAPTER 1

#### **GENERAL PROVISIONS**

Section 1. In General.

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(a) <u>Authority</u>: The authority for the rules and regulations promulgated in this chapter is the Wyoming Environmental Quality Act, W.S. 35-11-101 et seq. Specific sections of the act that provide authority for this regulation include W.S. 35-11-102, 35-11-109 and Article 5, Solid Waste Management, 35-11-501 et seq.

(b) <u>Applicability</u>: The rules and regulations contained herein shall apply to any person, government or governmental subdivision, corporation, organization, partnership, business trust, association, district or other entity involved in any aspect of the management of solid waste. These regulations are effective immediately upon filing with the Secretary of State.

(c) <u>Objective</u>: The objective of these rules and regulations is to provide minimum standards for the management of solid waste in order to carry out the policy and purpose of the Wyoming Environmental Quality Act, W.S. 35-11-102.

(d) <u>Severability</u>: If any section or provision of these regulations, or the application of that section or provision to any person, situation, or circumstance is adjudged invalid for any reason, the adjudication does not affect any other section or provision of these regulations or the application of the adjudicated section or provision to any other person, situation, or circumstance. The Environmental Quality Council declares that it would have adopted the valid portions and applications of these regulations without the invalid part, and to this end the provisions of these regulations are declared to be severable.

(e) <u>Definitions</u>:

(i) For the purpose of these rules and regulations, unless the context otherwise requires:

"Act" means the Wyoming Environmental Quality Act, W.S. 35-11-101 et seq.

"Applicant" means that person, as defined in the act, submitting an application to the administrator for a permit for a solid waste management facility, who shall be:

For a city owned facility, the city,

For a county owned facility, the county,

For a facility owned by any other public entity, that public entity,

For an individual, the individual,

For a corporation, the corporation, and

For a sole proprietorship or partnership, the partnership or proprietorship.

"Aquifer" means a geologic formation, group of formations, or portion of a formation capable of yielding significant quantities of groundwater to wells or springs.

"Asbestos-containing solid wastes" or "asbestos" means solid wastes containing greater than one percent (1%) by weight asbestos in any of the asbestiform varieties of: chrysotile (serpentine), amosite (cummingtonite, grunerite), crocidolite (riebeckite), anthophyllite, actinolite, or tremolite, and which may be considered friable asbestos;

"Buffer zone" means that portion of the solid waste management facility which is not used for waste management activities but is reserved for the placement and operation of monitoring equipment or for preventing public access during specific waste disposal events, such as the disposal of friable asbestos. The fire lane may be within the buffer zone.

"Cell" means compacted solid wastes that are enclosed by natural soil or cover material in a land disposal facility.

"Classification" means the specific type of solid waste management facility, as determined by the administrator, based upon waste type and volume of waste received.

"Clean wood" means untreated wood which has not been painted, stained, or sealed. Clean wood does not include treated railroad ties, treated posts, paper, or construction/demolition wastes containing nonwood materials.

"Closed facility" means a regulated facility at which operations have been properly terminated in accord with an approved facility closure plan on file with the Solid and Hazardous Waste Division or the WaterQuality Division and complying with all applicable regulations and requirements concerning its stabilization;

"Closure" means the act of securing and stabilizing a regulated facility pursuant to the requirements of these regulations;

"Closure Period" means the period of time during which a facility is completing closure. The closure period begins when the facility ceases receipt of wastes. The closure period ends when the administrator approves certification from a registered professional engineer confirming that the provisions of the closure plan have been carried out and that the facility has been closed in compliance with the closure standards specified in these rules and regulations.

"Collateral" means as related to self bonding the actual or constructive deposit, as appropriate, with the director of one or more of the following kinds of property to support a self bond:

A perfected, first-lien security interest in real property located within the State of Wyoming, in favor of the Wyoming Department of Environmental Quality which meets the requirements of Chapter 7,

Securities backed by the full faith and credit of the United States government or state government securities acceptable to the director. These securities must be endorsed to the order of, and placed in the possession of the director, or

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Personal property located within the state, owned by the operator, which in market value exceeds \$1 million per property unit;

"Commercial solid waste management facility" means any facility receiving a monthly average greater than five hundred (500) short tons per day of unprocessed household refuse or mixed household and industrial refuse for management or disposal;

"Comparative balance sheet" means item amounts from a number of the operator's successive yearly balance sheets arranged side by side in a single statement;

"Comparative income statement" means an operator's income statement amounts for a number of successive yearly periods arranged side by side in a single statement.

"Complete application" means a permit application that the administrator has determined to contain all the information required to be submitted by the regulations, in sufficient detail to allow a technical review of the information to commence.

"Construction/demolition landfill" means a solid waste management facility that accepts only inert construction waste, demolition waste, street sweepings and/or brush. This does not include garbage, liquids, sludges, paints, solvents, putrescibles, dead animals, friable asbestos, and hazardous or toxic wastes.

"Construction/demolition waste" includes but is not limited to stone, wood, concrete, asphaltic concrete, cinder blocks, brick, plaster and metal.

"Container" means any portable device in which a material is stored, transported, treated, disposed of or otherwise handled.

"Corrective action" means all actions necessary to eliminate the public health threat or environmental threat from a release to the environment of pollutants from an operating or closed regulated facility and to restore the environmental conditions as required;

"Cost-effective" means the selection of alternative responses taking into account total short-term and long-term costs of those responses including the costs of operation and maintenance for the entire activity, the presence of naturally occurring hazardous or toxic substances and current or potential uses of the natural resources impacted, as determined by the administrator;

"Cover material" means soil or other suitable material that is used to cover compacted solid wastes in a land disposal facility.

"Current assets" means cash and assets that are reasonably expected to be realized in cash or sold or consumed within one (1) year or within the normal identified operating cycle of the business; "Current liabilities" means debts or other obligations that must be paid or liquidated within one (1) year or within the normal identified operating cycle of the business. This shall also include dividends payable on preferred stock within one (1) quarter if declared, or one (1) year if a pattern of declaring dividends each quarter is apparent from the business' past practices;

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"Decommissioning" means removing all liquids and accumulated sludges, and cleaning a storagetank for its intended reuse or disposal;

"Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any waste material into or on any land or water so that such waste material or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

"Existing facility" means any facility that was receiving solid wastes on or before September 13, 1989.

"Facility" means the total contiguous area described in the permit application and which is occupied by any solid waste management area, site, process, or system and the operation thereof including, but not limited to, equipment, buildings, solid waste treatment, storage, transfer, processing, and disposal areas, buffer zones, monitor well systems, fire lanes, working area litter and access fences, systems for the remediation of releases to the environment, and perimeter access control fences. The term "facility" does not include contiguous or noncontiguous lands which may be owned or leased by the applicant which are not disturbed by solid waste management operations and which are external to the contiguous area occupied by the solid waste management area, site, process or system.

"Farming and ranching operation" means agricultural operations whose principal function is the growing of crops and the raising of livestock, but does not include concentrated animal feeding operations involving more than one-thousand (1,000) animal units. Concentrated animal feeding operations are facilities where animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period and crops, vegetation forage growth, or post-harvest residues are not sustained over the normal growing season over any portion of the lot or facility. One-thousand (1,000) animal units equals 1,000 slaughter and feeder cattle, 700 mature dairy cattle, 2,500 swine each weighing over 55 pounds, 500 horses, 10,000 sheep or lambs, 55,000 turkeys, 30,000 laying hens or broilers, or 5,000 ducks.

"Final cover" means cover material that is used to completely cover the top of a land disposal facility and includes compacted soils, drainage layers, synthetic membranes, soil-cement admixtures, and topsoils.

"Fire lane" means an area which does not contain combustible materials, including vegetation, and which can be utilized to provide access to firefightingequipment.

"Fixed assets" means plants and equipment.

"Floodplain" means low land and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, that are inundated by the 100-year flood.

"Friable asbestos", means asbestos that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure, and includes previously nonfriable asbestos after such previously nonfriable asbestos becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

"Garbage" means any putrescible solid or semi-solid animal and/or vegetable waste material resulting from the handling, preparation, cooking, serving and consumption of food.

"Groundwater" means water below the land surface in a saturated zone of soil or

rock.

"Hazardous wastes" means those wastes that are defined as hazardous wastes in Wyoming Department of Environmental Quality Hazardous Waste Rules and Regulations, Chapter 2, Identification and Listing of Hazardous Waste.

"Incineration" means the controlled process by which combustible solid wastes are burned and altered to noncombustible gases and other residues. A solid waste incineration facility is considered to be a solid waste management facility.

"Incorporated city or town" shall mean a "first class city" or a "town" as defined in W.S. 15-1-101(a).

"Industrial landfill" means a solid waste management facility utilizing an engineered method of land disposal primarily for industrial solid waste.

"Industrial solid waste" means solid waste resulting from, or incidental to, any process of industry, manufacturing, mining or development of any agricultural or natural resources.

"Irrevocable letter of credit" means an engagement, however named or described, by a bank made at the request of a customer (the operator and/or financially responsible parties for a permit or site), that the issuer will honor drafts or other demands for payment from thebeneficiary (the State of Wyoming) upon compliance with the conditions specified in the letter of credit. The issuing party (a bank) guarantees that it will not withdraw the credit or cancel the letter before the expiration date. The customer cannot modify, revoke or repeal this letter of credit unless specified by the beneficiary.

"Land treatment facility" means a treatment facility or part of a solid waste management facility at which solid waste is applied onto the soil surface;

"Landfarm Facility" means a facility or part of a facility at which solid wastes are treated and disposed by incorporation into existing soils, and which is subject to a post-closure period;

"Landfill" means a solid waste management facility for the land burial of solid wastes, utilizing an engineered method of controls to avoid creating a hazard to the public health, the environment, plants, or animals. "Lateral expansion" means the horizontal enlargement of the boundaries of a solid waste management facility.

"Leachate" means liquid that is the result of the percolation of fluids through solid waste and which consists of chemicals and microbial waste products from the decomposition of solid waste, in a dissolved or suspended/colloidal state.

"Liabilities" means obligations to transfer assets or provide services to other entities in the future as a result of past transactions;

"Lower explosive limit (LEL)" means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25° Celsius and atmospheric pressure.

"Low hazard and low volume treatment, processing, storage, and transfer facility" means a solid waste management facility which accepts only solid wastes as described in this subsection, and which are:

Mobile transfer, treatment and storage facilities;

Transfer, treatment, storage and processing facilities managing the specified quantities of the following wastes:

A solid waste storage or management facility occupying less than 30,000 square feetand used only for the management of less than 500 tons per day of source-separated or presorted paper, cardboard, plastic, aluminum cans, glass, and metal, or other nonputrescible household wastes which may be specifically authorized by the administrator, for the purposes of being transferred to a recycling facility;

Less than 5000 gallons of used oil, if the used oil is being stored to

be recycled, reclaimed, or reused;

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Less than 5000 gallons of used antifreeze, if the used antifreeze is being stored to be recycled, reclaimed, or reused;

Less than 5000 scrap tires, if the scrap tires are being stored to be

recycled, reclaimed, or reused;

Wood waste storage piles;

Storage of less than 15,000 used drums; or

A solid waste management facility used for the management of 40 cubic yards or less of municipal solid waste per day, and having 120 cubic yards or less total container capacity for solid wastes. This definition does not apply to facilities whose owner or operator simultaneously owns or operates more than one such solid waste management facility within one (1) mile of each other;

Transfer, treatment, storage and processing facilities which manage only

low hazard and low volume solid wastes not including wastes or materials having or exhibiting one or more of the following criteria or characteristics. Exceptions may be granted by the administrator based on consideration of concentration and volumes of wastes to be disposed:

> Toxicity, Carcinogenicity, Ignitability, Ignitability, Flammability, Explosivity, Instability, Corrosivity, Incompatibility, Special wastes as defined in this subsection, Medical/infectious wastes,

PCB-containing wastes,

Excluded hazardous wastes as defined at 40 CFR part 261, or Chapter 2 of the Department's Hazardous Waste rules and regulations,

Wastes that have the potential to create odor, vector, dust, or other

nuisances, or

Wastes that in the evaluation of the administrator have a significant potential to impact public health and/or the environment, unless the operator of a proposed facility can demonstrate by submittal of a waste analysis and/or characterization plan that the waste treatment, processing, storage, or transfer activity can be considered a low hazard and low volume waste management activity consistent with the act.

"Major change" means a change to any solid waste management facility location, design or construction, or to any operating, monitoring, closure or post-closure activities, involving one or more of the following items:

The total permitted volumetric capacity of the facility is to be increased by more than five percent (5%);

The facility classification will change;

The facility service area or source of waste will change and cause the original daily tonnage of waste received to increase by more than five percent (5%);

The facility may begin to accept for treatment, storage, or disposal one or more of the special wastes regulated under Chapter 8 of these rules and regulations;

The effectiveness of any liner, leachate collection or detection system, gas detection or migration system, or pollution control or treatment system may be changed; or

The facility modification will, in the judgement of the administrator, be likely to alter the fundamental nature of the facility's activities or cause noncompliance with any applicable facility standard.

"Mixed household and industrial refuse" means any mixture of municipal solid wastes, industrial solid wastes, or sludge.

"Mixed solid waste" means municipal solid waste and industrial solid waste.

"Mobile transfer, treatment and storage facility" means a facility which is mobilized to conduct transfer, treatment or storage of a solid waste at or near the point of generation.

"Monitoring" means all procedures and techniques used to systematically collect, analyze and inspect data on operational parameters of the facility or on the quality of the air, groundwater, surface water and soil.

"Municipal solid waste" means solid waste resulting from or incidental to residential, community, trade or business activities, including garbage, rubbish, ashes, street sweepings, dead animals, tires, abandoned automobiles and all other solid waste other than industrial or hazardous waste.

"Municipality" means a city, town, county, district, association, or other public

body.

"Net worth" means total assets minus total liabilities and is equivalent to owner's

equity.

"New facility" means:

Any facility that did not receive solid waste on or before September 13,

1989; or

Any modification or lateral expansion of an original permit boundary for the purpose of increasing capacity and/or site life by more than five percent (5%). An incidental facility boundary enlargement for the development of, but not limited to fire lanes, buffer zones, surface water diversion systems, and monitoring systems which are not in conflict with local zoning, land use, and/or land ownership is not considered to be a new facility.

"Occupied dwelling house" means a permanent building or fixed mobile home

that is currently being used on a permanent or temporary basis for human habitation.

"100-year floodplain" means a flood thathas a 1-percent (1%) or greater chance of recurring in any given year or a flood of a magnitude equaled or exceeded once in 100 years on the average over a significantly long period.

"On-site decommissioning" means decommissioning performed within a facility's property boundary on petroleum storage tank(s) which are being proposed to be removed from the ground or abandoned in-

place within the facility's property boundary.

"Open burning" means uncontrolled burning of solid waste in the open.

"Open dump" means an uncontrolled solid waste management facility at which solid wastes are placed on the land in such a manner that they present a real or potential hazard to public health and the environment. Open dump includes any solid waste management facility subject to the permitting requirements of these rules and regulations which does not have a current, valid permit.

"Operator" means the applicant who has been granted a permit, who may manage and operate the solid waste management facility or who may hire another person, who shall be known as the solid waste manager, for these responsibilities.

"Parent corporation" means a United States corporation which owns or controls

the applicant.

"Person" means an individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, municipality or any other political subdivision of the state, or any interstate body or any other legal entity.

"Petroleum-contaminated soils" means solid waste consisting of any natural or man made soil or rock material into which petroleum product has been added, excluding hardened asphalt rubble.

"Petroleum product" means any crude oil or any liquid petroleum fraction including but not limited to gasoline, diesel fuels, and used and unused motor oils.

"Pile" means any noncontainerized accumulation of solid, nonflowing waste that is used for treatment or storage.

"Plans" means maps, specifications, drawings and narrative description, prepared to describe the solid waste management facility and its operation.

"Post-closure period" means the period of time during which a closed facility is maintained and monitored. The post-closure period begins when the administrator approves certification from a registered professional engineer confirming that the provisions of the closure plan have been carried out and that the facility has been closed in compliance with the closure standards specified in these rules and regulations. The post-closure period ends when the administrator determines, upon petition by the operator, that the facility has been adequately stabilized and that the environmental monitoring or control system have demonstrated that the facility closure is protective of public health and the environment consistent with the purposes of the act.

"Principal officer" means an officer described in the bylaws of a corporation or appointed by the board of directors in accordance with the bylaws who serves at least at the level of vice president.

"Private industrial solid waste disposal facility" means any industrial solid waste disposal facility used solely for the disposal of solid waste generated by the owner of the facility; wastes are not transported over public roadways for delivery to the facility; and access by persons other than employees of the facility owner is restricted.

"Processing plant" means a solid waste management facility used or designed to transfer, shred, grind, bale, compost, salvage, separate, reclaim or provide other treatment of solid wastes.

"Release" includes, but is not limited to, any spilling, leaking, pumping, pouring, emptying, emitting, discharging, dumping, addition, escaping, leaching, or unauthorized disposal of any oil or hazardous substance which enters, or threatens to enter, waters of the state.

"Routine cover" means cover material that is applied to the top and side slopes of compacted solid wastes at the end of each operating day.

"Salvaging" means the controlled removal by the operator or his or her agent of solid waste from a solid waste management facility for the purpose of reuse.

"Sanitary landfill" means a solid waste management facility utilizing an engineered method of land disposal primarily for municipal solid wastes.

"Scavenging" means the removal by personsother than the operator or his agent of solid wastes from any solid waste management facility.

"Scrap tire" means a tire that is no longer used for its original purpose.

"Seismic impact zone" means an area with a 10 percent (10%) or greater probability that the maximum horizontal acceleration in hard rock, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10g in 250 years.

"Self bond" means an indemnity agreement in a sum certain executed by the permittee and/or the parent company or federal agency guarantor and made payable to the state, with or without separate surety.

"Silviculture waste" means any wood wastes generated during the management and development of forests. This includes but is not limited to all wood wastes that are generated during the operation of a sawmill. "Sludge" means the accumulated semisolid mixture of solid wastes and water, oils, or other liquids.

"Solid waste" means garbage, and other discarded solid materials, materials, including solid waste materials resulting from industrial, commercial, and agricultural operations, and from community activities, but, unless disposed of at a solid waste management facility, does not include:

Solids or dissolved material in domestic sewerage or other significant pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents, dissolved materials in irrigation return flows or other common water pollutants;

Liquids, solids, sludges or dissolved constituents which are collected or separated in process units for recycling, recovery or reuse including the recovery of energy, within a continuous or batch manufacturing or refining process; or

Agricultural materials which are recycled in the production of agricultural

commodities.

"Solid waste manager" means any person designated by the applicant who has primary responsibility for the daily management and operation of the solid waste management facility.

"Solid waste management disposal facility" means any landfill or any incinerator used for the management of wastes generated by persons other than the owner of the incinerator.

"Solid waste management facility" means any facility for the transfer, treatment, processing, storage or disposal of solid waste, but does not include:

Lands or facilities subject to the permitting requirements of Article 3 of

the act;

Facilities which would have been subject to the permitting requirements of Article 3 of the act if constructed after July 1, 1973;

Any facility described under W.S. 30-5-104(d)(vi)(A) or (B);

Lands and facilities subject to the permitting requirements of Articles 2, 3 or 4 of the act used solely for the management of wastes generated within the boundary of the permitted facility or mine operation by the facility or mine owner or operator or from a mine mouth electric power plant or coal drier;

Lands and facilities owned by a person engaged in farming or ranching and used to dispose of solid waste generated incidental to his or her farming and ranching operations; or

Transport vehicles, storage containers and treatment of the waste contain-

ers.

"Solid waste management unit" means a contiguous area of land on or in which solid waste is placed, or the largest area in which there is significant likelihood of mixing solid waste constituents in the same area of a solid waste management facility. Examples of solid waste management units include a surface impoundment at a solid waste management facility, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment systems at a solid waste management facility and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed.

"Solid waste petroleum storage tank" means any underground or aboveground storage tank that has been taken out of service and which contained any substance regulated under Subtitle I of the Resource Conservation and Recovery Act, as amended as of September 23, 1988, including but not limited to storage tanks that have held gasoline, diesel fuels, and used and unused motor oils.

"Special wastes" are those wastes which require special handling as described in Chapter 8 of these rules and regulations.

"State or federal highway" shall mean any road or primary highway designated as a "state highway" by the Wyoming State Highway Commission in accordance with W.S. 24-2-109(a).

"Storage" means the holding of solid waste for a temporary period, at the end of which time the solid waste is treated, disposed of, or stored elsewhere.

"Storage facility" means any facility that stores solid waste for a temporary period, at the end of which time the solid waste is treated, disposed, or stored elsewhere.

"Surface impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments include, but are not limited to holding, storage, settling, and aeration pits, ponds and lagoons.

"Tangible net worth" means net worth minus intangibles such as goodwill, patents

or royalties.

"Tank" means a stationary device designed to contain an accumulation of waste that is constructed primarily of nonearthen materials (e.g., wood, concrete, steel, plastic) that provide structural support and integrity.

"Topsoil" means all surface soil usually including the organic layer in which plants have most of their roots, or in the case where no topsoil is present, the top six (6) inches of inplace native material.

"Transfer" means the temporary holding of solid waste pending transportation of the solid waste for treatment, storage, and/or disposal.

"Transfer facility" means any solid waste transportation related facility including loading docks, parking areas, storage areas and ancillary features.

"Treatment" means any method, technique, or process designed to change the physical, chemical, or biological character or composition of any solid waste soas to recover energy or material resources from the waste or so as to render it safer to transport, store, or dispose of, or to make it amenable for recovery, use, or storage, or for reduction in volume. Treatment includes but is not limited to baling, chipping, composting, distilling, incinerating, processing, reconditioning, recovering, recycling, rerefining, reclaiming, and shredding.

"Treatment facility" means any facility that treats solid waste. Types of treatment facilities include but are not limited to solid waste incinerators, tire shredding/chipping facilities, tire pyrolysis plants, solid waste shredding or baling facilities, drum and barrel reconditioning/recycling facilities, composting facilities, and facilities used to distill, rerefine, recover, recycle, or incinerate used antifreeze, oils or solvents.

"Type I landfill" means a sanitary landfill which is not a Type II landfill.

"Type II landfill" means a sanitary landfill which:

Accepts for disposal less than twenty (20) tons of municipal solid wastes daily, and has no evidence of existing groundwater contamination from the landfill, and

Serves a community that has no practicable waste management alternatives and the landfill is located in an area that receives less than or equal to twenty-five (25) inches of precipitation annually, and

For the purposes of determining whether a landfill is a Type I or a Type II landfill, operators shall assume that each person served by the solid waste disposal facility generates an average of six and three tenths (6.3) pounds of solid waste per person per calendar day. If local data are available and the administrator approves, the applicant may use an alternate waste generation rate to calculate annual average daily tonnage of municipal solid waste which is received.

"Unprocessed household refuse" means municipal solid wastes which have not been treated, processed, or recycled at a facility subject to the requirements of these rules and regulations.

"Unstable area" means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventingreleases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terranes.

"Uppermost aquifer" means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically connected with this aquifer within the facility's property boundary. "Used antifreeze" means any antifreeze that has been used and as a result of such use is contaminated by physical or chemical impurities. Used antifreeze also includes new antifreeze which has not been used for its intended purpose but is being discarded.

"Used oil" means any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities. Used oil also includes new oil which has not been used for its intended purpose but is being discarded.

"Vadose zone" means the unsaturated zone between the land surface and the water

table.

"Vector" means a carrier capable of transmitting a pathogen from one organism to another, including flies, mosquitoes, skunks, or rodents.

"Waste pile" means any noncontainerized accumulation of solid waste used for treatment or storage of solid waste.

"Water table" means the seasonally high surface of groundwater which is subject to atmospheric pressure in an unconfined aquifer. Water table does not mean the piezometric surface of a confined aquifer.

"Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include, but are not limited to, swamps, marshes, bogs and similar areas.

"Working face" means that portion of the land disposal site where solid wastes are being deposited and are being spread and compacted prior to the placement of cover materials.

(ii) The singular includes the plural, the plural the singular, and the masculine the feminine orneuter, when consistent with the intent of the act and necessary to effect its purpose.

# (f) <u>Permit required for new and existing facilities</u>:

(i) A permit or a one-time or emergency disposal authorization is required for the location, construction, operation or closure of any new or existing solid waste management facility as specified by Chapter 1, Section 5, or by the applicable chapter(s) of these rules and regulations. All facilities shall be located, designed, constructed, operated and closed in accordance with the permit or disposal authorization issued by the director or administrator.

(ii) A permit or disposal authorization is not required for the facilities or activities specified in subsection (l) of this section.

(iii) Any facility that is regulated under more than one of the permitting chapters of these rules and regulations can apply for and receive a single solid waste management permit demonstrating compliance with each of the applicable chapters of these rules and regulations.

(g) <u>Recordkeeping, monitoring and reporting requirements:</u>

(i) Operators of any solid waste management facility, including those operators of open dumps, will be required to establish and maintain monitoring equipment or methods, sample effluent discharges or emissions, or provide such other information as may be reasonably required and specified by the administrator.

(ii) All records required by these rules and regulations shall be maintained by the operator of the facility for a minimum of three (3) years from the date of recording, except for those records required to be kept through the life and post-closure period of the facility as specified in Chapter 2 of these rules and regulations. All records shall be available for inspection and copying by department personnel during reasonable business hours. Copies of these records shall be submitted to the administrator when requested.

(h) <u>Prohibited acts</u>: The following acts are prohibited:

- (i) Open dumping;
- (ii) Scavenging and animal feeding at active solid waste management facilities;

(iii) Dumping bulk liquid wastes at solid waste management facilities unless specifically authorized by the administrator;

(iv) Dumping hazardous wastes (other than hazardous wastes generated by residential households) in any facility other than a facility authorized as a hazardous waste disposal facility by these rules and regulations unless specifically authorized by the administrator;

(v) Open burning of any wastes not exempted in Chapter 1, Section 1(I); and

(vi) No solid wastes shall be speculatively accumulated at a facility intended for use as a solid waste management facility without a permit.

(i) Inspections:

(i) Inspections will be made to insure compliance with the standards included in each of the chapters of these rules and regulations. These inspections will consist of:

(A) Preapplication inspections, to evaluate suitability of locations for development of solid waste management facilities;

(B) Preconstruction inspections, to allow the administrator to evaluate planned construction designs for solid waste management facilities;

(C) Construction inspections, to determine if construction of a solid waste management facility is in accordance with plans and specifications for the facility which are contained in the permit application; (D) Closure, post-closure, and annual operational compliance inspections to evaluate compliance with applicable standards contained in these rules and regulations; and

(E) More frequent routine or complaintrelated inspections, at the administrator's discretion.

(ii) Neither advance notice nor a waiver of liability shall be required to be provided by department personnel as a condition of entry to any facility for the purpose of conducting any solid waste management facility compliance inspection under subsection (i)(i) of this section. The operator shall allow department personnel entry to the disposal facility for the purpose of inspection. Department personnel shall be required toobey all safety and other operation requirements as may be required of its (the waste facility's) own employees.

(iii) The administrator shall provide copies of all inspection reports to the operator following completion of the inspection.

(j) Deficiencies:

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(i) Following any inspection by department personnel, the operator will be notified in writing of any deficiencies within thirty (30) days from the date of the inspection.

(ii) The administrator will use conference and conciliation procedures cited in W.S. 35-11-701(c) to establish a plan and schedule to correct the deficiencies. Failure of the operator to implement the plan shall be cause for the director to begin enforcement proceedings under Article 7 (Complaint) or Article 9 (Penalties) of the act.

(iii) Denial of permit renewal and/or revocation of the facility permit may result from failure to implement corrective actions.

(k) <u>Noncompliance</u>: In the event of noncompliance with the rules and regulations contained herein, the director may seek remedies as prescribed under Article 7 (Complaints) and Article 9 (Penalties) of the Environmental Quality Act.

(1) <u>Exemptions</u>: The administrator may exempt the following from a permit or any requirement to obtain a waste management authorization under these regulations, provided that persons engaged in activities which are otherwise exempted may be required to supply information to the administrator which demonstrates that the act, practice, or facility is exempt, and shall allow entry of department inspectors for purposes of verification of such information:

(i) Facilities regulated by the Wyoming Oil and Gas Commission under W.S. 30-5-104(d)(vi)(A) or (B);

(ii) Baling of used motor vehicles or scrap metals, and operation of metal smelters regulated by the Air Quality Division and storage for sale or reuse of used motor vehicles, motor vehicle parts, or scrap metals at auto salvage yards or scrap metal dealers as authorized under W.S. 31-13-112(a), provided that for used oil, used antifreeze, tires, and lead acid batteries the following storage accumula-

tion limits are not exceeded:

(A) 1,000 scrap tires, excluding any scrap tires remaining on wheels attached to vehicles;

(B) 500 gallons of used motor oil, if the oil is being stored to be recycled, or to be burned in a used oil-fired space heater which is exempt under this section, or in any device authorized by the Air Quality Division;

(C) 1200 used lead acid batteries, excluding any used lead acid batteries remaining in vehicles, if the batteries are being stored in an upright position and are not leaking, for the purpose of being transferred to a recycling facility;

(D) 500 gallons of used antifreeze, if the antifreeze is being stored to be recycled, and the owner or operator only stores used antifreeze they generate or receive from do-it-yourself anti-freeze changers or other similar sources.

(iii) The disposal of waste soil and rock directly connected with mining, subject to the Land Quality Division rules and regulations, and including overburden, reject mineral and mill tailings;

(iv) The collection, storage and disposal of household wastes generated by a single family unit or household on their own property in such a manner that does not create a health hazard, public or private nuisance, or detriment to the environment;

(v) The disposal of sewage waste, municipal wastewater treatment sludges, wastewaters, or bulk liquid waste at facilities, other than solid waste landfills, which are permitted in accord with the Water Quality Division rules and regulations;

(vi) Open burning of wood, brush, weeds and tree trimmings conducted in compliance with the Air Quality Division rules and regulations;

(vii) The disposal of clean fill consisting solely of uncontaminated natural soil and rock, hardened asphalt rubble, bricks, and concrete rubble in such a manner that does not create a health hazard, public or private nuisance or detriment to the environment;

(viii) The management of solid wastes, which in the judgement of the administrator, constitute de minimis quantities which are managed in a manner that does not create a health hazard, public or private nuisance, or detriment to the environment;

(ix) Facilities which would have been subject to the permitting requirements of Article 3 (Water Quality) of the act if constructed after July 1, 1973;

(x) Lands and facilities subject to the permitting requirements of Articles 2 (Air Quality),
 3 (Water Quality), or 4 (Land Quality) of the act used solely for the management of wastes generated within the boundary of the permitted facility or mine operation by the facility or mine owner or operator or from a mine mouth electric power plant or coal drier;

(xi) Lands and facilities owned by a person engaged in farming or ranching and used to dispose of solid waste generated incidental to his or her farming and ranching operation;

(xii) Transport vehicles, storage containers and treatment of waste in containers;

(xiii) Scrap tire storage units at permitted landfills which, in the ordinary course of operation, have fewer than 5,000 scrap tires in aboveground storage at any one time. Such landfills are subject to applicable landfill rules;

(xiv) Retail business facilities which have fewer than 1,000 scrap tires on the premises at any one time;

(xv) A solid waste storage or transfer facility used only for the storage or transfer of any of the following wastes:

(A) No more than 1200 used lead acid batteries, if the batteries are being stored in an upright position and are not leaking, for the purpose of being transferred to a recycling facility, or

(B) No more than 500 gallons of used oil and 500 gallons of used antifreeze, if the used oil or used antifreeze is being stored to be recycled or reused;

(xvi) A solid waste storage, treatment, or transfer facility occupying less than 10,000 square feet and used only for the storage, treatment, or transfer of source-separated or presorted paper, cardboard, plastic, aluminum cans, glass, and metal, or other nonputrescible household wastes which may be specifically authorized by the administrator, for the purposes of being transferred to a recycling facility. This exemption applies to the shredding, grinding, crushing, baling and storage of these wastes prior to being transferred to a recycling facility. This exemption does not apply to drum and barrelreconditioning or recycling facilities, or to underground storage tank storage or decommissioning facilities;

(xvii) Solid waste transfer facilities used for transferring 20 cubic yards or less of nonliquid solid waste per day and having 40 cubic yards or less total container capacity for solid wastes. This exemption does not apply to facilities whose owner or operator simultaneously owns or operates more than one transfer facility within one (1) mile of each other;

(xviii) Used oil and used antifreeze storage tanks located at vehicle service facilities, provided the storage tanks are properly labeled, have a combined capacity of no more than 2,000 gallons for each waste, and are used only to contain used oil or used antifreeze that the owner or operator generates or receives from do-ityourself oil changes;

(xix) Used oil-fired space heaters, provided that the heater is designed to have a maximum capacity of not more than 0.5 million btu per hour, combustion gases are vented to the outside air, and the heater burns only used oil that the owner or operator generates or receives from do-it-yourself oil changers, and

(xx) Medical waste storage units, incinerators, autoclaves, or other treatment devices,

used to store or treat only medical wastes which are generated by the owner or operator of the medical facility or by doctor's offices, medical clinics, dental offices and other medical waste generators within the county or local area where the medical waste storage units, incinerators, autoclaves, or other treatment devices are located.

(xxi) The reuse of wastes in a manner which is both beneficial and protective of human health and the environment, as approved by the administrator.

(m) <u>Time</u>:

(i) When time is prescribed by these rules and regulations in "days", the time period shall be counted as calendar days.

(ii) When time prescribed by these rules and regulations for performing any act expires on a Saturday or legal holiday, such time shall extend to and include the next succeeding business day.

Section 2. General Permit Application Procedure.

(a) <u>General application requirements</u>: Each application for a solid waste management facility permitdescribed in this section shall contain information adequate to demonstrate compliance with the minimum standards for location, design and construction, operating, monitoring, closure and post-closure as specified in the applicable chapter of these rules and regulations.

(b) <u>Public notice and comment</u>: Prior to the issuance of a permit by the director, each application for a new solid waste management facility permit and any application for a major amendment, shall be submitted for public notice and comment as follows:

(i) Upon receipt of notification that the application has been determined to be complete, the applicant shall comply with the following requirements:

(A) Within fifteen (15) days of being notified that the application is complete:

(I) Provide written notice to landowners with property located within a half mile of the site, using certified, return receipt requested mail for disposal facilities and first class mail for other solid waste management facilities;

(II) Provide written notice to each member of the interested parties mailing list maintained by the administrator, the mayor of each city or town within fifty miles of the proposed facility and to the county commission and any solid waste district for the county in which the potential facility is located, using first class mail;

(III) Cause a written notice to be

published once a week for two (2) consecutive weeks in a newspaper of general circulation within the county where the applicant plans to locate the facility;

(IV) Specific text for the written notice shall be provided to the applicant

by the administrator. The notice shall contain information about the permit application including the identity of the applicant, the proposed facility location and size, the wastes types intended for management, the method of waste management, and the operating life. The notice shall identify the last date for filing comments on the application;

(B) Provide the administrator with documentation that the notice requirements of subsection (b)(i)(A) of this section have been followed. Documentation shall consist of copies of return receipt cards, publisher's affidavits and other documentation, asappropriate; and

(C) The public comment period shall begin on the first date of publication of the notice required in subsection (b)(i)(A)(III) of this section, and shall end at 5:00 pm on the thirtieth (30th) day following the last date of publication of the notice.

(D) The administrator may, at his or her discretion, conduct a public hearing on the application submission.

(ii) For each new solid waste management facility permit application or any application for a major amendment, the administrator shall issue a draft permit following completion of the administrator's permit analysis, unless the permit is denied pursuant to Section 4 of this chapter. Upon receipt of a draft permit, the applicant shall comply with the following requirements:

(A) Within fifteen (15) days of receiving a draft permit:

(I) Provide written notice to landowners with property located within a half mile of the site, the mayor of each city or town within fifty (50) miles of the proposed facility, the local county commission and any solid waste district for the county in which the potential facility is located, using certified, return receipt requested mail for disposal facilities and first class mail for other solid waste management facilities;

(II) Provide written notice to each member of the interested parties mailing list maintained by the administrator using first class mail;

(III) Cause a written notice to be published once a week for two (2) consecutive weeks in a newspaper of general circulation within the county where the applicant plans to locate the facility;

(IV) Specific text for the written notice shall be provided to the applicant by the administrator. The notice shall contain information about the permit application including the identity of the applicant, the proposed facility location and size, the wastes types intended for management, the method of waste management, the operating life, and the administrator's findings. The notice shall identify the period for filing objections to the application;

(V) Deliver, in person or via certified, return receipt requested mail, a copy of thepermit application, the administrator's review and the administrator's draft permit to a local public library and the county clerk of the county of the proposed facility. The permit application and draft permit shall be maintained for public viewing at a local public library and at the county clerk's office for the duration of the public comment period specified in Section 2(b)(ii)(C) of this chapter; and

(B) Provide the administrator with documentation that the notice and filing requirements of subsection (b)(ii)(A) of this section have been followed. Documentation shall consist of copies of return receipt cards, and publisher's affidavits or affidavits of personal delivery as appropriate.

(C) The public comment period shall begin on the first date of publication of the notice required in subsection (b)(ii)(A)(III) of this section, and shall end at 5:00 pm on the thirtieth (30th) day following the last date of publication of the notice.

(D) If substantial written objections are received by the director by 5:00 pm on the last day of the public comment period, a public hearing will be held within twenty (20) days after the last day of the public comment period, unless a different schedule is deemed necessary by the council. The council or director shall publish notice of the time, date and location of the hearing in a newspaper of general circulation in the county where the applicant plans to locate the facility, once a week for two (2) consecutive weeks immediately prior to the hearing. The hearing shall be conducted as a contested case in accordance with the Wyoming Administrative Procedures Act, and right of judicial review shall be afforded as provided in that Act.

(c) <u>Permit application procedure</u>:

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(i) The applicant shall provide the administrator with three (3) complete copies of the permit application. The application shall be organized in three-ring binders, and the information presented in an order that conforms to the order set forth in the applicable sections of these rules and regulations.

(ii) The administrator shall conduct a completeness review of each application and notify the applicant of the results within sixty (60) days of receipt of the application. If the administrator deems the application incomplete, he or she shall so advise and state in writing to the applicant the information required. All items not specified as incomplete at the end of the first sixty (60) day period shall be deemedcomplete for the purposes of this subsection.

(iii) If the applicant resubmits an application or further information, the administrator shall review the application or additional information within sixty (60) days of each submission and advise the applicant in writing if the application or additional information is complete.

(iv) After the application is determined complete, the applicant shall give written notice of the application as required in Section 2(b)(i) of this chapter. A preconstruction inspection will be conducted within sixty (60) days of a determination that the application is complete.

(v) The administrator shall review the application and unless the applicant requests a delay, advise the applicant in writing within ninety (90) days from the date of determining that the application is complete, that a proposed permit is suitable for publication under Chapter 1, Section 2(b)(ii), or that the application is deficient, or that the application is denied. All reasons for deficiency or denial shall be stated in writing to the applicant. All items not specified as being deficient at the end of the first ninety (90) day period shall be deemed sufficient for the purposes of this subsection.

(vi) If the applicant submits additional information in response to any deficiency notice,

the administrator shall review such additional information within thirty (30) days of submission and advise the applicant in writing if a proposed permit is suitable for publication under Chapter 1, Section 2(b)(ii), or that the application is still deficient, or that the application is denied.

## (d) Permit issuance:

(i) If the application is determined to be complete and demonstrates compliance with the applicable standards, the administrator shall prepare a proposed permit. Public notice as specified in Chapter 1, Section 2(b)(i) and 2(b)(ii), will occur.

(ii) The director shall render a decision on the proposed permit within thirty (30) days after completion of the notice period if no hearing is requested. If a hearing is held, the council shall issue findings of fact and a decision on the proposed permit within thirty (30) days after the final hearing. The director shall issue or deny the permit no later than fifteen (15) days from receipt of any findings of fact and decision of the Environmental Quality Council. In granting permits, the director may impose such conditions as may be necessary to accomplish the purpose of the act and which are not inconsistent with the existing rules, regulations, and standards.

(iii) The operator shall notify the administrator as soon as construction has been com-

#### pleted.

A construction inspection shall be conducted within ninety (90) days of the notification.

(e) <u>Permit renewal application procedure</u>:

(i) The operator subject to solid waste management facility permit requirements shall provide the administrator with a renewal application. The renewal permit application shall contain the information specified in the relevant chapter(s) of these rules and regulations and be submitted in accordance with the time frames specified.

(ii) The operator of a facility with a valid permit issued under Section 2(d) of this chapter or a valid renewal permit issued under Section 2(f) of this chapter, shall submit a permit renewal application between 270 and 180 days prior to the expiration of said permit unless a closure permit application has been submitted. The renewal application shall contain the information specified in the applicable chapter of these rules and regulations.

(iii) Three (3) copies of the permit renewal application shall be submitted to the administrator. The application shall be organized in three ring binders, and the information presented in an order that conforms to the order set forth in the applicable application requirements sections of these rules and regulations.

(iv) The application shall be reviewed by the administrator within ninety (90) days after submission.

(v) A renewal inspection shall be conducted within sixty (60) days after the application is determined complete and technically adequate.

(f) <u>Renewal permit issuance</u>:

(i) If the renewal permit application is determined to be complete, and technically adequate, and the application and site inspection demonstrate compliance with the renewal requirements in the applicable chapter of these rules and regulations, a renewal permit will be issued.

(ii) The term of the renewal permit shall be as specified in the applicable chapter of these rules and regulations.

(g) <u>Closure permit application procedure</u>:

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(i) The operator shall provide the administrator with a closure permit application if required by the applicable chapter of these rules and regulations in accordance with the time frames specified therein.

(ii) Anticipated closure: The operator of a facility with a valid permit on the effective date of these regulations, or a valid permit or renewal permit issued under Section 2(d) or Section 2(f) of this chapter, shall submit a closure permit application to the administrator between 270 and 180 days prior to the anticipated facility closure.

(iii) Unanticipated closure: In the event any solid waste management facility ceases operation, as determined by nonreceipt of solid wastes for any continuous nine (9) month period or any continuous one (1) year period for landfarm facilities or petroleum-

contaminated soils land treatment facilities, the facility operator shall provide written notification to the administrator no later than thirty (30) days after the end of such nine (9) month (or one (1) year) period. This notification shall be accompanied by a closure permit application unless the administrator approves interim measures with delayed final closure for good cause upon application by the operator.

(iv) Three (3) copies of the closure permit application shall be submitted to the administrator. The application shall be organized in three ring binders, and the information presented in an order that conforms to the order set forth in the applicable application requirements sections of these rules and regulations.

(v) The application shall be reviewed by the administrator within ninety (90) days after submission.

(h) Closure permit issuance:

(i) If the closure permit application is determined to be complete and the application demonstrates compliance with the closure/post-closure standards in the applicable chapter of these rules and regulations, a closure permit shall be issued.

(ii) Upon completion of closure activities, the operator shall provide a certification from a registered professional engineer confirming that the provisions of the closure plan have been carried out and that the facility has been closed in compliance with the closure standards specified in these rules and regulations.

(iii) The term of any closure permit shall be set to coincide with the duration of any

closure/post-

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closure maintenance and monitoring period specified in the applicable chapter of these rules and regulations. No renewals of closure permits shall be required.

#### (i) <u>Variance application procedure for location standards specified in W.S. 35-11-502(c)</u>:

(i) For solid waste disposal facilities which do not meet the location standards specified in paragraphs (i) through (iv) of W.S. 35-11-502(c), the applicant may apply to the director for a variance from the standards by submitting a written variance application. The variance application shall contain the following information:

(A) For proposed facilities which do not meet the location standards for proximity to towns, schools or any occupied dwelling house in W.S. 35-11-502(c)(i) or (ii), the applicant shall:

(I) Present an analysis of additional traffic which would result from the proposed facility, and demonstrate that additional traffic caused by operation of a disposal facility will not pose a safety threat to the public;

(II) Demonstrate that the operation of the proposed facility will not present odor, dust, litter, insect, noise, health (human and animal) or aesthetic problems, and will not present a public nuisance by its proximity to the town, schools and/or dwellings. This demonstration may be made through analysis of the facility design and operation practices; and

(III) Provide design features and monitoring specifications used to preclude methane migration from affecting any buildings within one (1) mile of the proposed facility, if the facility is used for the disposal of wastes which may form methane as a decomposition product.

(B) For proposed facilities which do not meet the location standard for proximity to, and visual screening from, state or federal highways in W.S. 35-11-502(c) (iii), the applicant shall provide information describing how the design and operation of the facility will minimize visual impacts to the highway(s).

(C) For proposed facilities, excluding incinerators, which do not meet the location standard for proximity to water wells in W.S. 35-11-502(c)(iv), the applicant shall provide:

(I) A detailed description of the site's geologic and hydrologic characteristics, supported by data from on-site soil borings and groundwater monitoring wells;

(II) A detailed description of the proposed facility's containment system (cap and liner systems) and surface water diversion structures;

(III) A detailed description of the groundwater monitoring program (including location of wells, sampling frequency and sampling parameters) which would be instituted when the facility begins operations; and

(IV) An analysis of the potential for contaminants which may leak from the disposal facility to adversely affect the nearby water well(s). This analysis may be in the form of contaminant transport modeling results, an evaluation of hydrologic conditions or aquifer properties, or other applicable information.

(D) In addition to the other information requested in this subsection, all variance applications made under this subsection shall be accompanied by the following information:

(I) The proposed size of the facility;

(II) The name, address and telephone number of the applicant;

(III) The legal description of the property;

(IV) A detailed description of the facility which includes information on the amount, rate (tons per day), type (including chemical analyses if other than household refuse) and source of incoming wastes, a narrative describing the facility operating procedures, and the estimated site capacity and site life;

(V) The names and addresses of the property owners of all lands within one (1) mile of the proposed facility boundary;

(VI) A USGS topographic map (scale of 1:24,000 or 1: 62,500) which shows the boundaries of the proposed landfill site; and

(VII) Information sufficient to evaluate the conditions specified in paragraph (i)(ii) of this section.

(ii) In granting any variance as provided by this paragraph, the director shall issue written findings that the variance will not injure or threaten to injure the public health, safety, or welfare. The director shall only make such a finding if the evidence presented in the application and obtained at a public hearing demonstrates that:

(A) There are no available alternative locations which meet the location standards for a solid waste management disposal facility to meet the disposal needs of the applicant, within a reasonable distance of the boundary of the service area of the facility;

(B) It is not possible for the applicant to use existing, permitted solid waste management disposal facilities owned by another person within a reasonable distance of the boundary of the service area of the facility; and

(C) Special or unique conditions or circumstances apply to the applicant and justify granting the variance.

(iii) In granting any variance as provided by this paragraph, the director shall condition the variance such that it applies only to the facility described in the application. Changes to the facility size, type or source of waste, rate at which waste is received, or any other aspect of the facility as described in paragraph (i)(i)(D)(IV) of this section shall render the variance invalid.

(iv) The administrator shall review the variance application and provide his or her draft findings and recommendations to the director and the applicant within ninety (90) days of the date when the variance application is received, unless a delay is requested by the applicant.

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(v) Upon issuance of the administrator's draft findings and recommendations, the administrator shall schedule and conduct a hearing on the variance in accordance with the procedures specified in W.S. 35-11-

601. The director shall make a final decision regarding the variance application within sixty (60) days from the date of the hearing.

(j) <u>Permit application procedures for low hazard and low volume treatment, processing, storage, and transfer facilities</u>:

(i) The applicant shall provide the administrator with three (3) complete copies of the permit application. The application shall be organized in threering binders and the information presented in an order that conforms to the order set forth in the applicable sections of these rules and regulations;

(ii) The administrator shall conduct a completeness and technical review of each application submittal within thirty (30) days of receipt of the application. If the administrator deems the application incomplete and/or technically inadequate, the administrator shall so advise and state in writing to the applicant the information required;

(iii) For each new low hazard and low volume treatment, processing, storage, and transfer facility permit application or application for a major amendment to an existing facility, excluding mobile transfer, treatment or storage facilities, the administrator shall issue a proposed permit following completion of the administrator's permit analysis, unless the permit is denied pursuant to Section 4 of this chapter. Upon receipt of a proposed permit the applicant shall within fifteen (15) days:

(A) Cause a written notice to be published once a week for two (2) consecutive weeks in a newspaper of general circulation within the county where the applicant plans to locate the facility. Specific text of the notice shall be provided to the applicant by the administrator. The notice shall contain information about the permit application including the identity of the applicant, the proposed facility location and size, the waste types intended for management, the method of waste management, the operating life, and the administrator's findings. The notice shall identify the period for filing objections to the application;

(B) Notify adjacent landowners by first class mail;

(C) Provide the administrator with documentation that the notice requirements of paragraphs (iii)(A) and (B) of this subsection have been followed. Documentation shall consist of the publisher's affidavits and sworn statement;

(iv) For each new mobile low hazard and low volume treatment, processing, storage, and transferfacility permit application or application for a major amendment to an existing facility, the administrator shall issue a proposed permit following completion of the administrator's permit analysis, unless the permit is denied pursuant to Section 4 of this chapter. Upon receipt of a proposed permit the

applicant shall within fifteen (15) days:

(A) Cause a written notice to be published once a week for two (2) consecutive weeks in a newspaper of general circulation within the state. Specific text of the notice shall be provided to the applicant by the administrator. The notice shall contain information about the permit application including the identity of the applicant, the proposed facility service area, the waste types intended for management, the method of waste management, the operating life, and the administrator's findings. The notice shall identify the period for filing objections to the application;

(B) Provide the administrator with documentation that the notice requirements of paragraphs (iv)(A) of this subsection have been followed. Documentation shall consist of the publisher's affidavits and sworn statement;

(v) The public comment period shall begin on the first day of publication of the notice required in paragraphs (iii)(A) or (iv)(A) of this section and shall end at 5:00 pm on the thirtieth (30th) day following the last day of publication of the notice;

(vi) If substantial written objections are received by the director by 5:00 pm on the thirtieth (30th) day following the last date of publication of the notice, a public hearing will be held within twenty (20) days after the last day of the public comment period, unless a different schedule is deemed necessary by the council. The council or director shall publish notice of the time, date, and location of the hearing in a newspaper of general circulation in the county where the applicant plans to locate the facility, once a week for two (2) consecutive weeks immediately prior to the hearing. The hearing shall be conducted as a contested case in accordance with the Wyoming Administrative Procedures Act, and right of judicial review shall be afforded as provided in that act.

(vii) The operator of a facility with a valid permit issued under Section 2(d) of this chapter or a valid renewal permit issued under Section 2(f) of this chapter, shall submit a permit renewal application between 270 and 180 days prior to the expiration of said permit unless a closure permit application has been submitted. The renewal application shall contain the information specified in the applicable chapter of these rules and regulations.

(viii) Three (3) copies of the permit renewal application shall be submitted to the administrator. The application shall be organized in three ring binders, and the information presented in an order that conforms to the order set forth in the applicable application requirements sections of these rules and regulations.

Section 3. <u>Permit Amendments and Transfers</u>: This section applies to all permits, renewal permits and closure permits previously described in Chapter 1, Section 2, as follows:

(a) <u>Permit amendments</u>:

(i) For amendments describing a major change, the operator shall submit a written application, describing the major amendments sought, including additional plates and/or drawings as necessary to completely describe the proposed amendment.

(ii) Within forty-five (45) days of receipt of any application for a proposed major amend-

ment, the administrator shall conduct a review of the application and provide a written response to the operator of its findings. If the amendment is deemed to be complete and demonstrates compliance with applicable standards, the public notice and comment period in Chapter 1, Section 2(b)(ii) shall commence. If the proposed amendment is determined to be inadequate, the operator shall be required to submit any additional information required by the administrator, unless there is a basis for denial as specified in Chapter 1, Section 4(a).

(iii) The operator shall consult with the administrator prior to instituting a change in design or operation of a permitted facility, to get a determination as to whether the change is considered to be a major change.

(iv) Following receipt of the administrator's written determination that the proposed change is not major, the operator may make the change in design or operation without prior approval of the administrator. Amendments to the application reflecting any change in design or operation shall be included in the permit renewal application.

(v) All amendments shall comply with the location, design and construction, operating, monitoring, financial assurance and closure standards of theapplicable chapter of these rules and regulations.

### (b) Permit transfers:

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(i) An operator shall receive written approval from the director prior to transfer of any permit authorized by these regulations.

(ii) Applications for the approval of the transfer of any permit shall be made in writing by the operator and shall contain:

(A) The name, address and telephone number of the legal operator of the facility to whom the permit will be transferred, and, at a minimum, a summary, listing of any administrative order, civil or administrative penalty assessment, bond forfeiture, civil, misdemeanor, or felony conviction, or court proceeding for any violations of any local, state or federal law occurring within a minimum of five (5) years of application submittal relating to environmental quality or criminal racketeering, of the solid waste manager, the applicant, or if the applicant is a partnership or corporation, any partners in the partnership or executive officers or corporate directors in the corporation;

(B) The name, address and telephone number of the solid waste manager;

(C) Proposed date of the transfer of the permit;

(D) Signed and notarized documentation from the new operator indicating that the new operator has agreed to accept and be bound by the provisions of the permit and any amendments, agreed to construct and operate the facility in accordance with the approved plan, and agreed to accept responsibility for the facility's compliance with the standards specified in the applicable chapter of these rules and regulations, including the responsibility to perform corrective actions.

(iii) The original operator shall retain responsibility for the facility according to the terms

of the original permit until the application for permit transfer has been approved by the director. The new operator may not operate the facility until the permit transfer has been approved.

Section 4. <u>Permit Denial, Revocation or Modification</u>. This section applies to all permits, renewal permits and closure permits previously described in Chapter 1, Section 2, as follows:

(a) <u>Permit denials</u>: The director may deny a permit if:

(i) Permit issuance would conflict with the policy and purpose of the act; or

(ii) The applicant fails to submit the required information; or

(iii) The facility history indicates continual noncompliance with these rules and regula-

tions; or

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(iv) The application indicates that the facility would not comply with the location, design and construction, operating, monitoring, closure or post-closure standards as specified in the applicable sections of these regulations; or

(v) The application misrepresents actual site conditions; or

(vi) The applicant fails to employ a solid waste manager who meets the qualifications of the applicable chapter of these rules and regulations; or

(vii) The applicant, or any partners, executive officers, or corporate directors, has been found civilly or criminally liable for violations of environmental quality or criminal racketeering laws or regulations which in the judgement of the director constitutes evidence that the applicant cannot be relied upon to conduct the operations described in the application in compliance with the act and these rules and regulations.

(b) Permit revocation:

(i) The director may revoke a permit in instances of continual noncompliance, or if it is determined that the permit application misrepresented actual site conditions, or if the continued operation is inconsistent with the policy and purpose of the act.

(ii) The director shall notify the operator of his or her intent to revoke the permit. The written notification shall contain the basis for revoking the permit. All permit revocation procedures shall be accomplished in accordance with the requirements of the Wyoming Administrative Procedures Act.

(iii) The director may order facility closure following permit revocation. Closure and post-closure activities shall be accomplished in accordance with a plan approved by the administrator. If a closure/post-closure plan has not been approved, closure and post-closureactivities shall be accomplished in accordance with the standards specified in the applicable chapter of these rules and regulations.

(c) <u>Permit modification</u>: The director may modify an existing permit by notifying the facility operator in writing. The written notification shall contain the basis for modifying the permit.

Section 5. One-Time or Emergency Waste Management Authorization.

#### (a) <u>Authorization application procedure</u>:

(i) This section applies to emergency situations, spilled solid wastes and residues from uncontrolled releases. This section does not apply to hazardous wastes or actions completed under either a hazardous waste permit or a hazardous waste corrective action order.

(ii) The administrator may choose to issue a one-time or emergency waste management authorization in lieu of the permits specified in Chapter 1, Section 2. This type of waste management authorization shall only be considered under the following conditions:

(A) The proposed waste management activity shall be a single occurrence of limited duration.

(B) The applicant documents that other waste management and/or reuse options were thoroughly investigated and that no other reasonable alternatives had been identified.

(C) The proposed waste disposal site would meet the location standards specified in the applicable section of Chapter 2, 3, or 4 of these rules and regulations or the proposed waste management site would meet the location standards specified in the applicable section of Chapter 8 of these rules and regulations.

(D) The proposed waste management activity would not present a significant threat to public health or the environment.

(E) The waste management activity would result in de minimis impacts which would not warrant the initiation of public participation procedures.

(F) The total waste disposal area would be less than one (1) acre.

(G) The applicant can document that permission has been obtained from the landowner to manage the materials at the proposed waste management location, if that location is not owned by the applicant.

(H) The applicant commits to promptly record a notarized notice with the county clerk, in the county where the facility is located, which adequately describes the location, nature and extent of any waste disposal activity.

(iii) Three (3) copies of the waste management authorization request shall be submitted to the administrator. The request shall be organized in a three ring binder and the information presented in an order that conforms to the relevant application requirements section of these rules and regulations.

(iv) The waste management authorization request shall document compliance with the

conditions specified in subsection (a)(ii) of this section allowing for the administrator's consideration of a one-time or emergency waste management authorization. The request shall contain information adequate to demonstrate compliance with the standards specified in the applicable chapter of these rules and regulations.

(v) The waste management authorization request shall be reviewed by the administrator within twenty (20) days after submission.

# (b) Authorization issuance:

(i) The administrator may deny waste management authorization for any of the reasons specified in Chapter 1, Section 4(a). The administrator may also deny waste management authorization if it is determined that the proposed waste management activity would not be subject to the provisions described in subsections (a)(i) and (a)(ii) of this section.

(ii) If the waste management authorization request is determined to be complete and the request demonstrates compliance with the standards in the relevant application requirements section, a waste management authorization will be granted by the administrator.

(iii) The operator shall notify the administrator following completion of authorized waste management activities. This notification shall be accompanied by site photographs adequate to demonstrate the site conditions following closure.

(iv) The term of the waste management authorization shall be no longer than one (1)

year.

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#### CHAPTER 15

#### SOLID WASTE MANAGEMENT RULES & REGULATIONS

Section 1. Authority.

(a) <u>General provisions</u>: The Wyoming Environmental Quality Act, Article 5, Section 35-502.42 through 44 (Cumulative Supplement 1973) authorizes the Director of Environmental Quality to:

(i) Coordinate the activities of all State agencies concerned with Solid Waste Management and disposal. (35-502.42)

(ii) Promulgate Rules and Regulations for operation of Solid Waste disposal sites. (35-502.44)

(iii) Request Solid Waste disposal site plans for approval from any person or municipality that proposes to establish or is presently operating a Solid Waste Disposal site. (35-502.43)

(b) Existing state statutes regulating solid waste disposal practices:

(i) 35-196: Prohibits industries from dumping refuse in any water body.

(ii) 35-462: Prohibits all waste disposal practices that constitutes either a nuisance or a potential source of water pollution.

(iii) 35-463: Provides a fine of not less than \$50 or more than \$200 or a jail term not to exceed six (6) months for violation of Statute 35-462.

(iv) 35-464: Prohibits the disposal of sawdust in any water body.

(v) 35-465: Provides for a fine not to exceed \$100 for the improper disposal of dead animals.

(vi) 35-466: Prohibits the littering of public rights of way.

(vii) 35-502.16: No person shall cause, threaten or allow the discharge or emission of any air contaminant in any form

so as to cause pollution which violates rules, regulations and standards adopted by the administrator after consultation with the advisory board.

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(viii) 35-502.18: No person, except when authorized by a permit issued pursuant to the provisions of this act, shall:

(A) Cause, threaten or allow the discharge of any pollution or wastes into the waters of the state;

(B) Alter the physical, chemical, radiological, biological or bacteriological properties of any waters of the state;

(C) Construct, install, modify or operate any sewerage system, treatment works, disposal system or other facility, capable of causing or contributing to pollution;

(D) Increase the quantity or strength of any discharge;

(E) Construct, install, modify or operate any public water supply.

(c) Legislation assisting counties and municipalities.

(i) 9-18.13 through 9-18.20 "Wyoming Joint Powers Act".This Act gives two or more agencies the power to jointly plan, create, finance and operate:

- (A) Water sewerage or Solid Waste facilities.
- (B) Recreational facilities.
- (C) Police protection agency facilities.
- (D) Fire protection agency facilities.
- (E) Transportation systems facilities.
- (F) Public school facilities.
- (ii) 15.1-410(i) Enrolled Act #98.
  - (A) Improvements authorized: In addition to all

other powers provided by law, any city or town may make public improvements, for which bonds may be issued to the contractor, or be sold as provided in this chapter:

(I) To plan, create, construct and equip liquid and solid waste facilities. To carry out this power or to prevent pollution or injury to the environment, any city or town may go beyond its corporate limits and take hold and acquire property by purchase or otherwise, or in joint effort with cities, towns, counties or special districts. Cities or towns may enact ordinances and make all necessary rules and regulations for the government and protection of liquid and solid waste disposal facilities, and fix rates and provide for collection and disposal.

(iii) 18-330.30 through 18-330.34. Enrolled Act #109. Solid Waste Disposal Districts. An Act giving county commissioners the authority to:

(A) Establish by resolution one (1) or more solid waste disposal districts.

(B) Exercise all powers granted to cities and towns by W.S. 15-1-3 (19) and (39) to adopt rules and regulations in managing the disposal of solid wastes within the district.

(C) Levy a tax upon the taxable property within a solid waste disposal district.

Section 2. <u>Definitions</u>. For the purpose of these Regulations the following terms shall have the meaning or interpretations set out below and shall be used in conjunction with, and as supplemental to, those definitions contained in W.S. Section 35-502.3.

(a) "Cell" means compacted solid wastes that are enclosed by natural soil or cover material in land disposal site.

(b) "Construction/Demolition Landfill" means a solid waste disposal site that accepts only construction waste, demolition waste and/or brush. This does not include garbage, liquids, sludges, paints, solvents, putrescibles, dead animals and hazardous or toxic waste which will be prohibited from being disposed of in this type site.

(c) "Cover Material" means soil or other suitable material that is used to cover compacted solid wastes in a land disposal

(d) "Daily Cover" means six inches of cover material that is spread and compacted on the top and side slopes of compacted solid wastes at the end of each operating day in order to control vectors, fire, moisture and erosion and to assure an aesthetic appearance.

(e) "Final Cover" means cover material that is used to completely cover the top of a landfill. This cover is at least twenty-four inches thick.

(f) "Facility" means any solid waste disposal area, site, process, or system and the operation thereof including, but not limited to personnel, equipment and buildings.

(g) "Garbage" means any putrescible solid or semi-solid animal and/or vegetable waste material resulting from the handling, preparation, cooking, serving and consumption of food.

(h) "Ground Water" means any water found beneath the surface of the earth.

(i) "Hazardous Waste" means any waste or combination of wastes which pose a substantial present or potential hazard to human health, the environment, and plants or animals because such wastes are nondegradable or persistent in nature or because they can be biologically magnified, or because they can be lethal, or because they may otherwise cause or tend to cause detrimental cumulative effects.

(j) "Incineration" means the controlled process by which combustible solid, liquid or gaseous wastes are burned and changed into noncombustible gases and other residues.

(k) "Incinerator" means a controlled facility consisting of one or more chambers or furnaces in which wastes are burned.

(1) "Industrial Landfill" means a disposal facility utilizing an engineered method of disposing of industrial solid waste on land without creating a hazard to the public health, the environment, plants or animals.

(m) "Industrial Solid Waste" means waste resulting from, or incidental to, any process of industry, manufacturing, mining or

site.

development of any agricultural or natural resources. This does not include waste materials, the discharge of which is subject to the rules and regulations of the Water Quality Division or mining materials subject to the Land Quality Rules and Regulations.

(n) "Leachate" means liquid that is the result of the percolations of fluids through solid waste and which consists of chemicals and microbial waste products from the solid waste in a dissolved or suspended state.

(o) "Letter of Approval" means the written approval from the Department to construct and/or operate a solid waste disposal facility.

(p) "Modified Landfill" means an adaptation of sanitary landfill, differing only in that coverage with a layer of earth is applied to deposited refuse at a frequency less than daily.

(q) "Municipality" means a city, town, county, district, association or other public body.

(r) "Municipal Solid Waste" means solid waste resulting from or incidental to residential, community, trade or business activities, including garbage, rubbish, ashes, street sweepings, dead animals, abandoned automobiles and all other solid waste other than industrial solid waste.

(s) "New Facility" means any facility which requires new or additional construction, such as access roads, fencing, surface water diversion, etc. or the working area is not included in a plan which has been previously submitted to and approved by the Department.

(t) "Open Burning" means uncontrolled burning of solid waste in the open.

(u) "Open Dump" means an uncontrolled solid waste disposal site at which solid wastes are dumped in the open in such a manner that they present a real or potential hazard to public health and the environment.

(v) "Person" means an individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, municipality or any other political subdivision of the state, or any interstate body or any other legal entity.

(w) "Plans" means maps, drawings and narrative description, prepared to describe the solid waste disposal facility and its operation.

(x) "Processing Plant" means a facility used or designed to transfer, shred, grind, bale, compost, salvage, separate, reclaim, or provide other treatment of solid wastes.

(y) "Promiscuous Dumping" means the unauthorized deposition of solid waste in an area that is not approved by the Department as a solid waste disposal site.

(z) "Public Road" means a road which all the people have a right to use, or which all the people have used, or which are under the control of governmental instrumentalities and maintained at public expense.

(aa) "Refuse" means any putrescible or nonputrescible solid waste, except human excreta, but including garbage, rubbish, ashes, street sweepings, dead animals, offal and solid agricultural, commercial, industrial, hazardous, institutional, demolition and construction wastes.

(bb) "Sanitary Landfill" means a method of disposing of refuse on land without creating nuisances or hazards to public health or safety by utilizing the principles of engineering to confine the refuse to the smallest practical area, to reduce it to the smallest practical volume, and to cover it with a layer of earth at the conclusion of each day's operation or at such more frequent intervals as may be necessary. (American Society of Civil Engineers)

(cc) "Salvaging" means the controlled removal of solid waste for the purpose of reuse.

(dd) "Scavenging" means the uncontrolled removal of solid waste by unauthorized persons.

(ee) "Sludge" means the accumulated semi-liquid suspension of settled solids.

(ff) "Solid Waste" means garbage, and other discarded solid materials resulting from industrial, commercial and agricultural

operations, and from community activities, but does not include solids or dissolved material in domestic sewage or other significant pollutants in water resources such as silt, dissolved or suspended solids in industrial waste water effluents, dissolved materials in irrigation return flows or other common water pollutants.

(gg) "Solid Waste Disposal Site" means any facility that processes, transports or disposes of solid waste.

(hh) "Vector" means a carrier, usually an arthropod, capable of transmitting a pathogen from one organism to another.

(ii) "Water Table" means the upper water level of a body of ground water.

(jj) "Working Face" means that portion of the land disposal site where solid wastes are being deposited and are being spread and compacted prior to the placement of cover materials.

Section 3. <u>Applicability</u>. The Rules and Regulations contained herein shall apply to any person, government or governmental subdivision, corporation, organization, partnership, business trust, association, district or other entity involved in any aspect of the management, control or disposal of solid waste. Section 11. c. (i) of these regulations are effective upon final approval of a state program pursuant to P.L. 95-87.<sup>1</sup>

Section 4. <u>Objectives</u>. The objectives of these rules and regulations are to provide minimum standards for the management and disposal of Solid Waste in order to protect the health, safety and welfare of the people and prevent the degradation of the environment.

Section 5. <u>Scope</u>. The Rules and Regulations promulgated herein shall cover all aspects of solid waste management as provided under the authority of the previously cited legislation.

Section 6. <u>Severability</u>. If any section or provision of these regulations, or the application of that section or provision to any person, situation, or circumstance is adjudged invalid for any reason, the adjudication does not affect any other section or provision of these regulations or the application of the adjudicated section or provision to any other person, situation, or circumstance. The Environmental Quality Council declares that it would have adopted the valid portions and applications of these regulations without the invalid part, and to this end the provisions of these regulations are declared to be severable.

Section 7. Operation Classification.

(a) <u>Operational standards</u>: The operational standards prescribed in the following sections are the minimum requirements for the various types of solid waste facilities and are based on population density and types of solid waste handled. Facilities are classified according to the amount and degree of treatment required.

### (b) Types of Operations.

(i) Type I Operation: Type I operations are those facilities which serve a minimum resident population of 3,000 or process a minimum of 2100 tons of solid waste per year. Type I solid waste disposal shall be accomplished by sanitary landfill, incineration, composting, or other acceptable methods which are approved by the Department.

(ii) Type II Operation: Type II operations are required as a minimum for municipalities or other areas, or any combination, thereof, serving a resident population of less than 3,000 but greater than 1,000. A Type II operation shall not be located within 1,000 feet of any public road, residence, water way, or water well unless the Department, after an on-site inspection, determines that the operation is not and/or will not create a nuisance or detriment to the environment or public health. Type II solid waste disposal facility shall be accomplished by a modified landfill (using a minimum of once-per-week compaction and cover) or any other equally acceptable method which is approved by the Department. The Department may require a more frequent application of cover for sites which serve areas with an influx of tourists during certain months of the year.

(iii) Type III Operation: Type III operations are required as a minimum for municipalities or other area, or any combination thereof, serving a resident population of less than 1,000. A Type III operation shall not be located within 1,000 feet of any public road, residence, waterway or waterwell unless the Department, after an on-site inspection, determines that the operation is not and/or will not create a nuisance or detriment to the environment or public health. Type III solid waste disposal shall be accomplished by a modified landfill (using a minimum of once-permonth compaction and cover), or any other equally acceptable method which is approved by the Department.

(iv) Construction/Demolition/Brush Fill: The construction/demolition fill shall be accomplished as described for a Type III landfill.

(v) Industrial Landfill: Each industrial landfill operation must have the written approval of the Department. This can be accomplished by the Department approving plans and design criteria formulated and submitted by a qualified Solid Waste Management person and by an on-site inspection by an employee of the Department. Each industrial site will be evaluated on an individual basis by the Department.

(vi) Hazardous Waste Facility: Each hazardous waste facility shall be accomplished as described for an industrial land-fill.

Section 8. Facility Construction and Operation Approval.

(a) <u>New facilities</u>: Each person planning to construct and operate a solid waste facility shall submit construction and operating plans to the Department for approval. New facilities are required to have letters of approval for both the construction and operation of the facility. These plans shall include, but not be limited to, the following:

(i) A legal description of the property to be used for a facility.

(ii) Map or aerial photograph of the area showing land use and zoning within one-half mile of the solid waste disposal site. The map or photograph shall be of sufficient scale to show all residences, industrial water courses, buildings, waterwells, roads and other applicable details and shall indicate the site and the adjoining general topography. Surface ownership of the proposed lands shall also be indicated on the map or photograph.

(iii) Plot plan of the site showing dimensions, location of soil borings, where applicable, proposed trenches and filled areas where applicable, winter cover stock piles, fencing, and original and proposed fill elevations. The scale of the plan should not be greater than 200 feet per inch. (iv) A written report shall accompany the plans indicating:

(A) The proposed starting date of construction and the estimated completion date.

(B) Population and area normally served by the site. If applicable, give the population served and number of months the site will be affected by the influx of tourists.

(C) Projected life of the site.

(D) Anticipated type (municipal, industrial, commercial, agricultural, hazardous waste), estimated quantity (cubic yards, tons, pounds), and source (city, county, industrial, etc.) of solid waste handled at the site.

(E) Geological formations and soil analysis to a depth of at least 15 feet below proposed excavations and the lowest elevation of the site. Such data shall be obtained by soil borings or other appropriate means. This information can usually be obtained from the Soil Conservation Service, U.S.G.S. or a log from a well in the area. If soil borings are used, there should be a maximum of two per 5 acres in areas of variable topography and geology and/or two per site area in areas of uniform topography and geology. The borings should be taken at the highest and lowest elevations of the proposed use area.

(F) Estimated depth to the highest ground water table and basis on which estimation was made.

(G) Source and characteristic of cover material and method of protecting cover material for winter operation.

(H) Type and amount of equipment to be provided at the site for excavating, earth moving, spreading, compaction and other needs.

(I) Name, address, telephone number of persons responsible (Plant engineer, supervisor, director of public works, city engineers, etc.) for actual operation and maintenance of the site and intended operating procedure.

(J) Method of handling bulky items, dead animals, and other special materials.

(K) Method by which the surface and ground water will be protected from contamination. (Diversion ditches, drain pipes, impermeable liners, etc.)

(L) Type of fire protection which will be provided. (Fire department, water supply, stockpiled soil, fire lanes, etc.)

(M) Reclamation of site and planned reuse.

(v) The design of the solid waste facility shall include one or more topographic maps at a scale of not over 200 feet to the inch with five foot contour intervals. These maps shall show: the proposed fill area (where applicable), any borrow area, access roads, grades for proper drainage of each lift, special drainage devices if necessary; fencing; equipment shelter; existing and proposed utilities; and all other pertinent information to clearly indicate the orderly development, operations, and completion of the facility.

(vi) Four copies of these plans shall be submitted to the Department for evaluation and approval. A fifth copy shall be filed in the county clerk's office for public perusal in the county in which the site will be operated. The submitted plans for a new facility will be evaluated and an on-site inspection of the area will be made by an employee of the Department within sixty (60) days after the receipt of the plans by the Department. The person responsible for the facility will be notified in writing within fifteen days after the inspection of the approval or disapproval for the construction of the facility. When the construction phase of the facility is near completion the person responsible will notify the Department and another on-site inspection will be made by a representative of the Department. If the construction phase is satisfactory a letter of approval for operating will be issued within fifteen (15) days from the date of the inspection. If the construction of the proposed site is unsatisfactory, the person responsible will be notified in writing within fifteen days from the date of the inspection as to the deficiencies. The Department will provide the necessary recommendations for correction. The letter of approval for operation will be valid for a period of one (1) year from the date of the letter. Periodic inspections will be made of the facility by representatives of the Department to insure conformity with the plans and the rules and regulations. Letters of approval for operation will be issued on a yearly basis. Operating plans will not be needed after initial approval unless they

are requested by the Department.

(b) <u>Existing facilities</u>: All existing facilities will be required to submit operating plans to the Department. These plans should include, but not be limited to, the following:

(i) Map or aerial photograph of the area showing land use and zoning within one-half mile of the solid waste disposal site. The map or photograph shall be of sufficient scale to show all residences, industrial buildings, water wells, water courses, roads and other applicable details, and shall indicate the general topography.

(ii) A written report shall accompany the map or photograph indicating:

(A) Location of the site.

(B) Population and area normally served and if applicable, the population served and number of months the site is affected by the tourist trade.

(C) Name, address, telephone number of responsible persons.

(D) The type, estimated quantity, and source (city, county, industries, etc.) of solid wastes handled at the site.

(E) Geological formations and soil analysis to a depth of at least 15 feet below proposed excavations and the lowest elevation of the site.

(F) Depth to the highest ground water table in the area.

(G) Type of cover material and frequency of cover.

(H) Type and amount of equipment provided at the

site.

- (I) Number and duties of personnel at the site.
- (J) Hours and days of operation.
- (K) Method of handling bulky items, dead animals and

other special materials.

(L) Method by which the surface and ground water is protected from contamination. (Diversion ditches, drainage pipes, liners, etc.)

(M) Type of fire protection available. (Fire department, water supply, stockpiled soil, fire lanes)

(N) Type of access road (is it an all weather road).

(O) Method for controlling blowing material. (Catch fences, watering, etc.)

(P) Is an inclement weather disposal site provided?

(Q) Any other pertinent information that may assist the Department in evaluating the site.

(iii) After the plans are submitted, they will be evaluated and an on-site inspection will be made by an employee of the Department within sixty (60) days from the date the plans are received. The person in charge will be notified in writing within fifteen (15) days after the inspection as to the results of the inspection. If the evaluation of the site indicates that it is not being operated in compliance with Section 10 of these Rules and Regulations, the person responsible will be notified in writing of the deficiencies and recommended corrections. The person responsible shall reply to the Department in writing as to the steps that will be taken to correct the deficiencies and the expected time period for the corrections. The Department after consultation with the person responsible will issue a compliance schedule for the proposed corrections. If the facility is in compliance with the Rules and Regulations a letter of approval for operation will be issued which will be valid for a period of one (1) year from the date of the letter. Periodic inspections will be made of the facility by representatives of the Department to insure conformity with the plans and the Rules and Regulations. Letters of approval for operating will be issued on a yearly basis. Operating plans will not be needed after initial approval unless requested by the Department.

(c) <u>Preparation of data</u>: Data presented in support of Types I, II and III operations and data for industrial and hazardous wastes sites shall be prepared by a qualified Solid Waste Management person.

(d) <u>Change or transfer of letter of approval</u>: In the event that any person the possession of a letter of approval for the construction and/or operation of a solid waste disposal facility decides to substantially change or modify construction or operating procedures, or transfer the letter of approval to another person, he must get prior written approval from the Department.

(e) <u>Revocation of approval to operate</u>: In the event that a person does not comply with the submitted plan, or the Rules and Regulations, the letter of approval for site operation can be withdrawn by written notice from the Department. Such a notification shall include the reasons for the withdrawal of approval and it will become effective twenty (20) days from the mailing date of such notice, unless within that time the holder of the letter of approval requests a hearing before the Environmental Quality Coun-Such a request for hearing shall be made in writing to the cil. Director and shall state the grounds for the request. Any hearing held shall be conducted pursuant to the Rules of Practice and Procedure of the Department. If the person so notified does not respond within the twenty-day period or the Council judges that the letter of approval should be withdrawn, the site will be considered in noncompliance and will be subject to the penalties as prescribed under Article 9.35-502.49 of the Environmental Quality Act.

(f) <u>Research on experimental disposal of solid waste</u>: Special considerations may be given on an individual basis by the Department for any research or experimental disposal of solid wastes.

Section 9. <u>Public Participation</u>. The Department will post a notice in the area newspaper for a period of one (1) week. A copy of the plans for the site will be on file at the county clerk's office in the area of the proposed site. Any person or persons wishing to comment on the installation of a new solid waste disposal site will have twenty (20) days from the date of the first newspaper publication in which comments can be submitted in writing to the Department. If substantial adverse comments are received, a public hearing will be called by the Department.

Section 10. Minimum Standards of Operation.

(a) <u>Sanitary Landfill (Type I operation)</u>: To comply with minimum standards each Type I operation must meet or exceed the

## following requirements:

(i) Each day's deposits of solid waste shall be compacted to the smallest practical volume and a six-inch layer of acceptable cover material shall be placed and compacted over the solid waste at the end of each working day. A minimum of two feet of acceptable cover material shall be placed over any completed segment or cell of the site in such a manner that effective surface drainage will be obtained.

(ii) The working face of the site shall be confined to the smallest practical area in order to control the exposed waste without interfering with operational procedures.

(iii) Adequate fencing shall be provided in order to prevent the access to the site by livestock and large wild animals.

(iv) Adequate fencing shall be provided to catch windblown material. All windblown material shall be collected by attending personnel and returned to the working face once per week or as necessary to prevent the site from becoming unsightly.

(v) Adequate provisions shall be made for operating during adverse weather conditions. This may be accomplished by providing an emergency disposal area which can be utilized during bad weather.

(vi) Surface water shall be prevented from entering onto, into or out of the deposited solid waste.

(vii) Solid waste shall not be deposited nearer than 500 feet to a drinking water supply well, stream, reservoir, lake, water treatment plant, or raw water intake which furnishes water to a public water system or for human consumption unless engineering data supplied to the Department shows there is no danger of the contamination of these waters.

(viii) Reasonable precautions shall be taken to prevent leachate from the solid waste from entering the surface or ground water.

(ix) The Department, at its discretion, may require monitoring wells, provided by the responsible person, in order to observe any changes in the quality of the ground water. (x) No burning of solid waste shall be conducted at any site without the written permission of the Department.

(xi) Adequate equipment shall be provided for excavating, compacting, and covering.

(xii) Adequate personnel or signs shall be provided at each site to give directions for the unloading of refuse.

(xiii) All weather access roads shall be provided at each site.

(xiv) A fire lane (minimum 10 feet wide around the perimeter of the site) and other fire protection shall be provided at each site. This may be accomplished by a water supply, stockpiled earth, nearby fire department, or other acceptable means.

(xv) Hazardous materials may be disposed of in a municipal solid waste disposal site only if the Department gives special written permission. This permission can be obtained by submitting in writing the type, physical composition and chemical composition of the waste and the special procedures and precautions to be taken in handling and disposing of the hazardous waste. There will be some types of hazardous waste that will not be allowed to be deposited in a municipal site. Special directions for the disposal of these wastes will be given by the Department.

(xvi) Salvaging and reclamation, if permitted, will be conducted in such a manner as not to interfere with normal operating procedures.

(xvii) The site shall be operated in such a manner so as to control insects and rodents. Additional control in the form of pesticides may be required.

(xviii) Scavenging and animal feeding or grazing by domestic livestock shall not be permitted on the site.

(xix) Adequate provisions shall be made for the handling and disposal of bulky waste. If this type material cannot be combined with normal municipal refuse, a separate unloading or alternate area shall be provided on-site for the handling and ultimate disposal of large or bulky items. These items (junk cars, tires, tree stumps, appliances, etc.) shall not be stored on-site in such a manner or for periods of time that they will create a public nuisance, fire hazard, public health hazard, or detriment to the environment.

(xx) Special provisions shall be made for the acceptable disposal of dead animals. Dead animals should be covered with six inches of cover material upon disposition. Small animals can be worked into the operating face of the landfill, but provisions should be made for the disposal of large dead animals.

(xxi) When a site is completed or disposal operations are temporarily suspended, all refuse in the area shall be covered with at least two feet of topsoil and reseeded if sufficient vegetation is not available to stabilize the surface. The person who received the written approval of the Department will be responsible for the repair of any eroded, cracked and uneven areas for a period of three (3) years after completion of the site.

(xxii) The person who was given permission to operate will be responsible for controlling any gases or leachate from a site for a period of five (5) years after completion of the site.

(xxiii) Street sweepings may be stored temporarily or utilized in areas where they do not create public nuisances, aesthetic degradation, or public health hazards.

(b) <u>Type II Operation (modified landfill)</u>: To comply with minimum standards, each Type II operation must meet or exceed all standards required of a Type I operation except a six-inch well-compacted cover material will be required only once per week.

(c) <u>Type III Operation (modified landfill)</u>: To comply with minimum standards, each Type III operation must meet all the requirements of a Type I and II operation except a six-inch wellcompacted cover material will be required only once per month.

(d) <u>Demolition/Construction/Brush Landfill</u>: To comply with minimum standards each demolition/construction/brush landfill must meet the requirements of a Type III site plus no putrescible or hazardous waste shall be deposited in this type fill.

Section 11. Industrial and Hazardous Waste Facility Construction and Operation Approval.

(a) <u>New facilities</u>: Each person planning to construct and operate an industrial solid waste land disposal facility or hazard-

ous waste disposal facility shall submit construction and operating plans to the Department for approval. These plans will be for the industrial waste disposal that is not subject to the rules and regulations of the Air, Land and Water Quality Divisions. These plans shall include, but not be limited to, the following:

(i) A detailed map of the area showing land use and/or zoning within one-half mile of the solid waste disposal site. The map shall be of sufficient scale to show all residences, industrial buildings, water wells, water courses, roads and other applicable details and shall indicate the general topography.

(ii) A legal description of the property to be used for a disposal site.

(iii) A plot plan of the site showing dimensions and describing the working areas of the site.

(iv) A written report shall accompany the plans indicating:

(A) The proposed starting date of construction and estimated completion date.

(B) Anticipated number of days the site will be operated per month and/or per year.

(C) Types, characteristics, and quantities of wastes to be handled at the site. Common, trade, and chemical names of materials will be required of the different materials (caustic, toxic, water soluble, flammable, solid, liquid, slurry, etc.), amounts per day, per month, per year.

(D) A description of the working area which gives, in detail, the operations proposed, such as treatment and recovery processes and equipment involved, along with identification of disposal procedures to be used. (Landfill, land farming, etc.)

(E) Projected life of the site.

(F) Geological formations and soils analysis of the proposed site.

(G) Proposed method by which surface and ground water will be protected from contamination. (Drainage plans, con-

trol devices, etc.)

(H) Proposed method by which the public and animals will be excluded from the site.

(I) Where applicable, type of fire protection which will be provided.

(J) Depth to the highest ground water table in the area.

(K) Where applicable, method by which blowing material will be controlled.

(L) Will the site be operated during periods of inclement weather? If so, what provisions will be made for inclement weather operations?

(M) Intended points of ingress and egress.

- (N) Local wind pattern.
- (O) Utilities on site. (If applicable)

(P) Other pertinent information requested by the Department.

(v) These plans will be submitted and processed as described in Section 8-(5) paragraph two.

(vi) If a person is planning on installing several small disposal sites of the same type in a general area, an area plan for all sites with the pertinent information (such as water and air pollution abatement processes, method of disposal, amounts and types of waste, etc.) will be acceptable.

(b) <u>Existing facilities</u>: All existing facilities shall submit operating plans upon request to the Department. These plans will be for the industrial waste or hazardous waste disposal that is not subject to the rules and regulations of the Air, Land and Water Divisions. These plans shall include, but not be limited to, the following:

(i) A detailed map of the area showing land and/or zoning within one-half mile of the solid waste disposal site. The map shall be of sufficient scale to show all residences, industrial buildings, water wells, water courses, roads and other applicable details and shall indicate the general topography.

(ii) A legal description of the property being used for a disposal site.

(iii) A plot plan of the site showing dimension and describing the working areas of the site.

(iv) A written report shall accompany the plans indicating:

(A) Number of days the site is operated per month and/or per year.

(B) Types, characteristics and quantities of wastes handled at the site. Common, trade, and chemical names of materials will be required of the different materials (caustic, toxic, water soluble, flammable, solid, liquid, slurry, etc.), amounts per day, per month, per year.

(C) A description of the working area which gives, in detail, the operations such as treatment and recovery processes and equipment involved, along with identification of disposal procedures used. (Landfill, land farming, etc.)

(D) Projected life of the site.

(E) Geological formations and soils analysis of the

site.

(F) Method by which surface and ground water is protected from contamination. (Drainage plans, control devices, etc.)

(G) Method by which the public and animals are excluded from the site.

(H) Where applicable, type of fire protection provided.

(I) Depth to the highest ground water table in the

area.

(J) Where applicable, method by which blowing material is controlled.

(K) Is the site being operated during periods of inclement weather? If so, what provisions are made for inclement weather operations?

(L) Points of ingress and egress.

(M) Local wind pattern.

(N) Utilities on site. (If applicable)

(0) Other pertinent information requested by the Department.

(v) These plans will be submitted and processed as described in Section 8 b., final paragraph.

(c) <u>Minimum Standards of Operation for Industrial Disposal</u> <u>Sites</u>.

(i) Industrial solid waste disposal site - To comply with minimum standards each industrial site shall meet or exceed the following requirements:

(A) All sites shall be fenced or otherwise guarded to prevent the access of the public, wild animals and livestock. This will only be necessary if the site is receiving materials that will be harmful to the public and animals.

(B) All sites shall be located in areas that will not create nuisances, aesthetic degradation or hazards to nearby residents.

(C) Sites shall be constructed in such a manner that surface water will not run onto, into or out of the working area.

(D) Sites shall not be located nearer than 500 feet to a drinking water supply well, stream, reservoir, lake, water treatment plant, or raw water intake which furnishes water to a public water system or for human consumption unless supportive engineering data shows that materials from the site will not enter these areas. (E) Sites shall be designed and operated in such a manner that fumes, gases, leachates, solids, particulates, or liquids will not enter the water in such quantities as to be in violation of Water Quality standards.

(F) Sites shall be designed and operated in such a manner that fumes, gases, particulated, and other materials will not enter the air in such quantities as to be in violation of the Air Quality regulations.

(G) All sites shall have adequate fire protection.

(H) All sites shall be designed, constructed, and operated in such a manner that the combining of different materials will not create undesirable or dangerous reactions within the area.

(I) For industrial solid waste disposal sites located at surface coal mines, the following standards also apply:<sup>2</sup>

(1.) Noncoal waste (grease, lubricants, paints, flammable liquids mining machinery, etc.) shall be disposed only in accordance with a letter of authorization issued by the Department under the authority of the Solid Waste Management Rules and Regulations, (1975)\*\*

(2.) All noncoal waste shall be covered with a minimum of two feet of nontoxic and noncombustible material, or if necessary, treated. The cover shall be stabilized and reveg-etated.\*\*

(3.) Solid waste material shall not be deposited at refuse embankments or impoundment sites, not shall any excavation for solid waste disposal be located within eight (8) feet of any coal outcrop or storage area.<sup>\*\*</sup>

(d) <u>Minimum Standards of Operation for Hazardous Waste Dis-</u> posal Sites.

(i) Hazardous waste disposal sites: To comply with the minimum standards each hazardous waste site shall meet or exceed the following requirements:

(A) The responsible person shall take all precautions to prevent unauthorized persons from entering the site. (B) The responsible person shall take the necessary precautions to prevent animals from entering the site.

(C) All sites shall be located away from flood plains, natural depressions and excessive slopes unless the detailed engineering plans indicate the acceptability of a site in these areas.

(D) Hazardous waste sites shall be located in areas of low population density, low land use value, and low ground water contamination potential unless detailed engineering plans indicated the acceptability of this type site in the area.

(E) Sites shall not be located near a drinking water supply well, stream, reservoir, lake, water treatment or raw water intake which furnishes water to a public water system.

(F) Whenever possible, sites shall be located in areas where impermeable soils are located.

(G) The site shall be located and designed to contain any runoff from accidental spills at the site.

(H) All sites shall be designed and located where there will be no hydraulic surface or subsurface connection between flowing or standing water.

(I) All trenches, ponds, holding tanks, etc. shall be lined with acceptable liners to prevent leaching or transmission of materials from the sites.

(J) All sites shall be located, designed, and operated in such a manner that they will not create nuisances, aesthetic degradation, or hazards to the surrounding area.

(K) Records of the amounts received, types (chemical analysis), date and locations where these materials are on site will be maintained.

(L) Precautions shall be taken to avoid mixing of materials that are not compatible.

(M) All sites shall be designed, located, and operated in such a manner that the materials will be totally contained on the site. (N) Prior to the deposition of hazardous wastes at a site, monitoring wells shall be provided by the person responsible and background data shall be provided to the Department.

(0) The site and the different areas within the site shall contain the appropriate hazardous waste signs.

(P) When the site is completed the working areas of the site shall be properly encapsulated to prevent the migration of water into or out of the material.

(Q) The site at completion shall be closed off, signed and permanently isolated from humans and animals.

(R) Before a letter of approval is issued for the operation of a hazardous waste disposal site, the responsible person shall consult with the Department of Environmental Quality as to the length of time that person will be required to monitor for water pollution at the site. The length of time required will depend on the types of materials deposited and their life span.

Section 12. Processing Plants.

(a) Solid waste processing plants shall meet the following minimum standards:

(i) All-weather access roads shall be provided.

(ii) Surface drainage facilities shall be provided to prevent surface water runoff into, or out of the working area.

(iii) Fencing shall be provided in order to control access to the site.

(iv) Provisions shall be made to prevent blowing litter in the area.

(v) Personnel and provisions shall be provided at each facility to give directions for unloading of refuse and prevent the blockage of the normal flow of traffic during operating hours.

(vi) Fire protection shall be provided at each facility.

(vii) No hazardous materials shall be processed unless

permission is given by the operator and the Department.

(viii) The processing facility shall be constructed in such a manner as to allow it to be thoroughly cleaned by water or steam.

(ix) All liquids produced by the process and by cleaning shall be disposed of in compliance with the Wyoming Water Quality Rules and Regulations.

(x) Ventilation and odor control shall be provided at each plant.

(xi) The processing plant shall not accumulate solid waste in quantities that cannot be processed before the waste creates a public nuisance, health hazard, fire hazard, odors, or vector habitat.

(xii) In the event of extended mechanical breakdown the unprocessed solid waste and incoming waste shall be removed from the site to an approved alternate facility before the solid waste creates a public nuisance, health hazard, fire hazard, odors or vector habitat.

(xiii) Vector control shall be provided by good sanitation practices and/or pesticides.

Section 13. Compliance Schedules. All persons who have existing solid waste disposal sites that serve 3,000 or more people and/or who are operating industrial or hazardous waste disposal sites shall submit operating plans to the Department by January 1, 1977. All other persons operating solid waste disposal sites (municipal sites serving less than 3,000 population, county sites, private sites, construction/demolition fill, etc.) shall submit operating plans to the Department by July 1, 1977. If a person already has a letter of approval for operating it will not be necessary to submit these plans. If the site or sites are not in compliance with Sections 10 and 11 of these Rules and Regulations the responsible person must include a proposed plan of action with a date or dates when compliance will be obtained. The Department, after consultation with the responsible person, will approve or disapprove the proposed compliance schedule. If the schedule is disapproved, the Department will provide the responsible person with a compliance date. In the event that a person does not agree with the compliance date set by the Department, he can request a

hearing before the Environmental Quality Council. Such a request for hearing shall be submitted in writing to the Director and shall state the grounds for the request. Any hearing held shall be conducted pursuant to the Rules of Practice and Procedure of the Department.

The submission of a compliance schedule, operating plans or operating under a compliance schedule does not relieve the operator of a solid waste disposal site of his legal responsibility to operate the facility in a manner which does not create a public nuisance, a health hazard, a fire hazard or does not violate applicable Air and Water Quality standards.

Section 14. <u>Promiscuous Dumping</u>. Persons shall not deposit solid waste in an area that is not designated by the Department as a solid waste disposal facility. This does not apply to a single family unit or household which is disposing of that family unit or household's solid waste on their own property in such a manner that it is not creating a health hazard, public nuisance, or detriment to the environment.

Section 15. <u>Waivers and Exemptions</u>.

(a) <u>Waivers</u>: The Department, upon application, shall grant waivers from the provisions of these Rules and Regulations for solid waste disposal practices and sites which are necessitated by reason of agricultural or industrial operations remote from authorized solid waste disposal sites and which do not create a health hazard, public nuisance or are not a detriment to the environment. Applications for such waiver shall be made and granted by letter, or verbally when the circumstances permit. "Remote" means inaccessible due to distance, natural barriers or inaccessible because of private, public or legal restrictions.

(b) <u>Exemptions</u>: The disposal of solid waste at oil industry drilling sites which are presently regulated by the Wyoming Oil and Gas Commission, United States Geological Survey and the Bureau of Land Management shall be exempt from these Rules and Regulations.

<sup>1</sup>As amended, 1980 (Effective upon final approval of State Program.)

<sup>2</sup>As amended, 1980. (Effective upon final approval of State Program.)

ENVIROTANK EXHIBIT #19

Bills of Lading from 2002 thru 2005

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WYOMING BILL-OF-LADING & FREI	GHT BILL
CARLIN ENTERPRISES, LLC P.O.BOX 164 GILLETTE, WY 82717	CARRIER BILL NO
(NAME OF CARRIER) RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.	SHIPPER NO.
SHIPPER DATE, DATE _	1.2620 02.
ORIGIN Eagle Battle mine, (	COUNTY
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CONSIGNED, AND BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PROPERTY) AGREE THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED BY LAW, INC AND HIS ASSIGNS.	IS TO CARRY TO ITS DESTINATION, IT IS MUTUALLY AGREED
CONSIGNED TO: Enunotente for	
DESTINATION: The your	, COUNTY,
ROUTING:, TOTAL MI	LEAGE:
NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED ROADWAYS	
NUMBER MILES ON UNIMPROVED ROADWAYS	

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нм *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL, SIGN BELOW
	32 used tires from RAG Windbreak to youd & blowed To windbreak (ied)	112 hrs	2222	632.50	ON THE CONSIGNOR THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
					(IF TO BE PREPAID, WRITE OR STAMP 'TO BE PREPAID' ABOVE
				TOTAL	RECEIVED S TO APPLY ON PRE-PAYMENT
				63250	AGENT OR CARRIER PER
*	MARK WITH X IF HAZARDOUS MATERIALS				
SHIPPER CARLIN ENTERPRISES, LLC CARRIER					
PER		PER	- Ger	uj Moll	
GOODS & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER THIS DATE					

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WYOMING BILL-OF-LADING & FREIGHT BILL					
CARLIN ENTERPRISES, LLC P.O.BOX 164 GILLET	TTE, WY 82717 CARRIER BILL NO. 106824				
(NAME OF CARRIER) RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.	SHIPPER NO				
SHIPPER Enoustenti Inc	, DATE 20 C2				
ORIGINLUGTERLY	, COUNTY				
THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIO AND HIS ASSIGNS.	OTED, MARKED, CONSIGNED, AND DESTINED AS SHOWN BELOW, WHICH THE CARRIER (CARRIER SSION OF THE PROPERTY) AGREES TO CARRY TO ITS DESTINATION, IT IS MUTUALLY AGREED ONS NOT PROHIBITED BY LAW, INCLUDING THE CONDITIONS ON BACK HEREOF, BY THE SHIPPER				
CONSIGNED TO: Aam Rid	ner Windbreak				
DESTINATION: <u>Stitute Ling</u>	, COUNTY				
ROUTING:	, TOTAL MILEAGE:				
NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED RO/	DADWAYS				
NUMBER MILES ON UNIMPROVED ROADWAYS					

HM *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR, SHALL, SIGN, BELOW.
	5 blowed 4000 MARC To wind Fresh	Glus	55.00	495.00	SIGNET WINGOT A CONSIGNOR, THE CONSIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
					(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE
					RECEIVED \$ TO APPLY ON PRE-PAYMENT
				495.00	AGENT OR CARRIER PER
*	MARK WITH X IF HAZARDOUS MATERIALS	<u></u>	· ·		
	SHI	PPER <u>C</u> ?	ARLIN ENTERI	PRISES, LLC	CARRIER
PER		PER			
GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER	THIS DATE			

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WYOMING BILL-OF-LADING &	
	2717_ CARRIER BILL NO3.668:55
SHIPPER _ Ginerante fri	DATE 20 82
ORIGIN	, COUNTY
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CONS BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PROPE THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED AND HIS ASSIGNS.	BT'A AGBEES TO GARBY TO ITS DESTINATION. IT IS MITHALLY AGREED
CONSIGNED TO: Recuer Munkerer K	
DESTINATION:	, COUNTY
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NUMBER MILES ON UNIMPROVED ROADWAYS

NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTERED STATE OR FEDERAL HIGHWAY OR IMPROVED ROADWAY

HM ★	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON-	
	19 bland Tires	3/2/25	55 <i>°</i> °	192.50	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR. THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.	
					(SIGNATURE OF CONSIGNOR)	
					(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE	
					RECEIVED S TO APPLY ON PRE-PAYMENT	
	MARK WITH X IF HAZARDOUS MATERIALS		<u> </u>	192.30	AGENT OR CARRIER PER	
*					CARRIER	
PER	PER PER PER Kerry Mali					
GOODS & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER THIS DATE						

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WYOMING BILL-OF-LADIN	
CARLIN ENTERPRISES, LLC P.O.BOX 164 GILLETTE, WY (NAME OF CARRIER)	
RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.	SHIPPER NO.
SHIPPER <u>Eminotenti</u>	, DATE /2 -16 200 -2
ORIGIN Lillette Lily	, COUNTY
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, I BEING UNDERSTOOD AS MEANING ANY PERSON OF CORPORATION IN POSSESSION OF THE P THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIE AND HIS ASSIGNS.	PROPERTY) AGREES TO CARRY TO ITS DESTINATION. IT IS MUTUALLY AGREED
CONSIGNED TO: Aame	
DESTINATION: Undbuck	, COUNTY,
ROUTING:	_, TOTAL MILEAGE:
NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED ROADWAYS	
NUMBER MILES ON UNIMPROVED ROADWAYS	

NAME OR DESCRIPTION OF POINT WHERE SHIPMENT	LEFT OR	ENTERED STATE OR	FEDERAL HIGHWAY	OR IMPROVED ROADWAY

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нм *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- CONECTIONS
	3 eds tops	7%	55	41255	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
					(SIGNATURE OF CONSIGNOR) (IF TO BE PREPAID, WRITE OR STAMP 'TO BE PREPAID' ABOVE
					RECEIVED \$ TO APPLY ON PRE-PAYMENT
	MARK WITH X IF HAZARDOUS MATERIALS			4/2 5	AGENT OR CARRIER PER
<u>*  </u>		PPER CARLIN	V ENTERPRIS	ES, LLC	CARRIER
PER _			Jen	y Melt	
GOODS & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER THIS DATE					

# WYOMING BILL-OF-LADING & FREIGHT BILL

CARLÍN ENTERPRISES, LLC P.O.BOX 164 GILLETTE, WY 82717 (NAME OF CARRIER)	CARRIER BILL NO00033
	SHIPPER NO.
RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.	. /
SHIPPER, DAT	E2/17 20 02
ORIGIN Buckskin	_, COUNTY/
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CONSIGNED, BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PROPERTY) AS THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED BY LAW, AND HIS ASSIGNS.	GREES TO CARRY TO ITS DESTINATION. IT IS MUTUALLY AGREED
CONSIGNED TO: Contraction Area	
DESTINATION:	, COUNTY,
ROUTING:, TOTAL	MILEAGE:
NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED ROADWAYS	

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NUMBER MILES ON UNIMPROVED ROADWAYS

NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTERED STATE OR FEDERAL HIGHWAY OR IMPROVED ROADWAY

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					<u> </u>	PRE-PAYMENT	
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+ MARK WITH X IF HAZARDOUS MATERIALS	*	MARK WITH X IF HAZARDOUS MATERIALS			[	<u> </u>	
AGENT ON CANNIER					TOTALSO	AGENT OR CARRIER PER	
AGENT ON CANNIER					TOTALE 552-	AGENT OR CARRIER PER	
TOTALSE AGENT OR CARRIER					TOTALS	AGENT OR CARRIER PER	
AGENT OR CARRIER					TOTALE	AGENT OR CARRIER PER	
TOTALSE AGENT OR CARRIER					TOTALE	AGENT OR CARRIER PER	
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					TOTALS		
	ł					STAMP TO BE PREPAID ABO	15
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		3.los tops to hypromin	6.17			(SIGNATURE OF CONSIGNO	A)
		to the present these here and the second	8.5 lus			LAWFUL CHARGES.	
3. Los topos to Tripp windowed? 8,5 ms		7 - Kinkable 4100	1.5.hus	55 E	550 -	SIGNOR SHALL SIGN BELO THE CARRIER SHALL NOT MA DELIVERY WITHOUT PAYME OF FREIGHT AND ALL OTH	
3. Los topos to Tripp windowed? 8,5 ms			HRS.)	FACTOR	CHARGE	SIGNEE WITHOUT RECOUR ON THE CONSIGNOR, THE CO	SE
7 - tenkulle 3700 1.5 lus 550 50 50 the Signature of constant and the application of the constant of the const	HM ★		RATE FACTOR (BBL, GALS, WT, MILES OR	RATE PER		SUBJECT TO SECTION 5 OF CO	N- IS

# WYOMING BILL-OF-LADING & FREIGHT BILL

CARLIN ENTERPRISES, LLC P.O. BOX 164 GILLETTE, WY 82717	CARRIER BILL NO6834
(NAME OF CARRIER)	
RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.	
SHIPPER Envirolant In, DATE_	12-18-20 02
ORIGIN, C	OUNTY,
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CONSIGNED, AND D BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PROPERTY) AGREE THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED BY LAW, INCL AND HIS ASSIGNS.	S TO CARRY TO IT'S DESTINATION. IT IS MUTUALLY AGREED
CONSIGNED TO: Lipp Wendbrick	
CONSIGNED TO:	, COUNTY,

NUMBER MILES ON UNIMPROVED ROADWAYS \_\_\_\_\_\_

NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTERED STATE OR FEDERAL HIGHWAY OR IMPROVED ROADWAY

	HM *		RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT BECOURSE
12/	18	2 lds tops	5 kis			SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW, THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
12.	19	I id tops	2 5 kis	5500		(SIGNATURE OF CONSIGNOR)
17	 	2 lido Teps	5/4 hrs		70/25	(IF TO BE PREPAID, WRITE OR STAMP 'TO BE PREPAID' ABOVE
(d	סג	A car y	12: 75.2		TOTALS	RECEIVED S TO APPLY ON PRE-PAYMENT AGENT OR CARRIER PER
	*	MARK WITH X IF HAZARDOUS MATERIALS		<u> </u>	101	
	·	SHI	PPER <u>CARI</u>	··· /·· /	101.111	CARRIER
	PER		PER	herry	1 TOLDEEP	<u></u>
	GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER 1	THIS DATE	/ /		
			CONSIGNEE			

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	ADING & FREIGHT BILL 827175					
CARLIN ENTERPRISES, LLC P.O. BOX 164	GILLETTE, WY CARRIER BIL	_L NO				
(INAME OF CARRIER)	SHIPPER NO					
RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE,						
SHIPPER Enwintente Inc	, DATE	5-30 20 03				
ORIGIN Letto wy	, COUNTY	······				
THE PROPERTY DESCRIBED BELOW. IN APPARENT GOOD ORDER, EXCEPT AS NOTED BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS N AND HIS ASSIGNS.	I OF THE PROPERTY) AGREES TO CARRY TO ITS I	DESTINATION, IT IS MUTUALLY AGREED				
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DESTINATION: Killettelig	, COU	NTY				
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HM *	COMMODITY DESCRIPTION teak tops to wordbuck	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.) T. Mus	RATE PER FACTOR	CHARGE 442 D	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES. (SIGNATURE OF CONSIGNOR) (IF TO BE PREPAID, WRITE OR STAMP TO BE PREPAID, WRITE OR STAMP TO BE PREPAID ABOVE RECEIVED \$ TO APPLY ON PRE-PAYMENT				
*	MARK WITH X IF HAZARDOUS MATERIALS								
PER	SHIPPER CARLIN ENTERPRISES, LLC CARRIER								
	CONSIGNEE								

WYOMING BILL-OF-LADING	
CARLIN ENTERPRISES, LLC P.O. BOX 164 GILLETTE, WY	82717 CARRIER BILL NO. 1000001
(NAME OF CARRIER)	SHIPPER NO.
RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.	• • • • • • • • • • • • • • • • • • •
SHIPPER Envirotails In	, DATE <u>6-2 20 03</u> ,
ORIGIN	, COUNTY
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CON BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PRO THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITE AND HIS ASSIGNS.	PERTY) AGREES TO CARRY TO ITS DESTINATION, IT IS MUTUALLY AGREED
CONSIGNED TO: / and Kanch	
DESTINATION:	, COUNTY,
ROUTING:	TOTAL MILEAGE:
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NUMBER MILES ON UNIMPROVED ROADWAYS	

нм *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE
	tank Types	this	5500	22000	SUBJECT TO SECTION S OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
					(SIGNATURE OF CONSIGNOR)
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					RECEIVED \$ TO APPLY ON PRE-PAYMENT
				\$330.00	AGENT OR CARRIER PER
*	MARK WITH X IF HAZARDOUS MATERIALS				CARRIER
	SHI		IN ENTERPRIS	Mul Mul	VAIIIILI
PER		PER		- July -	
GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER T	THIS DATE			

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WYOMING BILL-OF-LADING	& FREI		
CARLIN ENTERPRISES, LLC P.O.BOX 164 GILLETTE, WY (NAME OF CARRIER)			166942
RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.	_, DATE _	6-3	2003
ORIGIN	, C	OUNTY	
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CO BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PRO- THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBIT AND HIS ASSIGNS.	OPERTY/ AGREE	S TO CARRY TO ITS DESTINATION	L IT IS MUTUALLY AGREED
DESTINATION:		, COUNTY	
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NUMBER MILES ON UNIMPROVED ROADWAYS			

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нм *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEF WITHOUT RECOURSE				
	ld of tenk types	34, hus	55.00	178:75	SUBJECT TO SECTION 5 OF CON- DITIONS. IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.				
					(SIGNATURE OF CONSIGNOR)				
					(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE				
					RECEIVED S TO APPLY ON PRE-PAYMENT				
		<u> </u>		TOTAL 128,25	AGENT OR CARRIER PER				
*	MARK WITH X IF HAZARDOUS MATERIALS	<u> </u>	<u> </u>	<u></u>					
	SHI	PPER <u>CAR</u>	LIN ENCERPE						
PER		PER	_ Aer	in me					
	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER 1	THIS DATE		(	\				
GOOD									
CONSIGNEE									

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WYOMING BILL-OF-LADING & FREM Carlin Enterprises, LLC P.O.Box 164 Gillette, 114 83717	GHT BILL
(NAME OF CARRIER) RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE,	SHIPPER NO.
SHIPPER Emiliatesch fine, DATE	
ORIGIN, C	OUNTY,
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CONSIGNED, AND D BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PROPERTY) AGREE THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED BY LAW, INCL AND HIS ASSIGNS.	S TO CARRY TO ITS DESTINATION. IT IS MUTUALLY AGREED
CONSIGNED TO:	
DESTINATION:	, COUNTY,
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NUMBER MILES ON UNIMPROVED ROADWAYS	

нм *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEF WITHOUT RECOURSE			
	Havel tops to Tripp windbrack	9.ku	6500	4tta 585 cc	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.			
	10% fuel			5850	(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE			
	1				RECEIVED \$ TO APPLY ON PRE-PAYMENT			
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*	MARK WITH X IF HAZARDOUS MATERIALS		[	<u> <u></u><u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u>	1			
	SHI	PPER	arlin Ent	er prises,	LLCCARRIER			
PER		PER_		- 				
GOOD	GOODS & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER THIS DATE							

CONSIGNEE \_\_\_\_\_

WYOMING BILL-OF-LADING		
CARLIN ENTERPRISES, LLC P.O. BOX 164 GILLETTE, WY	82717	CARRIER BILL NO.
(NAME OF CARRIER)		SHIPPER NO
RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.		
SHIPPER Cohie Luce	, DATE _	10-19 20 04
ORIGIN IlleltsTriv	, c	COUNTY
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, C BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PF THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBI AND HIS ASSIGNS.	ONSIGNED, AND T ROPERTY) AGREE	DESTINED AS SHOWN BELOW, WHICH THE CARRIER (CARRIER S TO CARRY TO IT'S DESTINATION, IT IS MUTUALLY AGREED
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DESTINATION:		
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NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED ROADWAYS		
NUMBER MILES ON UNIMPROVED ROADWAYS	·····	

HM *		RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT BECOURSE				
	assorted fromk Tires from Cobre gard To undbreak (The Two Tenkelly 10 Thel	3.kcs	6.500	19.5 °2 19 50 19 50	SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES. (SIGNATURE OF CONSIGNOR) (IF TO BE PREPAID, WRITE OR STAMP 'TO BE PREPAID, WRITE OR STAMP 'TO BE PREPAID, WRITE OR STAMP 'TO BE PREPAID' ABOVE RECEIVED \$ TO APPLY ON PRE-PAYMENT AGENT OR CARRIER PER				
*	MARK WITH X IF HAZARDOUS MATERIALS								
	SHIPPERCARLIN_ENTERPRISES,LLCCARRIER								
PER		PER							
GOODS	GOODS & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER THIS DATE								

CONSIGNEE

		LL-OF-LADING			#: - <b>0</b>	-ia - 17/
CARLIN ENTERPRISES	LLC P.O.BOX 164	GILLETTE, WY	82717	CARRIER BILL NO.		· · · · ·
(NAME OF CARRIER)				SHIPPER NO.		
RECEIVED, SUBJECT TO THE T	ERMS STATED ON REVERSE.					
SHIPPER	CA		_, DATE _		<u>~ / / _ 20 _</u>	04
ORIGIN	Gelletti n	J.V.				
THE PROPERTY DESCRIBED BE BEING UNDERSTOOD AS MEAI THAT SERVICES PERFORMED I AND HIS ASSIGNS.	LOW, IN APPARENT GOOD ORDER, EXC NING ANY PERSON OR CORPORATION IEREUNDER SHALL BE SUBJECT TO AL	CEPT AS NOTED, MARKED, CC IN POSSESSION OF THE PRI L CONDITIONS NOT PROHIBIT	Onsigned, and Operty) Agrei 'Ed by Law, inc	DESTINED AS SHOWN BELOW, I ES TO CARRY TO ITS DESTINAT CLUDING THE CONDITIONS ON B	WHICH THE CARRIER NON, 17 IS MUTUALL ACK HEREOF, 8Y THI	(Carrier Y Agreed E Shipper
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	ED ROADWAYS		····			
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HM *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE			
	more lead of scroper Tires to considerate	32.ku	65*	227 50	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES. (SIGNATURE OF CONSIGNOR) (IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE RECEIVED \$ TO APPLY ON PRE-PAYMENT			
*	MARK WITH X IF HAZARDOUS MATERIALS	· · · · · · · · · · · · · · · · · · ·		227 50	AGENT OR CARRIER PER			
SHIPPER CARLIN ENTERPRISES, LLC CARRIER								
PER		PER	fice	up Mo	<u>Q</u>			
GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER 1	THIS DATE						
		CONSIGNEE _						

AURICA SORAHON

WYOMING BILL-OF-LADIN CARLIN ENTERPRISES, LLC P.O.BOX 164 GILLETTE, WY	
(NAME OF CARRIER)	
RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.	_, DATE G-272004
ORIGIN	, COUNTY
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE F THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHI AND HIS ASSIGNS.	PROPERTY) AGREES TO CARRY TO ITS DESTINATION. IT IS MUTUALLY AGREED
CONSIGNED TO: windbreak	
DESTINATION:	, COUNTY
ROUTING:	, TOTAL MILEAGE:
NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED ROADWAYS	

NUMBER MILES ON UNIMPROVED ROADWAYS \_\_\_\_\_

NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTERED STATE OR FEDERAL HIGHWAY OR IMPROVED ROADWAY

нм *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEF WITHOUT RECOURSE
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	<i>"</i>				(SIGNATURE OF CONSIGNOR)
•	fine Burchas	ë e		1463	(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE
					RECEIVED \$ TO APPLY ON PRE-PAYMENT
			4	TOTAL 13	AGENT OR CARRIER PER
*	MARK WITH X IF HAZARDOUS MATERIALS	<u> </u>			
~ <u></u>	SHI	PPER		RPRISES, LLC	
PER.		PER	-fld	my Mel	<u> </u>
GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER T	HIS DATE		/	

CONSIGNEE

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# WYOMING BILL-OF-LADING & FREIGHT BILL

CARLIN NETERPRI	ISES,LLC	F.O.BOX	164 GI	LLETTE,	WY	82717	CARRIER BILL NO.	2027:5
(NAME OF CARRIER								
RECEIVED, SUBJECT TO	THE TERMS ST	ATED ON REVE	RSE.				SHIPPER NO.	
SHIPPER	<u>Enp</u>	wohnt			·	_, DATE _	5	- 6 20 04
ORIGIN	- He	<u>26 K.E.</u>	14			, c	OUNTY	
THAT SERVICES PERFO AND HIS ASSIGNS.	S MEANING ANY H	ERSON OF CORPC	DHATION IN PO	SSESSION OF	THE PR	OPERTY) AGREES	DESTINED AS SHOWN BELOW, W S TO CARRY TO ITS DESTINATI LUDING THE CONDITIONS ON BA	ON, IT IS MUTUALLY AGREED
CONSIGNED TO:	l	eff 4	2202	Hour	<u>ch</u>			- <u></u>
DESTINATION:		<i>40</i>					, COUNTY	
ROUTING:			<u></u>			TOTAL MIL	LEAGE:	
NUMBER MILES ON STAT	E AND FEDERA	L HIGHWAYS OF	R IMPROVED	ROADWAYS	S			

NUMBER MILES ON UNIMPROVED ROADWAYS

NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTERED STATE OR FEDERAL HIGHWAY OR IMPROVED ROADWAY

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*		WT, MILES OR	RATE PER		SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS
	COMMODITY DESCRIPTION	HRS.)	FACTOR	CHARGE	SIGNEE WITHOUT RECOURSE
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	<i>V</i>	fuels	40-	1950	(SIGNATURE OF CONSIGNOR)
		li			(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE
					RECEIVED \$ TO APPLY ON PRE-PAYMENT
	·			FL TOTAL	AGENT OR CARRIER PER
*	MARK WITH X IF HAZARDOUS MATERIALS			707	
	SHI	PPER <u>CA</u>	RLIN ENTERP	RISES,LLC	CARRIER
PER		PER		<u></u>	
GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER 1	THIS DATE			
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#### WYOMING BILL-OF-LADING & FREIGHT BILL

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CAPT. IN ENTERPR	ISES, LLC P.O. BOX	164 GILLETTE.	WY 82717	CARRIER BILL NO.	2027
(NAME OF CARRIE	3)			SHIPPER NO.	
RECEIVED, SUBJECT TO	THE TERMS STATED ON REVE	RSE.			
SHIPPER	Emunstank,	fre	, DATE _	5-1+5-2	2009/
	Alleton	.6	, (	OUNTY	
BEING UNDERSTOOD A	BED BELOW, IN APPARENT GOOD OR S MEANING ANY PERSON OR CORPO RMED HEREUNDER SHALL BE SUBJEC	DRATION IN POSSESSION OF T	HE PROPERTY) AGREE	S TO CARRY TO ITS DESTINATION	I. IT IS MUTUALLY AGREED
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				COUNTY	
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<u> </u>		PPER CARL	IN ENTERPRI	SES,LLC	CARRIER
PER	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER 1	PER	- Geo	Mall	 
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WYOMING BILL-OF-LADING & FREIGHT BILL						
ERPRESES, LLC P.O.BOX 164 GILLETTE, WY	82717	CARRIER BILL NO.	202000			
(NAME OF CARRIER)		SHIPPER NO.				
RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.						
SHIPPER Envirotenter Ane	, DATE	3-11	20 4 1/2			
ORIGINVallettery	, c	OUNTY				
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CONSIGNED, AND DESTINED AS SHOWN BELOW, WHICH THE CARRIER (CARRIER BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PROPERTY) AGREES TO CARRY TO ITS DESTINATION. IT IS MUTUALLY, AGREED THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED BY LAW, INCLUDING THE CONDITIONS ON BACK HEREOF, BY THE SHIPPER AND HIS ASSIGNS.						
CONSIGNED TO:		·····				
DESTINATION:		, COUNTY				
ROUTING:	_, TOTAL MI	_EAGE:	····- <u></u> ·			
NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED ROADWAYS			,			
UMBER MILES ON UNIMPROVED ROADWAYS						

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NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTERED STATE OR FEDERAL HIGHWAY OR IMPROVED ROADWAY

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HM *	COMMODITY DESCRIPTION Have tenk tops from two you to tripp Rench for windbuck	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE 2922	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL, SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.				
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<u> </u>		PPER <u>CAPI</u>	IN ENTERPRI	BES,LLC	CARRIER				
DED DED MAU									
GOODS	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER T	HIS DATE	/						
		CONSIGNEE _		······					

# WYOMING BILL-OF-LADING & FREIGHT BILL

CARLIN ENTERPRISES, LLC P.O.BOX 164 GILLETTE, WY8271	<u>7</u> CARRIER BILL NO.
(NAME OF CARRIER)	SHIPPER NO.
RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE	
SHIPPER Envirence , DA	TE <u>3-14</u> 20 <u>04</u>
ORIGIN <u>filettruy</u>	, COUNTY
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CONSIGNED BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PROPERTY)	
THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED BY LA AND HIS ASSIGNS.	
THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED BY LA	
THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED BY LA AND HIS ASSIGNS.	
THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED BY LA AND HIS ASSIGNS. CONSIGNED TO: DESTINATION:	W, INCLUDING THE CONDITIONS ON BACK HEREOF, BY THE SHIPPER

NUMBER MILES ON UNIMPROVED ROADWAYS

NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTERED STATE OR FEDERAL HIGHWAY OR IMPROVED ROADWAY

нм *	COMMODITY DESCRIPTION	RATE FACTOR (8BL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE
	heuled & lids of Tops to Tripp Bros windbreak	9 kcs	65	5 85 00	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR, SHALL, SIGN BELOW, THE CARRIER SHALL, NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
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					RECEIVED \$ TO APPLY ON PRE-PAYMENT
				TOTAL TOTAL	AGENT OR CARRIER PER
*	MARK WITH X IF HAZARDOUS MATERIALS			2072	
		PPER	RLIN_ENTERP	RISES, LLC	CARRIEF
PER		PER			
GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER	THIS DATE	····	·····	

		WYOM	ING B	ILL-OF-L	ADING	& FREIC	GHT E	BILL .	
CARLIN NETERPRI	SES,LLC	P.O.BOX	164	GILLETTE,	WY 82	717	CARR	IER BILL NO.	221358
	•••						сніра		
RECEIVED, SUBJECT TO	) THE TERMS	STATED ON RE	EVERSE.						
Shipper Origin	Em	inclast	k J	ne		, DATE			<u>-5 20 055</u>
ORIGIN		<u>Gilde</u>	TAUX			, Ci	OUNTY	f	J
BEING UNDERSTOOD / THAT SERVICES PERFO AND HIS ASSIGNS.	AS MEANING AN DRMED HEREUN	IY PERSON OR CO DER SHALL BE SUE	RPORATION BJECT TO AL	I IN POSSESSION	of the prof ot prohibite	PERTY) AGREES D BY LAW, INCLL	DING THE	Y TO ITS DESTINATIO	NCH THE CARRIER (CARRIER N. IT IS MUTUALLY AGREED K HEREOF, BY THE SHIPPER
CONSIGNED TO:		-tamo		·····					
DESTINATION:		Luni	the se	le				, COUNTY	
ROUTING:			**		, "	FOTAL MIL	EAGE		· · · · · · · · · · · · · · · · · · ·
NUMBER MILES ON STAT	TE AND FEDE	RAL HIGHWAYS	s or impr	OVED ROADW	AYS				
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NAME OR DESCRIPTION		nene anirwek				223 6745 6 11CB 6 8 9		M NOVED NOADI	
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НМ				1	E FACTOR				
*				wτ,	MILES OR	RATE PE		0.000	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON-
		TY DESCRIPTIC				FACTOF		CHARGE	SIGNEE WITHOUT RECOURSE
hand	top	to w	ender	af 8	Alio	650		520=	SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT
and a second second		,						67 60	OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
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		i	1394	lui					(SIGNATURE OF CONSIGNOR)

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GOODS & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER THIS DATE

MARK WITH X IF HAZARDOUS MATERIALS

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(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE

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AGENT OR CARRIER PER

CARRIER

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CARLIN TERPRISES, LLC

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WYOMING BILL-	OF-LADING	& FREIG				
CARLIN ENTERPRISES, LLC P.O. BOX 164 GIL	LETTE, WY	82717 <b>c</b>	ARRIER BILL NO.	221211		
(NAME OF CARRIER)		9	SHIPPER NO.			
SHIPPER	$\sim$	, DATE	57 /	9_2005		
ORIGIN Sullattany		, co	UNTY	/		
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CONSIGNED, AND DESTINED AS SHOWN BELOW, WHICH THE CARRIER (CARRIER BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PROPERTY) AGREES TO CARRY TO ITS DESTINATION. IT IS MUTUALLY AGREED THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED BY LAW, INCLUDING THE CONDITIONS ON BACK HEREOF, BY THE SHIPPER AND HIS ASSIGNS.						
DESTINATION:	1			f		
ROUTING:		TOTAL MILE	AGE:			
NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED	ROADWAYS					
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NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTE	RED STATE OR FE	DERAL HIGHWA	Y OR IMPROVED ROADV	VAY'		
HM }	RATE FACTOR	<u>]</u> .	1			
* COMMODITY DESCRIPTION	(BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE		
handle leds junktires	9 kcs	4500	.585-ee	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.		
				(SIGNATURE OF CONSIGNOR)		
	10% fuil &	uchange	5850	(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE		
				RECEIVED \$ TO APPLY ON PRE-PAYMENT		

		<u></u>		The LASSE	AGENT OR CARRIER PER
*	MARK WITH X IF HAZARDOUS MATERIALS				
		R	ARLIN NEZ	PRPRISES, LLC	CARRIER
PER		PER	(	; mi Moll	2
GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER THIS	DATE	^		
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• •		WYOMING 5	BILL-OF-LA	DIN	G & FRE	
CARLIN ENT	ERPRISES, LLC	P.O.BOX 164	GILLETTE,	WY	82717	_ CARRIER BILL NO. 221219
(NAME OF C RECEIVED, SUE		STATED ON REVERSE.	a			SHIPPER NO.
SHIPPER	En	wintent	2		, DATE	<u>5-2/20 (5-</u>
		Matri	j.k.		,	COUNTY,
BEING UNDE	ERSTOOD AS MEANING AN' CES PERFORMED HEREUNI	PERSON OR CORPORATION	on in possession of	f The P	ROPERTY) AGRE	D DESTINED AS SHOWN BELOW, WHICH THE CARRIER (CARRIER EES TO CARRY TO ITS DESTINATION. IT IS MUTUALLY AGREED ICLUDING THE CONDITIONS ON BACK HEREOF, BY THE SHIPPER
CONSIGNED	то:	teme				
DESTINATIO	)N:	rundbi	cake		·	, COUNTY,
ROUTING:					, TOTAL N	/ILEAGE:
NUMBER MILES	ON STATE AND FEDE	RAL HIGHWAYS OR IMP		/s	4	۲۹ <u>۲۹ ۲۰۰۰ میلوم می اور اور اور اور اور اور اور اور اور اور</u>
NUMBER MILES	ON UNIMPROVED ROA	ADWAYS			<u> </u>	

нм *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON-
	have junk tizes To wondbreak 10%	Zkis frielse	# 6500 uberge	455 °	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIEMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR THE CON- SIGNOR SHALL SIGN BELOW. THE CARBIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES. (SIGNATURE OF CONSIGNOR) (FTO BE PREPAID, WRITE OR STAMP 'TO BE PREPAID' ABOVE RECEIVED S TO APPLY ON PRE-PAYMENT
*	MARK WITH X IF HAZARDOUS MATERIALS			H TOTAL 5-0	AGENT OR CARRIER PER
	SHI	PPER <u>CARL</u> PER	IN ENTERPRE		CARRIER
PER_ GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER		1		

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WYOMING BILL-OF-LADING & FRE	IGHT BILL
CARLIN ENTERPRISES, LLC P.O.BOX 164 GILLETTE, WY 82717	CARRIER BILL NO. 221222
(NAME OF CARRIER) RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.	SHIPPER NO.
SHIPPER Celercondina DATE	5-24 20 05
ORIGINKullatariy	COUNTY
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CONSIGNED, AND BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PROPERTY) AGRE THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED BY LAW, INC AND HIS ASSIGNS.	ES TO CARRY TO ITS DESTINATION. IT IS MUTUALLY AGREED
CONSIGNED TO: Emuratente Inc	
DESTINATION: Windbrick	, COUNTY
ROUTING:, TOTAL M	ILEAGE:
NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED ROADWAYS	

NUMBER MILES ON UNIMPROVED ROADWAYS

NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTERED STATE OR FEDERAL HIGHWAY OR IMPROVED ROADWAY

	hard the from yard Cobri To Tripp wind breek	7. 74-kus 102 fre	45 av	503 Zo	ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
		10/2 fre			(IF TO BE PREPAID, WAITE OR STAMP 'TO BE PREPAID' ABOVE RECEIVED \$ TO APPLY ON PRE-PAYMENT
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		IPPERCAR	LIN ENTERPR	ISES,LLC	CARRIEF
PER		PER	Cher	<u>u Mell</u>	)
	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER	THIS DATE		<u> </u>	
4000		CONSIGNEE_			

CONSIGNEE'S COPY

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WYOMING BILL				
CARLIN ENTERPRISES, LLC P.O.BOX 164 GI	LLETTE, WY	82717	CARRIER BILL NO.	221223
(NAME OF CARRIER)			SHIPPER NO.	······································
RECEIVED, SUBJECT TO THE TERMS STATED ON REVEASE.			5-	· 7 ~ NC
Le Do total				<u>~</u> 20 <u>0</u> ,
ORIGIN			COUNTY	
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN P THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CO AND HIS ASSIGNS.	OSSESSION OF THE PRO	PERTY) AGREE	S TO CARRY TO ITS DESTINATION	ON, IT IS MUTUALLY AGREED
CONSIGNED TO:				
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NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR EN	TERED STATE OR FE	DERAL HIGH	WAY OR IMPROVED ROAD	VAY
HM *	RATE FACTOR (BBL, GALS, WT, MILES OR	RATE P		SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS
COMMODITY DESCRIPTION	HRS.)	FACTO	DR CHARGE	TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE
* <u>COMMODITY DESCRIPTION</u> hen Junk teres To Tripp wiendbreak	giks patuel	45	260 cm 260 cm	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
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				RECEIVED \$ TO APPLY ON PRE-PAYMENT
			TOTAL SC	AGENT OR CARRIER PER
* MARK WITH X IF HAZARDOUS MATERIALS		Jul 10	<u></u>	
SI	HIPPER	CARLIN	ENTERPRISES, LLC	CARRIER
PER	PER_	- U	eny Mal	K
GOODS & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDEI	R THIS DATE	1	( '	
	CONSIGNEE			

CONSIGNEE'S COPY

	WYOMING BI	LL-OF-LADING	& FREIGHT	BILL	
CAR	LIN ENTERPRISES, LLC P.O.BOX 164	GILLETTE, WY	82717 CAF		221222
(NAN	IE OF CARRIER)			PPER NO.	
RECE	VED, SUBJECT TO THE TERMS STATED ON REVERSE.				1
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ORIG	IN fillettervy	×		- /	
ד 19 דו	HE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXC EING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION I TAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL ND HIS ASSIGNS.	EPT AS NOTED, MARKED, CON	DEDTAA ARDEER TA AA	DDV TO TTO DESTINATION	
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NUMBE	R MILES ON STATE AND FEDERAL HIGHWAYS OR IMPRO	VED ROADWAYS			
	R MILES ON UNIMPROVED ROADWAYS				
NAME	OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR	ENTERED STATE OR FED	ERAL HIGHWAY OF		VAY
нм	······································	RATE FACTOR	[	1	
	COMMODITY DESCRIPTION	(BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON-
	have small pink tires to windbrack	5 his	45 <sup>-=</sup>	325-	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
	(R)	l			(SIGNATURE OF CONSIGNOR)
	fuel surela	Fl		3250	(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE

RECEIVED \$ TO APPLY ON PRE-PAYMENT TOTALSO AGENT OR CARRIER PER MARK WITH X IF HAZARDOUS MATERIALS \* CARLIN ENTERPRISES, LLC SHIPPER CARRIER en Mell PER PER GOODS & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER THIS DATE CONSIGNEE

CONSIGNEE'S COPY

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		WYOMING	BILL-C	<b>DF-LADING</b>	& FREIGHT	BILL	
<b>BRL1</b>	IN ENTERPRI	SES,LLC_P.O.BOX 164					221409
NAM	IE OF CARRIE	R) THE TERMS STATED ON REVERSE			SHI	PPER NO	1-1-06
SHIP	PER	Emissterligen	<u> </u>		DATE	p	1 1 20 m la
	IN	KIETAU			, COUNT	Ϋ́	
Di Al	HAT SERVICES PERFO NO HIS ASSIGNS.	IBED BELOW, IN APPARENT GOOD ORDER, IS MEANING ANY PERSON OR CORPORAT RMED HEREUNDER SHALL BE SUBJECT TO	EXCEPT AS ION IN POSS ALL CONDI	Noted, Marked, Con Session of the prop Tions not prohibited	SIGNED, AND DESTINEL ERTY) AGREES TO CA DBY LAW, INCLUDING T	) AS SHOWN BELOW, W RRY TO ITS DESTINATI HE CONDITIONS ON BA	ON. IT IS MUTUALLY AGREED CK HEREOF, BY THE SHIPPER
CONS	SIGNED TO:	Same					
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		COMMODITY DESCRIPTION		HRS.)	FACTOR	CHARGE	TO BE DELIVERED TO THE CON-
	How to Windb	enkeder Tires from werk to cutting you wel surcharge 10%	n	2/2 Res	6 57	162 50	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
	ki	uel suncharge 10%				16 -	(SIGNATURE OF CONSIGNOR)
	0	ر ا					(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE

GOOD ORDER THIS DATE		 
CON	SIGNEE	 

PER.

SHIPPER

CARLIN ENTERPRISES, LLC

MARK WITH X IF HAZARDOUS MATERIALS

GOODS & SERVICES AS NOTED ABOVE RECEIVED IN

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PER \_\_\_\_\_

RECEIVED \$ TO APPLY ON PRE-PAYMENT

AGENT OR CARRIER PER

CARRIER

TOTAL

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Bills of Lading from 2006 thru 2007

COMPANY	WYOMINC 1 10 CI RLIN ENTERPRISES, LLC P.O. BOX 164 CI E OF CARRIER)			CAR	RIER BILL NO.	275359	
	VED, SUBJECT TO THE TERMS STATED ON REVERSE. PER <u>Cuides TANKS</u>			-			
	• • • • • • • • • • • • • • • • • • • •						
	ORIGIN, COUNTY,						
BI	THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CONSIGNED, AND DESTINED AS SHOWN BELOW, WHICH THE CARRIER (CARRIER BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PROPERTY) AGREES TO CARRY TO ITS DESTINATION. IT IS MUTUALLY AGREED THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITED BY LAW, INCLUDING THE CONDITIONS ON BACK HEREOF, BY THE SHIPPER AND HIS ASSIGNS.						
CONS	SIGNED TO:						
DEST	INATION: ON BELL ROAD				_, COUNTY		
ROUT	ING: CLARK ALLAN ROAD TO	Bell Ropa	OTAL MI	LEAG	ā:		
NUMBE	R MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED F	ROADWAYS			·····		
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NAME	OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTE	RED STATE OR FED	ERAL HIGH	WAY OR	IMPROVED ROADV	VAY	
HM *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	BATE P FACTO		CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS. IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON-	
	HAUL BUNK TIPES FROM EUTED TANKS TO A MANCH ON BOIL	11.14 hrs	70 5	×.	7875	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.	
	Road	11.14 hrs	cerdee	ijere I		(SIGNATURE OF CONSIGNOR)	

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RECEIVED \$ TO APPLY ON PRE-PAYMENT

AGENT OR CARRIER PER

\_\_\_\_CARRIER

TOTAL

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WYOMING P	L-OF-LADING	& FREIGHT	BILL	
CARLIN ENTERPRISES, LLC P.O.BOX	164 GILLETTE,	<u>wy 827</u> 1Car	RIER BILL NO.	2/5388
(NAME OF CARRIER) RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.			PPER NO	
		DATE	9-	2 20/16
ORIGIN		, COUNT		
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXI BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO AL AND HIS ASSIGNS.	IN POSSESSION OF THE PROPA L CONDITIONS NOT PROHIBITED	ERTY) AGREES TO CA BY LAW, INCLUDING T	RRY TO ITS DESTINATION HE CONDITIONS ON BAC	DN. IT IS MUTUALLY AGREED CK HEREOF, BY THE SHIPPER
CONSIGNED TO: <u>Wendbreak</u>	<u></u>	<u>.                                    </u>		- <del></del>
DESTINATION:				
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NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPRO				
NUMBER MILES ON UNIMPROVED ROADWAYS				
NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OF	RENTERED STATE OR FED			VAY•
HM * COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR . HRS.)	RATE PER FACTOR	CHARGE	Subject to section 5 of Con- Ditions, if this shipment is to be delivered to the con-
11/4 this heading time to cl'endbreak	114 his field	70 00 Uncharge	CHARGE 787 <u>5</u> 212 <u>62</u>	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
				(IF TO BE PREPAID, WRITE OR STAMP 'TO BE PREPAID' ABOVE RECEIVED \$ TO APPLY ON PRE-PAYMENT
			1000 12	AGENT OR CARRIER PER
* MARK WITH X IF HAZARDOUS MATERIALS		<u> </u>	רוכניםווינאים זאד זרני	
PER	_SHIPPER PER		ALL MENTERP	RISES, LLC CARRIER
GOODS & SERVICES AS NOTED ABOVE RECEIVED IN GOOD OF			1	۰
		<u>لم</u>		

CONSTRACTOR ----

WYOMING BILL-OF-LADIN	
CARLIN ENTERPRISES, LLC P.O. BOX 164 GILLETTE,	<u>WY 82717CARRIER BILL NO. 275507</u>
(NAME OF CARRIER)	SHIPPER NO.
RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.	
SHIPPER Envirotentes for	, DATE /0-2 20
ORIGIN	, COUNTY
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE I THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHI AND HIS ASSIGNS.	PROPERTY) AGREES TO CARRY TO ITS DESTINATION. IT IS MUTUALLY AGREED
CONSIGNED TO:	
DESTINATION:	, COUNTY,
ROUTING:	_, TOTAL MILEAGE:
NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED ROADWAYS	×

NUMBER MILES ON UNIMPROVED ROADWAYS

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NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTERED STATE OR FEDERAL HIGHWAY OR IMPROVED ROADWAY

нм *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT BECOURSE
	Hauling Tops to	le his	76 °	42000	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
	Hauling tops to Tripp Wendbreak	fuel		8400	(SIGNATURE OF CONSIGNOR)
		-			(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE
					RECEIVED \$ TO APPLY ON PRE-PAYMENT
				E TOTAL CE	AGENT OR CARRIER PER
*	MARK WITH X IF HAZARDOUS MATERIALS	· ·	<u>                                      </u>		<u> </u>
	SH	IPPER	CAF	T.TN ENTERPR	ISES, LLC_CARRIER
			$\square$		DILODA
PER		PER		ang	proxi-
GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER	THIS DATE	/	/	······
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CONSIGNEE'S COF

CARLIN ENTERPRISES, LLC	P.O.BOX	164 G	ILLETTE,	WY 82717	CARRIE	R BILL NO	<u>. 31</u>	251	.9
(NAME OF CARRIER)			-		SHIPPE				
RECEIVED, SUBJECT TO THE TERMS		ERSE.	r, 5						
SHIPPER Dawn	otentose.	Jane	, i	. DATE		ే	24	20	07
witte t part									
	lillig	Wy			, COUNTY_	<u>,</u>			
	APPARENT GOOD O	PORATION IN F	OSSESSION OF	KED, CONSIGNED, A	, COUNTY_	HOWN BELOW	WHICH THE	MUTUALL	Y AGREE
ORIGIN THE PROPERTY DESCRIBED BELOW, IN BEING UNDERSTOOD AS MEANING ANT THAT SERVICES PERFORMED HEREUND	APPARENT GOOD O	PORATION IN F	OSSESSION OF	KED, CONSIGNED, A	, COUNTY_	HOWN BELOW	WHICH THE	MUTUALL	Y AGREE
THE PROPERTY DESCRIBED BELOW, IN BEING UNDERSTOOD AS MEANING ANY THAT SERVICES PERFORMED HEREUND AND HIS ASSIGNS.	APPARENT GOOD O	PORATION IN F	OSSESSION OF	KED, CONSIGNED, A	, COUNTY_ ND DESTINED AS I REES TO CARRY NCLUDING THE C	HOWN BELOW	WHICH THE	MUTUALL	Y AGREE

нм *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE
	more tops to tripp windbrack	10 his	70 - Re	700 5	DUIDASS, IF UTILS STIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
	windbrack		fuel	12600	(SIGNATURE OF CONSIGNOR)
			f //		(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE
					RECEIVED \$ TO APPLY ON PRE-PAYMENT
		÷		TOTAL 60	AGENT OR CARRIER PER
*	MARK WITH X IF HAZARDOUS MATERIALS	· .			
	SHI	PPER		MTERPRISES,	LLCCARRIER
PER		PER	her	ry mell	
GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER	THIS DATE			

CONSIGNEE \_\_\_\_

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a state of the second state of a state of the second state of the	<u>64 GILLETTE, NY 82717</u>	CARRIER BILL NO.	275455
NAME OF CARRIER)		SHIPPER NO.	
HIPPER		E 3-24-07	20 :
RIGIN		, COUNTY	
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD OR BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPO THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJEC AND HIS ASSIGNS.	der. Except as noted. Marked, consigned, Dration in possession of the property a of to all conditions not prohibited by Law	AND DESTINED AS SHOWN BELOW, WI GREES TO CARRY TO ITS DESTINATION I, INCLUDING THE CONDITIONS ON BAC	IICH THE CARRIER (CARRIER N. IT IS MUTUALLY AGREED K HEREOF, BY THE SHIPPER
ONSIGNED TO:			
ESTINATION: RANCH ON BOIL R	opol	, COUNTY	
ESTINATION: MARCEN UN LITER A			

HM *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HBS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNER WITHOUT RECOURSE
	HAUL GLOS JUNK TIPES FROM CHUIRO TANKS YARD TO RANCH ON Bell ROAD	10 hrs	70/les	700-00	UTIONS IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES,
			hel	126 -	(SIGNATURE OF CONSIGNOR)
		K			(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREPAID" ABOVE
					RECEIVED \$ TO APPLY ON PRE-PAYMENT
 *	MARK WITH X IF HAZARDOUS MATERIALS	· · · · · · · · · · · · · · · · · · ·		A TOTALOO	AGENT OR CARRIER PER
		PPER	CARLIN	ENTERPRISES	, LLCCARRIER
PER		PER	May U	UNR_	
GOOD	DS & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER 1	THIS DATE	·····	·····	······

CONSIGNEE

CARALERS

WYOMING BILL-OF LAD'NO	& FREIGHT BILL
CARLIN ENTERPRISES, LLC P.O.BOX 164 GILLETTE, WY	82717 CARRIER BILL NO. 312520
(NAME OF CARRIER) RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.	SHIPPER NO.
SHIPPER _ Chinotand Sm	_, DATE 3-26 20 00
ORIGIN Hellette Cerr	, COUNTY
THE PROPERTY DESCRIBED BELOW. IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, C BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE P THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIB AND HIS ASSIGNS.	OPERTY) AGREES TO CARRY TO ITS DESTINATION. IT IS MUTUALLY ACREED
CONSIGNED TO: Ming Wandbrack	
DESTINATION:	, COUNTY,
ROUTING:	, TOTAL MILEAGE:
NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED ROADWAYS	
NUMBER MILES ON UNIMPROVED ROADWAYS	······

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нм *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE
	Have Tops to windback	75 ko	TP=	52500	SUBJECT TO SECTIONS OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOF, THE CON- SIGNOR SHALL SKIN BELOW. THE CARRIER SHALL, NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
		T			(SIGNATURE OF CONSIGNOR)
					(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREFAID" ABOVE
					RECEIVED \$ TO APPLY ON PRE-PAYMENT
			·	TOTAL 50	AGENT OR CARNIER PER
*	MARK WITH X IF HAZARDOUS MATERIALS	·			<u></u>
	SHI	PPER		<u>ENTERPRISES</u>	·····
PER		PER	y	berry Vi	
GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER 1	THIS DATE			44

CONSIGNEE \_\_\_\_\_

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#### WYOMING BILL-Or ADING & FREIGHT BILL TTTCAPPIED BILL NO 312417

	<u>NY 8271</u> 7	CARHIER BILL NO. 🔍 🚣	tere i sta
(NAME OF CARRIER)		SHIPPER NO.	
RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.			·····
SHIPPER Envirotente Inc	_, DATE	7-13	20
ORIGIN	, C(	DUNTY	·····
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NOTED, MARKED, CO BEING UNDERSTOOD AS MEANING ANY PERSON OR CORPORATION IN POSSESSION OF THE PRO THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIONS NOT PROHIBITI AND HIS ASSIGNS.	operty) agrees	TO CARRY TO ITS DESTINATION. IT IS	S MUTUALLY AGREED
CONSIGNED TO: Windbreaks			

DESTINATION: \_\_\_\_\_\_, COUNTY \_\_\_\_\_,

ROUTING:\_\_\_\_\_, TOTAL MILEAGE:\_\_\_\_\_

NUMBER MILES ON STATE AND FEDERAL HIGHWAYS OR IMPROVED ROADWAYS

NUMBER MILES ON UNIMPROVED ROADWAYS

NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTERED STATE OR FEDERAL HIGHWAY OR IMPROVED ROADWAY

					10.00.000 mm 111 mm
HM *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	··· CHARGE	SUBJECT TO SECTIONS OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE
	Haul junk tires to Windbreaks M	10 hrs fuel	70 co ikg	70000	DITIONS, IF THIS SHIFMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOF, THE CON- SIGNOR SHALL SICIN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
:					(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREFAID" ABOVE
					RECEIVED S TO A PPLY ON PRE-PAYMENT
				ATOTAL CO	AGENT OR CARFIER PER
*	MARK WITH X IF HAZARDOUS MATERIALS	<u> </u>			<u> </u>
	SHI	PPER	CAE		TSES, LLC CARRIER
PER		PER		Jerry 7	Moll
			i.	1 1	
GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER	THIS DATE	{		,
		CONSIGNEE			

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# WYOMING BILL-OF-LADING & FREIGHT BILL

(NAME OF CARRIER) SHIPPER NO

RECEIVED, SUBJECT TO THE 1	ERMS STATED ON REVERSE.	2	SHIFFEN NO.	
SHIPPER	Siminstack &	Luc, DATE	7-1 county	<u>4</u> 20 <u>07</u>
BEING UNDERSTOOD AS MEA	ELOW, IN APPARENT GOOD ORDER, EXCEPT , NING ANY PERSON OF CORPORATION IN PO HEREUNDER SHALL BE SUBJECT TO ALL CON	SSESSION OF THE PROPERTY AGP	EES TO CARRY TO ITS DESTINATION.	IT IS MUTUALLY AGREED
DESTINATION:	· · · ·		, COUNTY	
ROUTING:		, TOTAL I	MILEAGE:	
NUMBER MILES ON STATE ANI	D FEDERAL HIGHWAYS OR IMPROVED	ROADWAYS		

NUMBER MILES ON UNIMPROVED ROADWAYS\_

NAME OR DESCRIPTION OF POINT WHERE SHIPMENT LEFT OR ENTERED STATE OR FEDERAL HIGHWAY OR IMPROVED ROADWAY

HM *.	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR . HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON- SIONEE WITHOUT SECONDASE
	Junk the to wendbred	4 43ke	- TO "	31500	UITIONS, P. THIS SHIFMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR THE CON- SIGNOR SHALL SIGN BELOW. THE CARHIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
					(IF TO BE PREPAID, WRITE OR STAMP 'TO BE PREPAID' ABOVE
					RECEIVED \$ TO A PLY ON PRE-PAYMENT
				E TOTAL AD	AGENT OR CARRIER PER
*	MARK WITH X IF HAZARDOUS MATERIALS		_		
	SHI	PPER			RISES, LLC_CARRIER
PER		PER	- Gen	y mal (	·
GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER "	THIS DATE		``````	······································
		CONSIGNEE			

CARRIER'S ------

WYO ARLIN ENTERPRISES, LLC P.O.BO	MING BILL-OF-L		
(NAME OF CARRIER) RECEIVED, SUBJECT TO THE TERMS STATED ON	REVERSE.		CARRIER BILL NO. $312349$ SHIPPER NO
ORIGIN THE PROPERTY DESCRIBED BELOW, IN APPARENT G BEING UNDERSTOOD AS MEANING ANY PERSON OF	COD ORDER, EXCEPT AS NOTED, CORPORATION IN POSSESSION	, ( MARKED, CONSIGNED, AND OF THE PROPERTY) AGREI	
			, COUNTY
ROUTING:		, TOTAL M	ILEAGE:
NUMBER MILES ON STATE AND FEDERAL HIGHW	AYS OR IMPROVED ROADW	AYS	
NUMBER MILES ON UNIMPROVED ROADWAYS	·····	· · ·	

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GOOD	S & SERVICES AS NOTED ABOVE RECEIVED IN GOOD ORDER	THIS DATE			
PER		PER		Gerry P.	<u>1 dl</u>
	SH	PPER	CARLIN EN	TERPRISES, LI	
*	MARK WITH X IF HAZARDOUS MATERIALS		<u> </u>	- rad	· · ·
				TOTAL 30	AGENT OR CARINER PER
					RECEIVED \$ TO APPLY ON PRE-PAYMENT
		Ĩ			(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREFAID" ABOVE
	windbreak	fue	þ	132 30	(SIGNATURE OF CONSIGNOR)
	have junto tires to	This	70,00	440-	THE CARRIER SHALL, NOT MAKE DELIVERY WITHOU: PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
*		WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTIONS OF CON- DITIONS IF THIS SIIPMENT IS TO BE DELIVERED TO THE CON- SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR, THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL, NOT MAKE DELIVERY WITHOU' PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
НМ		RATE FACTOR (BBL, GALS,			

	CARRIER BILL NO. 312359
(NAME OF CARRIER) RECEIVED, SUBJECT TO THE TERMS STATED ON REVERSE.	SHIPPER NO.
SHIPPERBalbaun	, DATE/129. 20 0
ORIGIN	, COUNTY
THE PROPERTY DESCRIBED BELOW, IN APPARENT GOOD ORDER, EXCEPT AS NO	OTED, MARKED, CONSIGNED, AND DESTINED AS SHOWN BELOW, WHICH THE CARRIER (CARRIE SSION OF THE PROPERTY) AGREES TO CARRY TO ITS DESTINATION. IT IS MUTUALLY AGREE
THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIO	NS NOT PROHIBITED BY LAW, INCLUDING THE CONDITIONS ON BACK HEREOF, BY THE SHIPPE
THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIO	NS NOT PROHIBITED BY LAW, INCLUDING THE CONDITIONS ON BACK HEREOF, BY THE SHIPPE
THAT SERVICES PERFORMED HEREUNDER SHALL BE SUBJECT TO ALL CONDITIO AND HIS ASSIGNS.	NOT PROHIBITED BY LAW, INCLUDING THE CONDITIONS ON BACK HEREOF, BY THE SHIPPE

нм *	COMMODITY DESCRIPTION	RATE FACTOR (BBL, GALS, WT, MILES OR HRS.)	RATE PER FACTOR	CHARGE	SUBJECT TO SECTION 5 OF CON- DITIONS, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CON-
	6 junk tires (4 blow outs) have tires to aundhesk	4 flies	7000 fuel	28000 78-40	SIGNEE WITHOUT RECOURSE ON THE CONSIGNOR; THE CON- SIGNOR SHALL SIGN BELOW. THE CARRIER SHALL NOT MAKE DELIVERY WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.
					(IF TO BE PREPAID, WRITE OR STAMP "TO BE PREFAID" ABOVE
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GARRIER'S

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ENVIROTANK EXHIBIT #20

Concordia, KS 66001-0445         (785) 243-3345       Fax (785) 243-1551         1,500 225-3345       Www.champlinitizerceycling.com         Bibbi more investigation in the second statement is the second statement in the second statement		CHAMPLIN	N TIRE RECYCLI P.O. Box 445	NG, ÍNĆ.		
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Im Agent must detach and retain this Shipping Order and must sign the Original Bill of Lading.	(REV. 11/04)

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W.W.F., INC.

ET \$1,200.00

### Luis Chavez

From: Sent: To: Subject:

Tim Morales <tmorales@knightflightcargo.com> Tuesday, February 28, 2012 10:28 AM 'Luis Chavez' RE: Rate needed

Luis,

Your rate on this would be \$1450.00.

Thanks

Tim Morales Knight Flight Cargo 19401 E. 23rd Ave. Aurora, CO 80011 Phone 303-495-2440 Fax 303-317-6847 Cell 303-981-3387 tmorales@knightflightcargo.com

From: Luis Chavez [mailto:luis@wwfinc.net] Sent: Tuesday, February 28, 2012 10:54 AM To: Tim Morales Subject: RE: Rate needed

Tim,

Good Day,

Can you please quote this for a legal load as well.

From Gillette Wyoming to Concordia Kansas. Legal stepdeck. 40K weight.

Thanks,

Saludos, Luis Carlos Chavez V.P. International Sales W.W.F. Inc, 145 14<sup>th</sup> Street Fort Lupton Colorado 80621 1-800-340-2737 303-857-2737 303-857-9631 FAX 303-718-1276 CELL

#### Luis Chavez

From: Sent: To: Subject: Tim Morales <tmorales@knightflightcargo.com> Monday, February 27, 2012 4:28 PM 'Luis Chavez' RE: Rate needed

Luis,

Your rate on this would be \$1,750.00 per load.

Thanks

Tim Morales Knight Flight Cargo 19401 E. 23rd Ave. Aurora, CO 80011 Phone 303-495-2440 Fax 303-317-6847 Cell 303-981-3387 tmorales@knightflightcargo.com

From: Luis Chavez [mailto:luis@wwfinc.net] Sent: Monday, February 27, 2012 4:15 PM To: Tim Morales Subject: Rate needed

Hello Tim,

Over Dimensional

Can you quote the following.

From Gillette Wyoming to Concordia Kansas 11 feet 6 inches wide 40,000 lbs Tires

Thanks,

Saludos, Luis Carlos Chavez V.P. International Sales W.W.F. Inc, 145 14<sup>th</sup> Street Fort Lupton Colorado 80621 1-800-340-2737 303-857-2737 303-857-9631 FAX 303-718-1276 CELL luis@wwfinc.net

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ENVIROTANK EXHIBIT #21

February 20, 2009

Brian S. Morgan 227 Bell Road Gillette, Wy 82718

Dear Ms. Jacobsen:

I am writing concerning the Lange trust lease land which Sandy Lange is the head of the lease. There are a few things I need to discuss.

The first is that I want to let Sandy know that during the hunting season of 2008 I did not have the guide, Tom Moore hunt on the lease land, because he did not obtain a Wyoming Outfitter's license, and if he were on the land guiding people we and the landowner could also be in trouble. I gave him Sandy's phone nunber so he could ask her permission, but I did not feel I wanted either of us to be liable.

The next issue is that I need to know where to send my lease payment, if Sandy would like it sent directly to her, or if it needs to go to your office. I also need to know the amount of the electric bill for the lease land, so I can send that amount also.

Concerning the tire windbreaks, I have spoken to Mr. Weatherwax. He stated that he would not remove all the tires and that DEQ told him what he needed to do to fix the problem in order to satisfy them. My intention is not to choose sides, but my hope is for both parties to be satisfied, The tires were placed on the property per Sandra Lange's wishes. I am not sure what to do,I have tried to assist in negotiations between the two parties. Mr. Weatherwax has stated that he will not remove the tires and your office has stated they all need removed. It was Sandy Lange's wish for the windbreaks to be put in place, we spoke on the phone, and she viewed the tire windbreaks on Tripp Brothers Ranch. It was discussed with her and she said she wanted it, before each windbreak. Before the last windbreak, which was not completed because of the death of an Envirotank worker and other difficulties, Sandy stated that it would be the last windbreak and it was the last windbreak. The only reason I mention this is that I feel this needs to be taken into account when trying to resolve the situation. Mr. Weatherwax seems to be willing to compromise and accomodate Sandy's wishes, but not to remove all the tires. I feel very stuck in the middle in this situation. I hope the situation can be resolved soon. I do appreciate Sandy giving Mr. Weatherwax time to get things decided as to what he needed to do to satisfy the DEQ. I would like to see things resolved, whether it involves a court decision or Mr. Weatherwax and Sandy simply talking to one another. I obviously do not know what is necessary, but would like to see the matter resolved and for Sandy to feel comfortable speaking directly to me once again.

I would appreciate it if you would let me know about the lease payment and electrical bill as soon as possible. Thank you.

Sincerely,

Bui & Mora

Brian Morgan

ENVIROTANK EXHIBIT #22

If you are idle, be not solitary; if you are solitary, be not idle. ---Samuel Johnson

Friday

March 2011 **Daily Notes** With Day 295 Left Week 10 ( .... S. [ <u>6266</u>, (°c . 3 5 3 -) J <.2\_ 14 ۵\_\_ 2 00 1 2009-~ 53 <u>ث</u> 5 a. 3.3 2 **63** Ð 3.50 -15. ~} e . ... 9 ے۔ 5 e va c . .0  $\mathcal{O}$ ÷ ప 3-3-5 Э × . ్రు ¢. のうしょう -govers) , L. . . с» Ē 10 . 1 0... ( ) 4, 54 \_ S. Car 300 Q. Č ------<u>}</u>~ (=:: ė s. الم 3 <u>\_\_\_\_</u> 1, 5, Section 2 -أقحمه © FranklinCovey Products, LLC + franklinplanner.com + Original-Classic

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ENVIROTANK EXHIBIT #23

Ť 9-11-04 Sandy, Hi! We are sorry it has taken so long to get this bill to you. We were on vacation in August and out of town a lot. Payment for the windmill needs to be sent to Butch Reynolds, 77 Jacobs Road, Gillette, Wy 82718. The bill is \$700. He may want \$1000, he stated that he could sell it to some one else for \$ 1000, but if he wants more than the \$ 700 we will pay the rest. Jeff put 2 loads of trash in your dump. IF you don't want him to do this in lat him Knn. Brian will let him Know not to put anymore trash ih it. Thanks. Brian + Dawn

DEPOSITION EXHIBIT Sandy Large Place

574 287 used steel posts at # 2 per post 1,530 450 new steel posts at \$ 3.40 per post 287.10 Line posts lib '-#4.35 each 822.50 Barb. wire 172 rolls \$47/roll \$40 30 Staples = box #40 100 Clips - 2000 - \*50 for a bage-used bags 69 Smooth wire 12 rolls #40 per roll 1412.60 (Come 100000 000-Dike on the desert had 1\_line\_post\_ Fence on the desert had 31 line posts Dike on the east end had South end had 29 line posts Windmill and Tower \$700 227 Bell Rd

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bencing Materials for 4' 2- 2005 Sullivan, Broyle and Lange 287 Used steel posts at #2 per post 450 new steel posts at #3,40 per post =# 66 treated line # 574 -<sup>\$</sup>1,530 Dosts at \$4.35 each = \$ 287,10 172 polls barb wire at 44 per roll 7 box staples (\*40perbox) \$ 822.50 = \$ 30.00 Clip-2000 12 rolls smooth wire 100.00 Б TS . 69.00 \$ 3,412,60

ATT STAT 102 411 061360 Sandy, OMERS The total left on the 1:4:0) D # 4, 798,44 Xpense nd an itemized the amount We SMAN D MDSE wet RECEIVED ON ACCOUNT 1 the lean: Use to c // PRICE the time lore rased NAO a N k Call 699 9.45 ()a nn no Thanks, Brian Ç,  $\mathbf{f}$ ALL Claims and Refurned Goods MUST Be Accompanied By This Bill SIGNATURE

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102 feet of 17 inch galvanized pipe, comes       35 28         0ff the well head and over to the tank       (*3.36 per foot)         74 foot of axi0 plank, treated       136 00         1- hose fitting and cap       346         Reducer 17 inch to 7 inch       325         4 hose clamps       400         9 proce for the to 7 inch       325         9 proce for the to 7 inch       325         9 hose clamps       400         9 hose clamps       831         1 hose for the wire to op through up       831	wire to go through the pipe to the fuse	XOX		
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pipe for the wire to go through up			04	
a na ana ang ang ang ang ang ang ang ang	pipe for the wire to go through u	P		

• 061364

To Sullivan, Brovle, and DATE ease **CUSTOMER'S** Materials Billing for 20 ORDER NO. <u>Adrees</u> ment SHIP City Shin Tor VIA SALESMAN CASH CHARGE C. O. D. PAD CUT RECEIVED ON ACCOUNT STATISTICS AND QUANTITY DESCRIPTION PRICE AMOUNT First well continued Solicina tape 5 20 Kote. 8 ເລ Connectors (10 at \$1.56 each 1\_1 at 1.36 rach 32 onnectors 17 no hod 30+\$2 mennxi Pach 3 oders 2 201 70 ry inch 20 90 10  $\mathbf{C}$ CALLOR WIRE 126 00 ot witharound 0. Yente an 205 nr15 oolinn 97ed nch 50 40 pp D the 15 pi nk 20 6 3.36 DPr not +00+ inch advanized nice ODES LUD acound to the box, for the  $\pm n$ roua wire to \*3.36 per foot hrough 26 0  $\infty$ no 119 Pach nch Par TON jL 29 ά inch cooper filling to go on 8 thread P ne threads onto the of wellhead Mut 26 each Dolu Dipe. nne i a . 4

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Sullivan, Broyle, and Lange Lease Barreners			
"Materials Billing for 2008 payment ORDER NO.			
Dage 3 VIA			
SALESMAN			
SH CHARGE C. O. D. PAID OUT RETURNED ADSE	RECE	IVED ON AC	COUNT
DESCRIPTION			
Second well continued:	PRICE	Affi	OUNT
4 Inch PVC 90	0	31	+
4 inch RVC collar	1 2	75	+
4 hose clamos (\$leach)		00	1
One hose fifting and cap	12	46	
First windmill:		- <del></del>	
windmill brake handle, cable and clamps	45	90	1
Rods	63	00	T
240 feet of 14 inch galvanized Dipe (*3.36 per foot)	806	40	
One = 14 inch T	4	59	
Dre - 14 inch street L	4	12	
Pipeclamp holder built to hold pipe as a	42	71	
safety, made at Pacific Steel	ne na parte da se Parte (n. 1997)		
Total	2651	<u>22</u>	
Second windmill - everything we had listed under			
the second windmill is already paid for.			
& There are other 'extras' things we used buff			
didn't Charge for that were written on			1
the original sheets, just wrote down what we were charging for on these. Thanks		<u></u>	
we were charging for on these. Thanks	l		-
			1. 1987
	· · ·		

Acterials Billing for 2010 7 lease SHIP			
3-27-07 VIA			
CHARGE C. O. D. PAID OUT PETIENED MIDSE			
CHARGE C. O. D. PAID OUT RETURNED MDSE.	RECE	IVED ON ACCO	JUNT
DESCRIPTION	PRICE	AMO	
inderground wire from the power		\$2616	17
with a around, 4 jourse (4,3100 for	.\		
Gran a grant grage happing			
From the box, down the hole, to the		\$407	75
sump, 175 feet of 8 gauge, 3 wire			
with a ground (2.3=1 per font)		And a second sec	
Total	<u>. 276 î</u> 1897 - 1	3023	92
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Sandy, On the billing we charged sheet, but we did not charge for the full amount of the heavy wire, of that and will do the rest another year. Thenks Brian

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City			State		SHIP		n di tan Tatun Angang	
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ĊĂ	я (	CHARGE	C. O. D.	PAID OUT	RETURNED MDSE.	RECE	IVED ON AC	ccc
QUANTITY			DESCRIPTI					
		nt for				PRICE		NON
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	ton to		esprvoir A3			V-10	100	<u>.</u>
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		ich. PVC				R	31	
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		<u>b gauge</u> in PVC	<u> </u>	en de la construcción de la constru La construcción de la construcción d			200	+
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	<u>Ц</u> ,	non PVC	415			8	2.1	I
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A.).

Sandy, I understand that you would pay for the cement, underground wire and stuff for the tire tanks. IF, I mis understood let me Know, or if, it is too much to take off this year let me know. I also made out an itemized listing of everything it took to do the wells, which includes the cement and wire. I will talk to you about that the later, do not let it worry you. They were supposed to send us a bill in your name for the electricity, but if you get the bill please send it to us so we can pay it. The amount that is over the lease amount can be taken off next year's lease, Thanks Brian

We appreciate the lease and don't want to take <u>advantage of your but</u> we wrote out our casts so you would Know the costs. We didn't include any labor, fuel, or backhoe use. Thanks

<u>Sul≬i</u> ≫ss						
ſo	StateVIASALESMAN					
CASH	CHARGE C. O. D. PAID OUT RETURNED MDD			IVED ON AC		
m	DESCRIPTION		PRICE	AN	MC	
· · · · · · · · · · · · · · · · · · ·	ment for 4 water lanks 70 feet of wire from the well to the br		1227			
- I - 1	To feet of while from the well to the br. but at the well 3 while with around.	<u>1 K. (7</u>	13515	1 <u>.10</u>	د در منبعتر	
	+ gauge (+4.31 per foot)	ni diyada ang Kang di			<u></u>	
17	2 feet of PVC drain bipe from the tank		172	82	<u></u>	
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	the reservoir (+3.31 per toot) thinch PVC (Clar	P		15.		
1	I Inch AVIC GO		1		-	
	211 Soot of U and All Incin all all	$\frac{1}{1}$	1707	(1:1	<u></u>	
<u>, , , , , , , , , , , , , , , , , , , </u>	24 feet of 4 inch PVC drain pipe (3.3/		1i02		8, 5 8, 7 8, 7 8, 7 8, 7 8, 7 8, 7 8, 7 8, 7	
$\vec{D}$	Contract of 6 Gauge, Buire with ground	14 8 19 1	011	<u>vu</u>		
	rom tuse box to polerer post (use A price	<u>Inc</u>	Television Spillaroofie	तुर्दे सिंह सिंहा होने के	<u>.</u>	
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-pr	icins on the lagouged		Carlo Carl	-		
2	7. In the pole of the second	<u>.</u>		5	<u></u>	
7 7	The PVC COllar 17 feet of 4 inch PVC drain Dipe (*3:31 per k	$\frac{1}{2}$	155	ET.	50 	
	The DIC ON THE OTHER CONTRACT	<u> NJ</u>	190	ží-		
<u> </u>	Lind AVC Collar	<u>. 6.63</u> 3363-346		75		
	Jinch PVC collar Difeet 4 inch PVC pipe		33	10		
+	Jeet 4 Inch WC pipe		1 705 1	31	د رو سنب	
-   · · ·	4 inch PVC collar		3	75	-97 	
	The <b>United States of Control of </b>			Martin Street Street	-	
	Total	ø	5634	37	 	
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Femized ð 061351 Lange lease DATE 2005/2006 Brovle and Lange Sullivan, GUSTOMER'S OPDEP NO Address Electric Cify\_ Well SHIP State Sta First 12/01 ing On Ship To NOTH SILL VIA OT. which is have the white House was 1 tige SALESMAN CHARGE C. O. D. PAID OUT RECEIVED ON ACCOUNT RETURNED MOSE QUANTITY DESCRIPTION PRICE AMOUNT WIR from the well to the 3318 Set O+ 70 Nerker. Onx. the well - 3 wire with a G + ( \$ 4.31 per foot -4 gauge around wire 175 rom the 40 FODT pump box down the 75 8 Gauge, Fuile the plemo to Buire with (FJ 33Der toot a oround horse Dumo with Franklin motor and 603 71 Frank the plimp box 26 Fuse box 00 55 Foel that went down black Doly DIDE SP, 90 the hole 28  $\infty$ inch ball valve Two trinch street \$4.12 each 24 Ł Tho-lainch collars (\$2.82 each thick copper titting 5-6-6 INO- IT Threaded by that goes on poly Dipe and threads into 0 the sumn. one threads on to the top well head 44.36x or the 39 すっこれ 4 Dere bix teet of 14 Inch galvanized Dibe for the 70 16 4.1  $\sim 20$ will to go through the pipe to the fuse buy 16.2 DEF (\$ 1.2.5. of 14 inch galvanized pipe comes off 35 213 4884 tost well head and over to the tank 13.3600 tine ALL Claims and Returned Goods MUST Be Accompanied By This Bill

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La <u>uttiver</u> , Brute and Lange Leuse Bares	06 no. 10 <u>x05 / 2</u>	1352 2004	
yStateSHIP			
IDETO FIEST LIVELL, Mage 2 (Electric Well) VIA	20 1 - Sayli Sayli - Sayli Sayli - Sayli - Say		
SALESMAN			
CASH CHARGE C. O. D. PAID OUT RETURNED MDSE		VED ON ACCO	JUNT
JANTITY DESCRIPTION	PRICE	ANRO	UNT
- 74 tost of 2×10 plank, treated,	136	20	
- 22 foot of PVC drain pipe from the tan	ik 72	28	
to the reservoir (3:BI per foot)			
One hose fitting and cap	3	40	
Reducer - 14 inch to & inch	3	25	
BFOLIC HOSE Clamps (Pleach)	L.	$(\mathcal{X})$	
Pré collar - 4 inch	ठ	75	
<u>Yinch WC 90</u>	8	31	
- Printike mittige pipe put over it		÷ ÷	
the pipe coming out so it wouldn't			
get d'amaged - oriven to us free - 15 fer			
	4.1 C		
Two - 7 footers of 19 Inch galvanited	147	O4	
pipe for the cuire to go through up			
to the box, so it won't get domaged	ana 2008/11/2018/11 Nya Westana Kana 11/2008		
(*3.36 per foot)	in in		
<u>Splicing tape</u>		<u>20</u> 12	
Connectures (10 at \$1.56 Pach)	18	1	
(12 at 2.36 coch)	201	<u>52</u>	
HIME-BOX	40	C. S.	
truppers for time box 2 an Zill rain	Ű	Jul .	૾ૼૼૼ
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Plactic weils, Used 12 Ft. posts from Brians brother and troubed him a size down the ALL Claims and Returned Goods MUST Be Accompanied By This Bill	4 c 8 f.f.	POS/3	
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ASH CHARGE C. O. D. PAID OUT RETURNED ADSE	RECEN	ED ON ACCOU
DESCRIPTION	PRICE	AMOUN
	8	
<u>Hinch PVC collar</u>	10	
Four hose clamps ("1 each)		
One has fifting and cap	 	46
Z norse plimp with Franklin motor	<u>. (</u> GUD)	
<u>ord Hanklin Eek</u>		
Commented in tire tank and made cage		
around electric wells, used 10 fact Dosin from		
indication and the start posts		
that were down there for them because we		
meeted longer post so they would be in the		
ground deep enough for the country tear		
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ship to wirely in First				
CASH CHARGE C. O. D. PAID OUT RETURNED MDSE	RECE	IVED ON ACC	201	
QUANTITY	PRICE		- Nii	
- 47 foot of 4 inch PVC drain Dipe Billiprin		-57	T	
Windmill brake handle	132	90	+	
Cable and clamps	12		+	
Pumprods, leathers and pump	1.1:5	00	+	
- CARRY IL WITTET CITU FORMA	$\left  \begin{array}{c} 0 \\ 0 \end{array} \right  $		+	
240 feet of 14 inch golvanized pipe	806	40		
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Cine 14 street L 0	1 21	1 · · · ·	+	
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necessary, but made it easier for us to			t	
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Collars - (1) at 2.89 each - Juri made it			t	
EOSIER to pull the well.		n <u>en en u>	t	
Pipe annie holder built to hold pipe as	42	71	t	
a solety made at Pacific			T	
4 web PVC Coller	3	729	T	
- 4 meh AVC 90	E S			
15 feet of B inch black weithing pipe put		- Contraction	ſ	
over the two pipe comins out soit			0	
won't get domaged - given is us tree				
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the chargene the oil and working in the motor		$\frac{\partial}{\partial t} = \frac{\partial}{\partial t} + \frac{\partial}{\partial t} = 0$	1	
Built the alattore the windmill tower is			L	
Sitting on and clemented it in			<u> </u>	
Insuicied the way of the pipe coming up soil won't fre	P.C.	4	-	
ALL Claims and Returned Goods MUST Be Accompanied By This Bill			L	

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