

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Permitting and Compliance Division
Waste and Underground Tank Management Bureau
Solid Waste Section

**Response to Public Comments Received for the
Proposed Adkins Class III Tire Monofill**

May 4, 2012

Mr. Michael D. and Mrs. Magdalen M. Adkins (applicants) submitted an application to the Montana Department of Environmental Quality (Department) Solid Waste Program (SWP) for the licensure of a new Class III Waste Tire Monofill. The applicants propose to license an 11.7-acre parcel that is located approximately 1.75 miles north of Pray, in the N ½ of the NE ¼ of Section 18, T5S, R9E, Park County, Montana. At the present time, the site contains a pit that was once a gravel mine. The applicants propose to expand the pit and use it for the disposal of waste tires. All waste disposal will occur in the pit. The proposed monofill will be developed in two phases and will have a total waste disposal capacity of 700,000 cubic yards (280,000 tons), with an operating life of approximately 20 years.

The Department published an Environmental Assessment (EA) of the proposal on January 31, 2012, and initiated a 30-day public comment period. The public meeting was facilitated by the Department's Solid Waste Program held in the Emigrant Community Center on February 15, 2012, and was attended by 137 people. During the meeting, the Department provided information about the application, the Solid Waste Program's licensing process, and answered questions about the proposal. Additionally, the applicants and their consultant provided information on the details in the application, including the design and operation of the proposed facility.

At the request of members of the community, the Department extended the public comment period an additional 15-days. The Department received approximately 230 written comments on the proposed monofill during the public comment period. The comments received that are outside the context of the regulatory purview of the Department's Solid Waste Program are not addressed in this response. The comments with similar content that are within the context of the proposed action have been combined for the purpose of providing an inclusive response to comparable issues. The response is provided in the context of the proposed license action - that is, whether or not the proposal meets the requirements of the Solid Waste Management laws and rules. If the proposal meets the minimum requirements of the laws and rules, the license must be approved by the Solid Waste Program. However, the Department may require additional license conditions to protect human health and the environment. To that end, the Department's responses to the comments received during the public comment period are organized as follows:

- Site Selection, Zoning and Land Use, Property Values
- Tire Fire Concerns
- Traffic Concerns
- Vectors
- Water Quality
- Financial Assurance
- Miscellaneous
- Conclusions and Recommendations

Site Location, Zoning and Land Use, Property Values

Comment:

The proposed site should not be located in the Paradise Valley. The Paradise Valley is a beautiful and pristine environment that serves as a gateway to Yellowstone National Park.

Response:

Comment noted. In regards to the location of the proposed facility in the Paradise Valley, site selection is the responsibility of the applicant, not of the Department. The Department is keenly aware of the sensitivity of local residents and has heard similar concerns in the past regarding siting of other solid waste management facilities. However, the Department does not get involved with site selection at the local level, nor does it have any administrative authority, or a direct role, in the issues of zoning. Further, the Department is not involved in landfill siting decisions other than to determine if the facility, at the chosen location, could be operated in compliance with the laws and rules. The Department's evaluation of the site location is limited to an evaluation of how site characteristics affect the potential for the migration of contaminants. In the case of the proposed landfill site, given that waste tires are currently regulated as an inert Group III waste, the Department determined that the site selected remains protective of human health and the environment with the proposed design and operational controls.

An individual or business proposing to operate a solid waste management system in the state may locate such a system where he or she chooses as long as current Federal, State and Local laws, rules, and ordinances do not prohibit such activity. Local City and County planning and zoning matters are local government issues. In this case, the Park County Community Development Department is the approving authority. At the time of the application, there were no zoning restrictions or ordinances in place to restrict or prohibit the use of the applicant's private property for the proposed activity. The Park County Community Development Department provided written confirmation of the lack of zoning restrictions for the proposed site use and signed off on the submitted application form.

Finally, although Yellowstone National Park (YNP) can be accessed through the Paradise Valley, the proposed site is located about 40 miles north of the entrance to YNP at Gardiner. There are currently no Federal, State, or County zoning ordinances, laws, rules, or restrictions that prohibit the use of the applicant's private property in the Paradise Valley for the proposed tire monofill site. In addition, there are no Federal, State, or County special area designations that protect the view shed in the Paradise Valley. Of the four currently licensed waste tire monofills, three are located in what is considered to be another scenic area in Montana and the gateway to Glacier National Park, the Flathead Valley. These sites have been operated for as many as 30 years with few, if any, violations and virtually no complaints from surrounding neighbors, local officials or other community members.

Comment:

The site is located in a residential area and would be better located in an industrial area with similar industrial uses.

Response:

Comment noted. The proposed facility is located in an area that is not currently zoned. With no land use zoning currently in place for this area, there is no delineation of specific areas for residential, commercial, agricultural, and industrial use. Until specific zoning ordinances or rules are passed by Park County, land use is not restricted to a specific use in the area of the proposed facility. As a result, any proposed commercial, agricultural, or industrial activity that a landowner wishes to conduct, that is not explicitly prohibited by law, rule, or ordinance, is possible.

Comment:

The monofill should not be located near a residential area and will negatively impact property values.

Response:

Comment noted. The Administrative Rules do not establish setback criteria from homes. Site selection for solid waste management facilities is a function of the applicant and the local government jurisdiction in which the proposed facility is located. Unless otherwise prohibited by the local zoning ordinances, the proposed land use as a solid waste management facility is permissible if the site meets the minimum requirements of the solid waste management regulations.

Regarding the decline in property values, the Department is not aware of any studies that conclusively show that landfills of any kind have a negative impact on property values. The establishment of property values is a complex process that involves more than just aesthetics. Recent experience in Montana has shown that as new industrial sites, including landfills, are developed outside major population centers, residential development follows as roads are developed in the area to support the new industry. At the present time, several of the largest licensed landfills in the state neighbor residential subdivisions that were developed after the landfill was constructed. Those locations are the City of Bozeman landfill, the Flathead County landfill in Kalispell, the Lewis & Clark County landfill in Helena, the Butte-Silver Bow County landfill, and the Lake County landfill in Polson.

Tire Fire Concerns

Comment:

A tire fire at the facility is a possibility and could ignite as the result of vandalism, embers from a forest fire or grass fire, lightning strike, careless operations, or equipment malfunctions.

Response:

Comment noted. Although a tire fire at regulated facilities in Montana is rare (two in the past 20 years), they are a legitimate concern because a tire fire is hard to extinguish, expensive to clean up, and can be a threat to human health and the environment. The Department recognizes the risks to human health and the environment as a result of a tire fire. However, tires are difficult to ignite and are not prone to self-ignition. Because a tire must be heated to over 700°F for several minutes before ignition, tire fires are normally the result of a focused ignition source on exposed tires.

Fire prevention is critical to minimize the risk of fire, and is the goal of any licensed operation. Operational controls will be required to eliminate contact with ignition sources at the active working face. The site owner/operator will be required to provide necessary on-site resources that include a fire suppression system as well as adequate fill dirt and other appropriate materials. Furthermore, additional operational controls will be implemented to reduce the number of tires involved and minimize the overall impact of a fire, should one occur.

The best option for extinguishing a tire fire is to smother them with soil. The application of water or foam is best used to keep the adjacent unburned tires from igniting. Removing unburned exposed tires from the pile will also lessen the fuel load. Recognizing that fires of any kind are not 100% avoidable, but are preventable, controls will be implemented to reduce the potential for ignition and minimize the impact if a fire was ignited. The requirements will include:

- The installation of a perimeter fence and locking gates to protect access points;
- The maintenance of a soil stockpile near the working face to be used for fire suppression in the event of a tire fire;
- The installation of a fire suppression system inside the tire processing building;
- Access to fire suppression equipment within the pit during pit operations;
- Minimize the size of the working face;
- Application of at least 6-inches of soil cover to exposed waste tires at regularly established intervals;

- No open-burning or open-flames within 1000-feet of the tire pile, no welding or other heat-generating devices within 200-feet of the pile. Smoking in designated areas only;
- Lightning rods conforming to local and state codes should be placed on the facility, but away from the tire pile;
- Removal of all vegetation within 200 feet of the outside perimeter of the pile. All exposures, including buildings, vehicles, or flammable materials will be at least 200-feet away; and,
- Piles will not be located near or below power lines.

Comment:

If a tire fire occurs at the facility, groundwater quality could be negatively impacted.

Response:

Comment noted. The Department recognizes the potential impact to groundwater quality in the event of a fire at any solid waste landfill facility. This is one of the reasons that fire prevention is critical at this, as well as at any other solid waste management facility. In addition to the operational controls noted above, the facility will also be required to maintain a site specific emergency response plan that includes specific steps the facility will follow in the event of a fire. Adherence to the emergency response plan will minimize the impact of a tire fire by taking measures to actively contain a fire, should one occur, and minimize the exposure of any unimpacted tires, thereby reducing the threat to groundwater.

Comment:

The local fire district had not been notified of the proposal and is ill equipped to respond in the event of a fire at the facility.

Response:

Comment noted. All solid waste landfills are required to implement operating controls to reduce the potential for fires. As provided in the previous response, the facility is required to maintain a site specific emergency response plan that includes steps the facility will follow in the event of a fire. These plans often include the notification of local emergency personnel to provide assistance, if needed. However, the Department has no authority to require local emergency agencies provide emergency assistance during such events. In addition to the fire prevention and suppression contingencies outlined above, the applicant is required to provide financial assurance for the clean-up and remediation of the site in the event a fire occurs.

Traffic Concerns

Comment:

Trucks will be accessing the site at the same time the school bus will be picking up and dropping off local school children.

Response:

Comment noted. To ensure facility operations do not impact current bus schedules, the Department will limit facility operational hours for the receipt of trucks to ensure they do not coincide with the school bus schedule during the school year.

Comment:

Trucks will be using roads that are incapable of supporting the additional 10-20 trucks per day transporting waste tires to the facility.

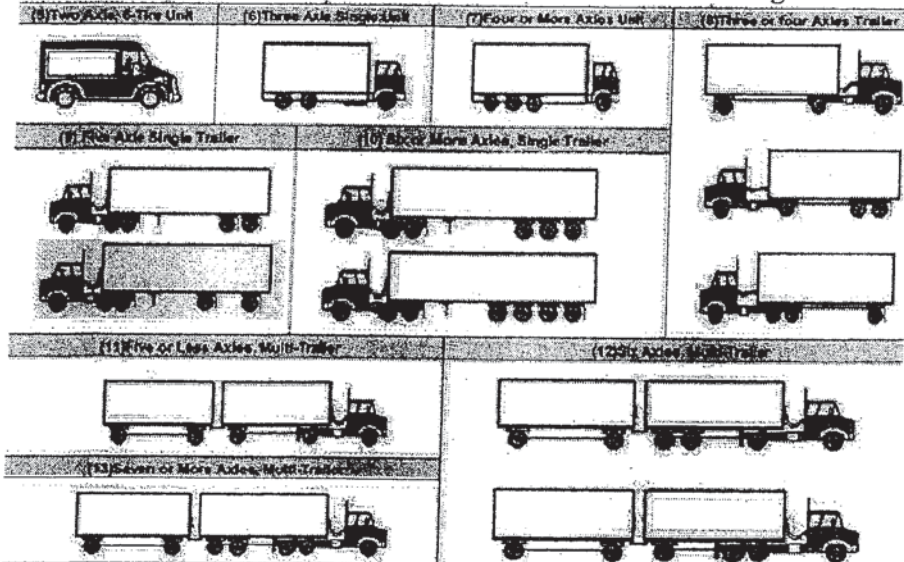
Response:

Comment noted. Trucks will be routed to the site south of Livingston on Highway 89 to Mill Creek Road; from Mill Creek Road to Highway S-540 (East River Road); and from Highway S-540 to Chicory Road. The entrance to the proposed site from Chicory Road is approximately 1,000-ft from the Chicory Road-East River Road intersection. The Department is keenly aware of the potential traffic impacts and has consulted with the Montana Department of Transportation (MDT) regarding the use of Mill Creek Road and Highway S-540.

The applicant proposes to accept a maximum of 5,000 tires per day at the facility. Based upon the Department's calculations and experience with the other licensed tire monofills in the State, these 5,000 tires could be transported to the site in as many as five semi-trucks with 26-ft trailers or three semi-trucks with 53-ft trailers. Considering the demographics of the proposed site and knowledge of waste tire management, the SWP is skeptical of the 5,000 tires per day projected volume. The largest currently licensed tire monofill in the state accepts an average of 2,500 tires per day. This facility imports waste tires from outside the state of Montana to supplement those available in-state for disposal. The remaining three tire monofills accept an average of anywhere from 200 to 600 tires per day. Based upon the Department's experience with the other licensed tire monofills in the state, it is unlikely the facility will receive 5,000 tires per day.

The MDT's study data for East River Road, conducted in 2008, records an actual average annual daily traffic (AADT) flow of 600 vehicles per day. A traffic study conducted in 2010 provides an estimated AADT of 590 vehicles per day. According to MDT, commercial vehicles (types 5-13) accounted for approximately 5.1% of the 2010 total; large trucks (types 8-13) accounted for approximately 2.2% of the total traffic in 2010 (Figure 1 shows the Federal Highway Administrations vehicle classification schemes). The addition of three to five semi-trucks per day would have a minor impact on the overall traffic count. Further, MDT has indicated that they do not foresee adverse impacts along Highway S-540 from Mill Creek Road to Chicory Road as a result of the additional truck traffic. Trucks carrying waste tires to the proposed site will use less than a mile of Highway S-540, including the Mill Creek Bridge. According to MDT, both Highway S-540 and the Mill Creek Bridge are capable of supporting the large trucks. A loaded semi-truck carrying waste tires can weigh approximately 34,000 to 38,000 pounds. A loaded semi-truck carrying 36 to 40 slaughter cows or a semi-truck loaded with hay can weigh anywhere from 36,000 to 40,000 pounds. The Mill Creek Bridge has an inventory rating (capacity rating for an indefinite period) of 38 tons and an operating rating (maximum weight to which the bridge can be subjected) of 68 tons. The semi-trucks loaded with waste tires fall well below the operating rating of the bridge. In addition, although the bridge has a narrower deck than Highway S-540, the bridge is still 20-ft wide and capable of conveying two vehicles simultaneously. Lastly, MDT evaluated the intersection of Chicory Road and Highway S-540 and determined there is no accident trend at this intersection, and as long as truck traffic access to Chicory Road is from the north only, and egress onto Highway S-540 is also to the north, no further evaluation was necessary.

Figure 1 – Federal Highway Administration Vehicle Classes 5 through 13



Comment:

Chicory Road is a County road that is covered in asphalt millings. The road will not support the additional truck traffic and will require maintenance at more frequent intervals.

Response:

Comment noted. The trucks will travel on approximately 1,000-feet of Chicory Road. The scope of the Department's EA was to determine whether or not the roads were capable of supporting the projected loads, not the potential increase in road maintenance requirements. Chicory Road is not a dirt road, but is a road covered and packed with asphalt millings. The proposed monofill site is currently used by the applicant for his heavy equipment, earthwork construction business. As a result, the applicant has utilized, and continues to utilize the road, on a daily basis, for the transport of heavy equipment to and from his job sites. The location was operated as a gravel pit and crushing operation from 1948 through 1965. Sporadic gravel operations have been conducted since then, and most recent operations, involving the removal of large cobbles and boulders for construction and landscaping occurred as recently as 2010. As noted above, the acceptance of the maximum projected number of tires per day would result in an additional 3-5 semi truckloads per day. While the truck traffic may impact the asphalt milled surface of the road, the road surface remains capable of supporting loaded semi-trailers.

Water Quality Concerns

Comment:

The waste tires disposed at the site will leach contaminants into the groundwater.

Response:

Comment noted. Waste tires are currently regulated in Montana as a Group III solid waste. Group III wastes are inert wastes. Tires are not putrescible and do not decompose like other putrescible solid wastes. Waste tires are generated because tires either fail or simply wear out from use. Waste tires disposed of at the site in their current state will not leach contaminants into the groundwater.

Comment:

Surface water resources will be negatively impacted by runoff from the tire landfill.

Response:

Comment noted. The site is located on Quaternary-age alluvium associated with the Yellowstone River. The alluvium at the facility is characterized by sand and gravel with frequent cobbles and some small boulders. The natural soils at the site consist of loams and sandy loams. Soil characteristics trend toward deep and well-drained with low available water capacity. Best Management Practices (BMPs) that include the construction of storm water control berms along with the establishment and maintenance of vegetation on the berms will be implemented as necessary. The storm water control berm will be constructed prior to the commencement of landfilling operations to control run-on into the pit. The berm will be maintained until the pit reaches grade and the landfill is capped. All storm water from the active landfill operation will remain in the active area. Thus, no surface water impacts are anticipated due to the implementation of the BMPs during the proposed operations.

Vectors

Comment:

The tire landfill will cause an increase in the local mosquito and rodent populations.

Response:

Comment noted. All licensed solid waste landfills in Montana are required to use operating controls, including the application of cover and the maintenance of a manageable working face, to control vectors. Class III landfills are required to apply an approved soil cover on a quarterly basis. At Class III landfills, the purpose of cover is to control disease vectors and fires. The Administrative Rules require the application of a minimum of six-inches of soil cover at Class III landfill on at least a quarterly basis. The

applicant has proposed to apply cover over the waste tires every two to three weeks. The application of cover at the proposed frequency is anticipated to curb the number of insects and rodents by removing access to breeding environments. In addition, the applicant proposed to quarter the tires prior to disposal. This will reduce the volume of air space available to rodents and minimize water retention. Any water that collects in a tire or piece of a tire will be removed by the application of the soil cover. As well, several commercial non-toxic insect controls are available. The Department may require the implementation of additional vector control measures in the event that vectors become an issue at the site.

Based upon a review of the 2011 color orthophoto taken of the Paradise Valley area (available online) the proposed site is located within a mile of several other permanent water features – Mill Creek, an irrigation ditch/canal, and numerous stock and/or private ponds. These features provide suitable habitat for mosquito breeding and contain more water than the amount likely found in a quartered waste tire disposed of at the site. A representative of the Montana Mosquito Vector Control Association indicated in a telephone communication to Department personnel that it is better to dispose of tires by landfilling than to treat each individual residence that either has tires or any other water collection feature.

Financial Assurance

Comment:

The facility should be required to put up a bond of several million dollars to ensure that waste tires are managed correctly. The \$1.50 to \$2.00 average cost per tire seems inadequate.

Response:

Comment noted. In accordance with 75-10-216, MCA, waste tire disposal sites are required to provide and maintain Financial Assurance (FA) to cover the cost of proper management of waste tires at the facility. The approved FA must cover the cost of waste tire treatment, removal, transportation, disposal, fire suppression, or other measures necessary to protect the environment and the health, safety, and welfare of the public. The amount of FA required for waste tire monofills is based upon the costs associated with third-party closure of the maximum exposed area. In addition, waste tire disposal sites must provide financial assurance for third-party costs for fire suppression. The requirement to maintain FA remains in effect until the final facility closure is approved by the Department.

Waste tire disposal facilities must comply with the general FA requirements for solid waste landfills by following the Department's guidance to establish (i) adequate standard cost estimates for required activities, (ii) an appropriate financial mechanism based upon the Administrative Rules, and (iii) sufficient funding for the costs as necessary. The Department will review the proposed FA to ensure that adequate funds are immediately available to contract third-party services and equipment as needed to ensure the responsible final management of waste tires at the facility. As usual, cost estimates for the facility must comply with the site-specific license requirements to (a) handle and dispose of the maximum quantity of waste tires that could remain stored on site; (b) install the final cover over the tire pit, re-vegetate, and properly close the facility according to the Closure Plan; and (c) activate and operate all on-site fire prevention and suppression measures without delay.

Draft guidance on the general requirements for waste-tire FA is available in the document "Standards for Solid Waste Financial Assurance" from the Department's Solid Waste Program.

Miscellaneous

Comment:

An EIS, rather than an EA, is needed to address the issues.

Response:

The Department believes that the EA is the appropriate mechanism required to address the environmental issues related to the licensure of the proposed Class III landfill facility. Waste tires are regulated as an inert Group III solid waste under the current solid waste laws and rules. Analysis of the potential impacts associated with the proposed tire monofill only resulted in the identification of minor impacts.

Comment:

In the EA, the site was identified as being located in a sparsely populated area. Local residents took issue with the sparse location description.

Response:

Comment noted.

Comment:

There will be a problem with odors from the tire landfill.

Response:

Comment noted. The Department does not anticipate odors as a result of tire disposal. Putrescible solid wastes decompose, and odors are created during the decomposition process. However, tires are not a putrescible waste and do not decompose like other household wastes. Therefore, objectionable odors are not anticipated.

Comment:

The Department's statement regarding the continued need for tire disposal sites in the state was not substantiated by an economic analysis. In addition, tires are already accepted at the landfill and transfer station in Livingston, so an additional site is not necessary.

Response:

Comment noted. The Department's analysis of costs is associated with the costs involved in the establishment of FA, as discussed earlier. Waste tires are generated on a daily basis in the state. Because the need to manage waste tires remains, the licensure of a new facility to manage waste tires provides another option to businesses and individuals that generate the waste tires. An additional licensed waste tire management system in the state will likely result in lower overall disposal costs for consumers because of increased competition. The Department has no authority to determine the necessity of proposed solid waste management systems in the state, but only to determine whether or not the proposed facility could be operated in compliance with the laws and rules. The applicant's decision to apply for a solid waste management system license is strictly a business decision on his or her part. The Department has no authority to dictate where certain types of solid waste management systems are necessary and should be located.

Comment:

The shredder is not feasible for the applicant.

Response:

Comment noted. The economics associated with the installation of a tire shredder to manage the waste tires is the decision of the applicant, not the Department. If the applicant determines that a tire shredder is feasible, the Department will review the details to ensure its use remains protective of the environment.

Comment:

The area residents are not responsible to monitor the site for compliance.

Response:

Comment noted. The Department inspects each solid waste management facility in the state on at least an annual basis. Because of the inert nature of Group III wastes, Class III landfills are typically inspected once per year. The Department places no expectations on the local residents to ensure that facility operations are conducted in accordance with the laws and rules. However, in most areas in Montana, when members of the community have a concern about operations at licensed facilities, they typically contact the Department to determine whether there is a cause for concern or they file a complaint. Complaints for licensed facilities are followed up by Department staff, not by local residents or by county environmental health authorities. However, local county environmental health authorities do have a right to inspect facilities as a result of a complaint if they are the first to receive such a complaint.

Comment:

The information on depth to groundwater is not correct. The water level in my well is higher than what was reported in the EA.

Response:

Comment noted. The Department consults the Montana Bureau of Mine and Geology (MBMG) database to obtain information on nearby water supply wells. While well drillers are required to submit information on wells that they drill, the Department recognizes that the information submitted is based upon conditions at the time the well was installed. The depths reported in the EA are averages based upon the well information in the MBMG database.

Comment:

Facility operations will generate excess amounts of dust and noise.

Response:

Comment noted. The dust generated from the operation of the proposed facility will be negligible compared to dust generated by the farming and ranching operations in the area. In addition, the applicant will implement dust suppression measures as necessary. Noise related to normal facility operations will occur during normal business hours.

Conclusions and Recommendations

The Department's Solid Waste Program believes it has thoroughly reviewed the permit application and supplemental materials from the applicants. The Solid Waste Program has also reviewed and analyzed all written comments provided during the public comment period, as documented herein. Based on the review of all the materials and comments submitted, the Department believes that a license that meets the requirements of the laws and rules for solid waste management and is protective of human health and the environment can be issued for the Adkins Class III Tire Monofill. The Solid Waste Program will inspect the site to ensure the required set-backs and all systems and funds required for monitoring or corrective action are in place and functional prior to the start-up of facility operations.

The Department will issue the Class III license for the Adkins Class III Tire Monofill based upon the approved Operations and Maintenance Plan with the following additional conditions:

1. The facility will install a 10-ft chain link fence and locking gates to protect access points.
2. Gates will be locked when the facility is closed.
3. The facility will install and maintain 'No Trespassing' signs on the perimeter fence.
4. The facility will establish and maintain clear ingress and egress points for emergency vehicles at all times.
5. The facility will maintain an adequate stockpile of fine-medium textured soil to be used in the event of a tire fire.
6. The facility will install a fire suppression system inside all tire processing buildings.
7. The facility will maintain access to fire suppression equipment (fire extinguishers 2A 10BC-rated or higher) during pit operations.
8. Any area of uncovered waste tires shall not exceed 9,000 square feet within the active disposal unit.
9. The total volume of whole tires in storage on site at any one time will not exceed 250 cubic yards. Whole tires in storage must be fully covered for fire protection or placed in an enclosed structure by the end of every working day.
10. At least 6-inches of soil cover will be applied to exposed waste tires every 3 weeks.
11. No open-burning or open-flames within 1000 feet of the tire pile.
12. No welding or other heat-generating devices within 200-feet of the pile.
13. Smoking is allowed in designated areas only.
14. Lightning rods conforming to local and/or state codes will be placed on the facility, but away from any waste tire pile.
15. Piles will not be located near or below power lines.
16. No receipt of trucks or other vehicles hauling waste tires to the landfill before 8:30 a.m. or after 3:00 p.m. on Monday through Friday during the school year.
17. No equipment operations at the facility before 8:30 a.m. or after 6:00 p.m.