



MONTANA ENVIRONMENTAL INFORMATION CENTER

"Working to Protect and Restore Montana's Natural Environment Since 1973"

September 28, 2006

Greg Hallsten
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

Dear Mr. Hallsten:

Please accept these comments on the Department of Environmental Quality's Draft Environmental Impact Statement for the Holcim (US) Inc., Tire Burning Proposal and its associated human health and ecological risk assessment, solid waste permit and draft air quality permit.

The Montana Environmental Information Center has 4,000 members, many of whom live in the Gallatin Valley. MEIC's mission is to protect and restore Montanan's natural Environment. Montanans Against Toxic Burning is an all-volunteer citizens group, based in the Gallatin Valley, focused on the public health impacts of burning solid or hazardous waste in cement kilns.. The Montana Chapter of the Sierra Club is part of the national Sierra Club, but is led by an executive committee of volunteers who are elected by the 2,500 members of the state of Montana. Our local Headwaters Group has approximately 400 members who reside in the Bozeman, Belgrade, Three Forks area. Nationwide, Sierra Club has about 750,000 members, many of whom are concerned about the quality of our air around our communities and the public lands in the west. Women's Voices for the Earth (WVE) is a women-centered environmental health advocacy organization whose mission is to empower women to create an ecologically sustainable and socially just society. We aim to reduce and where possible eliminate persistent toxic pollution, which disproportionately affects women and children's health.

We are extremely concerned because our members who live downwind of Holcim's Trident cement kiln may be subject to unacceptable levels of toxins from Holcim's burning of tires and lead smelter slag from the ASARCO East Helena Superfund site. We are concerned because the data presented by DEQ has an appalling lack of transparency. DEQ failed to provide the numerical calculations for the risk assessment. It failed to provide the references for the technical analysis report. Critical tables are illegible and one is missing an entire page. There is no discussion of how lead smelter slag was numerically incorporated into the risk analysis. It is impossible to verify how DEQ and Holcim reached their conclusion that burning tires and slag in the Trident cement kiln would be safe.

One of the areas of greatest controversy in Holcim's application was the nature of the statistical analysis conducted to assess risks to human health and the environment. In fact, this concern was expressed by officials within the DEQ and by the toxicologist contracted by the DEQ to review Holcim's initial risk assessment. It appears that these concerns were not heeded. Instead, DEQ is proposing adoption of a deeply flawed analysis that at best neglects to inform the reader of the risk to public health and at worst severely underestimates the risk to public health and the environment.

The inadequacies of the air modeling analysis exacerbate all of the problems above. As with the risk assessment, the analysis is only as valid as the inputs into the model. If these inputs are flawed, the outcome of the model is necessarily flawed as well. Many critical assumptions are either unstated or unjustified, as several experts have stated. But the data that is provided provides no reassurance that the analysis was properly conducted. The very basis for determining the impacts of pollution on human health is dependent on the analysis of how Holcim's plume is dispersed and ultimately deposited in and around the Gallatin Valley. Unfortunately, this analysis is fundamentally flawed.

Baseline Emissions

One of the most fundamental flaws in the Draft Environmental Impact Statement (DEIS) and risk assessment is the failure of Holcim and DEQ to properly analyze baseline emissions. The most appropriate way to determine baseline emissions at Holcim's Trident plant is to conduct test burns using various combinations of permitted feeds and fuels and to incorporate a margin of error. The baseline emissions should be calculated across a range of possible feeds and fuels. Currently, the kiln is combusting a number of different wastes, including glass, slag, pozzolan material, and petroleum coke, in addition to recycling a significant amount of cement kiln dust (CKD) back into the kiln. Yet the DEIS failed to say whether hazardous air emissions from these various waste feeds and fuels were incorporated into the baseline, and if so, how they were numerically factored in. Instead, Holcim projected its baseline emissions through extrapolation of limited data from dissimilar kilns burning unknown types of feeds and fuel.

There are several problems with this approach. First, although Appendix A of the Air Quality Technical Analysis Report (TAR) describes how emissions data were converted based on heat input and actual kiln production and then extrapolated to potential production, no calculations for these complex, multi-step conversions were provided, so the public cannot verify the accuracy of the results. The conversion factors and calculations must be included in this document.

Second, there is no information about what specific types of fuels and feeds these other types of kilns were utilizing during the test burns. For example, Holcim burns subbituminous coal. It is well recognized that lignite and bituminous coals have different compositions of hazardous pollutants like lead, mercury, and chlorine. Clearly coals utilized in Texas, Missouri, Maryland, and California differ in type and composition from coal burned at the Trident plant. Yet no information is available about the coal composition. If any of the other kilns were using natural gas during these test burns, emissions would be dramatically lower than at the Trident kiln, which is permitted to burn up to 100% petroleum coke in addition to coal. Although the Trident kiln is also permitted to burn natural gas, the manager has stated that Holcim now rarely uses natural gas in its fuel mixture, preferring instead to burn up to 80% coke. The burning of such large amounts of coke may change emissions so significantly (particularly emissions of heavy metals, sulfur dioxide, and carcinogenic PAHs) that no other facility is comparable. If the particular fuels and feeds used in the various test burns of other facilities varied significantly from those used at the Trident kiln, then the emissions projected from them certainly would not be a valid estimate.

The TAR says: "Holcim has performed source tests on the Trident stack to measure emissions of 13 HAPs, copper (a non-HAP), and dioxin/furans. Data from Holcim's site specific stack tests has been used to verify the emissions estimates obtained through the database" (TAR, page 8). Holcim must share baseline test protocols and results with the department and with the public.

Holcim and the Department are clearly relying upon Holcim's unconfirmed baseline data to verify the unsupported conclusions in the DEIS and risk assessment. Critical data of this nature should be available to both DEQ and the public. DEQ has acknowledged that it does not have a complete report of the test burns, yet DEQ is relying on the results. What were the operating conditions under which this test was conducted? What fuels were being used? What feedstocks were in the kiln? Was ASARCO slag being substituted for iron ore? What quantities were used? Was the production level representative of normal operating conditions? All of these factors would need to be considered, plus many more, to verify a source test. Yet DEQ does not have that information, and Holcim has not shared it with the public. Without complete disclosure of the test conditions, the test burn results are unreliable and cannot be considered valid.

Before authorizing the use of tires, lead smelter slag, or any other waste in the Holcim kiln, the DEQ should require Holcim to complete stack emissions testing that would yield baseline data based. Such testing would necessarily measure the range of emissions at normal operating temperatures with the same mix of fuels (including coke and coal) and feeds (including lead smelter slag from the East Helena Superfund site) that Holcim is currently using to make cement. The range would then be adjusted based on factors potential permitted levels, production rates, etc. This is the simplest, and indeed, the only reliable way to establish a principled baseline for purposes of the DEIS and health risk assessment. As the administrative rules governing risk assessments make clear, the DEQ has the necessary authority to require such testing. See Mont. Admin. R. 17.8.770(i) ("The department may impose additional requirements for the human health risk assessment, on a case-by-case basis, if the department reasonably believes that the type or amount of material being incinerated, the proximity to sensitive populations, short-term emissions variations, acute health impact, or the local topographical or ventilation conditions require a more detailed health risk assessment to adequately define the potential public health impact. Additional requirements for the human health risk assessment may include specific emissions from the incineration facility subject to 25-2-215, MCA, use of more sophisticated air dispersion models or modeling procedures and consideration of additional exposure pathways.") (emphasis added).

Hazardous Air Pollutants

Once again, DEQ has failed to gather relevant data for the analysis of risk. We have repeatedly requested that the risk analysis include data from kilns and processes similar to Holcim's proposal. EPA research indicates that hazardous air emissions vary significantly depending on the type of kiln and the type of tire fuel ("Temperature Dependence of Dioxin/Furan Emissions," memo from Elizabeth Heath to Joseph Wood, USEPA, Research Triangle Institute, Center for Environmental Analysis, Feb. 27, 1997). There are seven wet-process kilns in the United States that burn whole tires. Holcim owns one such kiln in Ada, Oklahoma. However, Holcim has declined to share any emissions data from that facility despite our repeated requests. Federal regulations governing cement kilns require regular testing of dioxin, VOCs, and particulate, and the EPA compliance history Web site indicates that source tests have been conducted at the Ada, Oklahoma, facility. One has to wonder why Holcim has not provided this pertinent data. DEQ's continued failure to provide emissions data from any wet-process kiln burning whole tires undermines this entire analysis. Instead DEQ has allowed Holcim to rely on data from dry-process kilns burning whole tires or shredded tires and wet-process kilns burning shredded tires.

Holcim's kiln in Ada, Oklahoma has been classified by EPA as a "high-priority violator." It has repeatedly violated air quality laws. We are concerned that if DEQ's analysis fails to include emissions data from this kiln and others like it, similar results could occur in the Gallatin Valley. The time to discover whether Holcim can comply with its permit is now, not after it receives a permit. Enforcement is never as effective at preventing pollution as proper analysis and proactive permit conditioning.

It is erroneous to assume that the combustion of whole tires is equivalent to the combustion of 3-inch crumbed tires with the steel belts removed. Surface area plays a critical role in the combustion process. The more surface area exposed to heat, the more rapid and complete the combustion. In addition, the insertion of whole tires in the middle of the kiln, where temperatures are lower than where fuels are normally injected, makes a significant difference in the combustion process. In contrast, crumbed tires are fed into the kiln in a steady stream at the hot end of the kiln. Greater surface area and exposure to higher temperatures promote more complete combustion. The fact that wet-process kilns burning whole tires have much higher emissions of carbon monoxide confirms that combustion is less efficient in these kilns. The mid-kiln insertion of whole tires is also likely to result in the formation of products of incomplete combustion and therefore increased amounts of hazardous air emissions. For these reasons, it is essential that any analysis of the Trident kiln include emissions from similar facilities.

Because the combustion process is so critical to the formation of hazardous air pollutants, and because combustion of whole tires is much less efficient than combustion of shredded tires, DEQ should have fully analyzed as an alternative the burning shredded tires in Holcim's Trident kiln. Although we specifically requested that DEQ conduct this analysis, it is absent from the DEIS. We continue to assert that this is an important alternative that should have been considered in the DEIS.

The DEIS dismisses the use of processed tires and other fuels by saying they, "would not be feasible as the primary fuel for the Trident plant." (DEIS, §2.4.1) This is not a reasonable cause to dismiss the use of processed tires, due to the fact that whole tires will not be used as the primary fuel source either. Instead tires will replace approximately 15% of the current fuels. This section of the analysis is completely lacking in analysis. Many other kilns in the country, including Holcim kilns, are processing tires prior to inserting them into the kiln. Certainly this is a reasonable alternative that appears to be technically and economically feasible. The use of processed tires should be not only considered but required of this kiln.

Not only did Holcim submit inappropriate test burn data on which to base its analysis, it submitted no data for many of the hazardous pollutants of concern. If, as Holcim contends, the burning of tires as fuel is such a widely accepted practice, then this data should be readily available. Please provide this additional information.

A comparative review of the 2003 risk assessment and the risk assessment in the current document reveals that many of the critical HAP numbers that originally were shown to increase now increase very little or decrease significantly. These include PAHs, PCBs, and nearly all heavy metals. For example, the HAP summary spreadsheet indicates an increase in PCB emissions, whereas Table 2 shows PCBs decreasing. There is no explanation in the DEIS that accounts for these very counterintuitive changes.

Furthermore, many of the data points in the two critical HAP tables (Table 4.2-2 and Table 2 in TAR) are inconsistent with data in the cumulative and baseline HAP emissions spreadsheets. On top of that, there are inconsistencies between the individual data points contained in Table 4.2-2 and the corresponding data points in Table 2 in the TAR when one converts the differing units. Despite repeated requests for clarification of these discrepancies, DEQ has not provided any meaningful response. The HAPs data are critical because these numbers were fed into the risk assessment. Please recalculate and provide the rationale for these changes, along with supporting calculations, so that the public can independently verify this critical information. As it stands, there is no way to determine how these results were achieved.

Why is there not emission limitations for PCBs in the draft permit. The previous draft permit contained such a condition and this permit should as well.

It is the DEQ's duty to "ensur[e] that the public ... can access the information that is made public" through the EIS process. *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Commission*, 449 F.3d 1016, 1034 (9th Cir. 2006). As the federal courts have emphasized, when "the information in the ... EIS [is] so incomplete ... that the ... public could not make an informed comparison of the alternatives," the EIS is inadequate under the National Environmental Policy Act ("NEPA"). *Ecology Center, Inc. v. Austin*, 430 F.3d 1057, 1067 (9th Cir. 2005). The same is true under the Montana Environmental Policy Act ("MEPA". See, e.g., *Ravalli County Fish and Game Ass'n, Inc. v. Montana Dep't of State Lands*, 273 Mont. 371 (1995) (Montana Supreme Court explaining that "MEPA is modeled after the National Environmental Policy Act (NEPA)" and therefore "when interpreting MEPA, we find federal case law persuasive").

All of the concerns listed above underscore the need for a mass balance analysis. The input functions should equal the output functions. All assumptions and calculations should be clearly laid out for the reader. The calculations for metals should be quite simple. Coal and glass have already been analyzed for metal composition. DEQ should require Holcim to analyze the petroleum coke, the ASARCO slag, and other feedstocks to determine the amount of heavy metals going into the kiln. Then the DEQ should consider temperature, residence time, and other factors to determine what happens to the pollutants in the process. A mass balance equation will go a long way toward verifying the accuracy of the conclusions reached by DEQ. It should have been required long before now and as discussed above, the DEQ has regulatory authority to require it. See Mont. Admin. R. 17.8.770 (i). In fact, DEQ also has the duty to require it. See Mont. Admin. R. 17.8.748 (4)(g).

Many more HAPs are included in the cumulative HAP spreadsheet than in the baseline spreadsheet (and in the original 2003 HAP spreadsheet). It is not clear how these additional HAPs were factored into the analysis. Please explain.

It appears that the DEIS has not correctly calculated the difference in potential annual HAP emissions (Table 4.2-2). The problem is that the 95% confidence limit on the difference in emissions with and without tire burning is not the same as the difference between the 95% confidence limits for plants without tires and plants with tires. As a result, the estimates of the change due to tire burning that are presented in the DEIS are not necessarily conservative or protective.

It appears that Holcim intentionally submitted emissions data to produce favorable results. For example, the data from Holcim cement kilns in Dundee, Michigan, and Seattle, Washington, show that lead emissions decreased with the burning of tires. However, according to EPA research, even crumbed tires with the wires removed contain a significant amount of lead and tests showed that lead emissions can be expected to increase by a factor of ten ("Air Emissions from Scrap Tire Combustion," EPA-600/R-97-115, Table 19 http://epa.gov/ttn/catc/dir1/tire_eng.pdf). Please review these numbers and consider worst-case emissions scenarios—not most-favorable emissions scenarios. While we all hope emissions from this facility will be minor, our concern is that worst-case conditions could occur, and therefore the risk assessment should be based upon the worst-case scenario in order to be protective of human health and the environment.

Holcim has further distorted the data by entering two runs of the same test burn from Dundee, Michigan, and Seattle, Washington. This heavily skews the result because four (not just two) of the thirteen data sets are strongly weighted toward decreases in lead emissions. The same thing has occurred with arsenic emissions, although EPA reported that in its test "elevated emissions of arsenic, lead, and zinc were found in the stack gas." There is no justification for including the two additional data sets when other test burns showing lead increases

were included only once. Moreover, test runs at 11% and 21% TDF are inconsistent with the proposed fuel input at Trident and it is unclear if or how adjustments have been made for the difference. The second Seattle test run is new to this analysis and was not included in the 2003 analysis. It appears that Holcim is trying to further stack the deck in the current analysis.

We are very concerned that interested individuals were unable to read the baseline and cumulative HAP spreadsheets and thus were unable to review the critically important data contained in these documents. These data constitute the foundation of the risk assessment, and without access to this information, it is impossible to evaluate the analysis.

Despite several requests, DEQ failed to consider or analyze synergistic effects among hazardous air pollutants. This is an important consideration in the risk assessment, as it has been shown that two HAPs can have far higher negative impacts in combination than in isolation. For example, even small exposures to methylmercury, when combined with exposure to PCBs, have been shown to increase adverse impacts on neuro-development. Please explain this omission.

The amounts of the metals in CKD HAP emissions seem extraordinarily low. How were these derived? DEQ seems to dismiss risks due to manganese, noting that it “is not classified as a human carcinogen.” However, manganese is a potent neurotoxin. Please explain. There is no discussion of how the numbers in Table 4.2-3 were derived. Please explain how the risks due to fugitive cement kiln dust were assessed.

How were emissions from startup and shutdown incorporated into the DEIS and risk assessment? Upset emissions are often followed by shutdown and start-up. These need to be incorporated into the worst case scenario.

The draft permit, section II.C.3 lists the emission limits for a list of HAPs and states: “Holcim shall not cause or authorize to be discharged into the atmosphere from the burning of tires in the kiln, emissions that contain....” Inclusion of the phrase “from the burning of tires” implies that there is no limit on HAP emissions when Holcim is not burning tires. Use of ASARCO slag could also contribute to HAPs emissions. This language indicates that Holcim could use slag when it is not burning tires and is under no obligation to report HAPs emissions tests. The words “from the burning of tires” should be removed from the draft permit to indicate that the emission limits apply at all times to protect public health.

The draft permit, section II.C.1.f provides an overall VOC emissions limit of 2.25 lb/hr. This has been increased from the previous permit (#0982-11) in which the VOC limit was 1.30 lb/hr. There is no explanation in the permit analysis for this significant increase (73%). The permit analysis must justify why this increase is necessary and how it is protective of human health and the environment. In addition, there appears to be an error in the results of this increase in allowed emissions. In the potential emissions inventory (permit analysis, section IV) the total VOC emissions have increased to 9.86 tons/yr from the previous estimate of 7.4 tons/yr, which represents a 33% increase. This inconsistency should be rectified.

The tables in the permit analysis, Section IV are structured differently than in the previous draft permit analysis. One confusing inconsistency is the emissions inventory for HAPs. In the previous draft permit analysis potential lead emissions were expected to be .15 tons, and in the current version they are expected to be .06 tons. Similarly the total metal HAPs emissions previously were expected to be 5.2 tons, but the total of metal HAPs as shown in the current chart are .26 tons. Please clarify how DEQ expects Holcim to comply with lower HAP emissions limits when there has been no change in pollution control technology to prevent metal

HAPS emissions. If the previous estimates were considered a valid potential emissions inventory, how can the DEQ claim such tremendous emissions reductions without requiring any pollution control that could achieve these reductions? It is unclear and unsubstantiated that reducing numbers in a permit will result in real world reductions in emissions. Please explain.

Cumulative Emissions

The DEQ must assess human health risks posed by cumulative emissions from the Trident Plant, not solely the risks associated with the incremental increase in emissions due to proposed tire burning. Montana's incineration statute requires the DEQ to consider all emissions from an incinerating facility in determining compliance with the negligible risk standard. Specifically, it mandates:

The department may not issue a permit to a facility described in subsection (1) until:

- (a) the owner or operator has provided to the department's satisfaction:
 - (i) a characterization of emissions and ambient concentrations of air pollutants, including hazardous air pollutants, from any existing emission source at the facility; and
 - (ii) an estimate of emissions and ambient concentrations of air pollutants, including hazardous air pollutants, from the incineration of solid or hazardous waste or the use of hazardous waste as fuel for a boiler or industrial furnace, as proposed in the permit application or modification; ...
- (d) the department has reached a determination that the projected emissions and ambient concentrations will constitute a negligible risk to the public health, safety, and welfare and to the environment.

MCA § 75-2-215(3)(emphasis added). Thus, consistent with the requirement that facilities disclose all emissions from "any existing emission source at a facility," the statute requires consideration of cumulative emissions in assessing risks to human health. The DEQ cannot rely on an administrative rule that is inconsistent with the governing statute to avoid factoring all emissions into the human health risk assessment. Rather, existing permitted emissions and emissions from tires and slag must be considered collectively when assessing the risk posed to human health and the environment by this facility's latest proposal to burn tires.

Assessing risk based only on the incremental impacts of burning tires not only violates the requirements of § 75-2-215, but also, as a practical matter, precludes meaningful protection of air quality across Montana. Looking only at incremental risk would preclude the DEQ from ever confronting the combined impacts of burning several different sorts of waste at a single facility. This would necessarily undermine the legislature's intent to prevent hazardous pollution from waste burning. Holcim has a worldwide policy of replacing fuels and feedstocks with solid and hazardous wastes. This is evidenced by its replacement of iron ore with waste slag from lead smelters in Canada and East Helena, Montana, and steel mill waste from Washington. It substituted these waste streams for conventional iron ore without informing DEQ or the public. Holcim still maintains that it does not need a permit to use these wastes in its cement kiln. Failing to base the risk assessment upon the entire risk posed by the facility means that when Holcim seeks to add new waste streams in the future, which it undoubtedly will do, at best the state would analyze each change in isolation, thereby underestimating the risk posed by the burning of multiple waste streams, or at worst, would not analyze the changes at all. Neither scenario is acceptable.

Slag

Last year Dave Klemp, Air Permitting Section Supervisor, wrote regarding the Department's settlement with Holcim over the use of slag in the kiln: "The Department is still finalizing the terms of the settlement, which should hopefully be completed by our legal staff very soon. As to the legal finding, the department currently

believes that the use of slag is subject to 75-2-215, MCA. This position was conveyed to Holcim.” He further stated, “The slag will be incorporated into the tire permit and analysis and both will need to show compliance with all of the applicable requirements” (Dave Klemp, email message to Jennifer Swearingen, July 29, 2005). Unfortunately, DEQ’s commitment to fully analyzing the impacts of slag has not been realized in the DEIS or risk assessment.

The DEIS does not answer a basic question: What happens to air emissions when slag is added to the kiln? Holcim is authorized to use iron ore and slag from ASARCO. Presumably the slag will come from ASARCO’s now defunct East Helena lead smelter and Superfund site. But the DEIS barely mentions the risk this poses to public health and the environment.

The DEIS contains three sentences describing how slag was incorporated into the risk assessment. It states, “DEQ estimated the amount of slag that would be needed to meet the iron requirements to produce 425,000 tons of clinker and determined the amount of metals that would be introduced to the kiln. DEQ assumed that 95 percent of the metals would be captured in the product and 5 percent would go to the ESP. The amounts of metals found in the slag samples were used in the risk assessment model.” The lack of detail is astounding. What numbers went into the DEIS and risk assessment? How were these numbers derived and how can they be verified? The assumption that 95% of the metals go to the product and 5% go to the ESP has not been justified. It has the effect of whittling down the heavy metals emissions to a tiny fraction of one percent, which is simply illogical. Furthermore, metals like arsenic volatilize at low temperatures and may not be controlled by the ESP. Whole tires also contain high levels of arsenic. How was an increase in volatilized arsenic from slag and tires incorporated into the risk assessment?

We are extremely concerned about the lack of information regarding fine particulate matter (PM2.5) emissions. The discussion of heavy metals does not address potential increases in fine particulate matter (PM2.5) emissions, which are not effectively controlled by the ESP.

Slag is toxic. In response to pressure from MEIC and MATB, DEQ analyzed the composition of a very few slag samples and found that the ASARCO slag had up to 34% more lead than Holcim’s conventional iron ore, 545% more arsenic, 180% more cadmium, 4,344% more manganese, and 457% more chromium. The ASARCO slag also had a higher pH, higher amounts of cobalt, antimony, nickel, phosphorous, selenium, and zinc. The DEIS and risk assessment fail to even mention these previous analyses by DEQ. How this critical information was incorporated into the DEIS and risk assessment was not disclosed to the public. Please provide that information and all calculations for how slag was incorporated into the analysis.

Slag is likely to be even more toxic than the results of DEQ’s limited sampling would indicate. Sampling from a similar ASARCO smelter in Utah indicates that heavy metal concentrations are highly variable and often far higher than the concentrations reported by DEQ.

Holcim’s use of ASARCO slag in the Trident kiln is the manifestation of a corporate policy that advocates the burning of wastes in its cement kilns. This policy calls for replacing conventional fuels and feedstocks with industrial wastes whenever possible. Nationally, Holcim substitutes limestone, clay, shale, silica, and other feedstocks with waste streams from refineries, coal-fired power plants, steel mills, lead smelters, and other industrial processes. By failing to consider the impacts the burning of slag could have on public health and the environment, DEQ has left the door open for Holcim to argue that it doesn’t need a permit when it uses additional wastes in the future.

In fact, the draft permit and DEIS are completely silent on subsequent waste burning in Holcim's kiln, despite the fact that Holcim has a history of burning waste without telling DEQ or the public. The draft permit has only a very limited condition: "Holcim shall not use any other iron source without prior written approval from the department" (emphasis added). The draft permit does not state that Holcim must receive a permit to burn other types of wastes. It does not indicate what DEQ will do if Holcim asks to burn other wastes. It doesn't even say whether the public will be informed when Holcim asks to burn something new.

And the draft permit only requires Holcim to inform DEQ if it is using other "iron sources." It is silent on replacements for limestone, silica, shale, clay, and other raw materials. This permit does not prohibit Holcim's use of other feedstock substitutes, and according to Holcim, any waste other than a waste substitute for its iron ore can be used without notifying DEQ or the public—because no permit is required. DEQ should clearly state that replacing any other fuels or feedstocks with waste materials requires a permit. Please make appropriate changes in the draft permit.

Without providing any analysis or justification, the DEIS states that it is safe to burn "12,000 tons of slag from the ASARCO smelter during any rolling 12-month time period, to ensure that the negligible risk level is not exceeded." (DEIS, §4.11) In contrast, the draft permit allows Holcim to burn 16,535 tons. Since the public has not seen the calculations, it is impossible to know what the environmental impacts of this error would be.

The permit says that Holcim is limited to burning slag from ASARCO. But it does not say which ASARCO facility. We know that ASARCO has many facilities across the country. The language in the permit would allow Holcim to burn waste from any of those locations. At the very least, the permit should limit the source of the slag to the East Helena lead smelter.

Just one year ago DEQ acknowledged, "there is variability in the [ASARCO East Helena] slag and this will need to be appropriately conditioned in the air quality permit. Testing the slag will most likely be a requirement placed on Holcim through the permitting process. However, all of these details (e.g. testing frequency, analysis, etc.) have not been worked out yet but will be completed as part of the upcoming permitting process" (Dave Klemp, email message to Jennifer Swearingen, July 29, 2005). The draft permit fails to incorporate any provisions for testing requirements or submission of compositional analyses. The permit should require Holcim to test each shipment of slag going into the kiln. Such testing is the only way to verify that the extremely limited testing done by DEQ accurately reflects the composition of the slag. This compositional analysis is critical in verifying that emissions will be within permitted parameters during the majority of time when testing is not required..

Lead was not adequately accounted for in the DEIS or risk assessment. DEQ data (undisclosed in the DEIS) shows that the previous Holcim iron source had a lead level of 382 ppm but that one of the ASARCO samples was as high as 511 ppm. Despite this, the DEIS does not discuss possible increases in lead emissions. In fact, the current analysis shows that the incremental increase in lead emissions is less than one-third of what was found in the 2003 analysis done by DEQ. This result is counterintuitive. As previously stated, we believe that the worst-case scenario should be included in the risk assessment and the baseline analysis should not include slag.

The emissions limitations on arsenic, cadmium, and chromium in the current draft permit are identical to the emissions limitations established in the 2003 draft permit, which was released prior to the incorporation of slag into the analysis. This leads us to believe that DEQ has failed to consider the potential impacts from burning metal-laden slag.

According to DEQ's sampling results for ASARCO slag, the slag contains six times more arsenic than the iron ore. Tires also contain high levels of arsenic. Yet the DEQ analysis shows that arsenic levels will decrease with the burning of tires and slag. This result seems irrational and is unsupported.

This analysis also fails to incorporate fugitive emissions of slag from various plant processes. The DEIS ignores the fugitive emissions from the grinding of slag before it goes into the kiln, emissions from startup, shutdown and malfunction, and the potential fugitive emissions from the addition of the ground slag directly into the finished product.

Most important, DEQ has stated that it has included HAPs emissions due to slag in both the baseline and cumulative cases. This makes it impossible to determine the impacts slag has on air emissions because there is no difference between baseline and cumulative emissions with regard to slag. This is critical because DEQ is basing its decision on the incremental increase in hazardous air emissions. This approach of adding slag emissions to both the baseline HAPs analysis and the cumulative HAPs analysis has the effect of canceling out all impacts due to slag.

In Section I.B. the "current permit action" should include language that explains that the permit is also allowing the addition of iron ore and ASARCO slag to the kiln. This is a controversial issue and should not be hidden in the small print of the permit. Although Holcim is already using ASARCO slag, this is the first time it is mentioned in the permit, and should be acknowledged in the "current permit action." Holcim's use of ASARCO slag without notifying DEQ, and DEQ's prepermitted allowance of slag in the kiln, should also be included in the permit history.

In sum, it appears that DEQ has not incorporated increases in heavy metal emissions due to slag in either the baseline or cumulative condition. Not only has DEQ failed to describe how the slag metals were integrated into the HAPs database, but if one checks the key constituents of slag, such as arsenic, cadmium, cobalt, chromium, manganese, antimony, nickel, phosphorus, selenium, and zinc, there is no evidence that these HAPs were included in the analysis. Please explain specifically how the hazardous air pollutants resulting from the use of slag were incorporated into the DEIS and risk assessment.

Monitoring and Reporting Requirements

The frequency of emissions testing is wholly inadequate. Measuring a limited number of heavy metals once a year for three years provides the public no assurance that Holcim is complying with its emissions limits the remaining 364 days a year. Additional testing should be required, and the testing schedule should not be subject to change after three years. Instead, testing should be a permanent requirement, subject to change only with the submittal of a permit application requesting modification.

Monitoring for dioxin every 30 months is inadequate. Total chlorine increases significantly with the burning of tires. Frequent upsets change the temperature profile in the kiln, which significantly affects dioxin formation. Relying on proper combustion is insufficient in a kiln that historically has had difficulty controlling its process. Regular testing for dioxin under representative operating conditions is imperative to guarantee protection of public health and the environment from this potent carcinogen and neurotoxin.

In regard to Holcim's sulfur dioxide limit, the existing permit establishes an hourly standard, but reporting is based upon a monthly average of a daily average of an hourly average. This standard should be a true hourly standard since short-term sulfur dioxide levels can impair lung function (see attached information from EPA's Web site). Since Holcim has acknowledged that it is burning up to 80% petroleum coke, which has very

high concentrations of sulfur, this is of great concern. The DEQ analysis in the TAR, page 12, indicates that sulfur emissions increase when whole tires are burned in cement kilns. The existing condition, combined with increases in sulfur dioxide from the burning of tires, indicates a need to modify the currently meaningless hourly limit so that it is a truly enforceable limit.

The permit should require all monitoring reports for permitted parameters conducted by the facility to be submitted to the department. The fact that the facility is charged with conducting and submitting test data means it is already conducting tests under the most favorable conditions. If a company receives an unfavorable test, it can, and does, keep that test for the agency and the public. It then simply runs another test to demonstrate compliance and can continue to do so until it receives favorable results. Those favorable results are all that the agency and the public ever see. This gives the public and regulators the false sense that the company is complying with its permit, when in fact, its own testing indicates that it is not. Therefore, any test that is done on permitted parameters should be submitted to the agency for review.

CO Emissions calculations need to be changed. In the draft permit section II.C.2 states: "...Any calculations used to establish CO emissions shall be approved by the Department in writing and shall be based on the CO emissions measured by the CO continuous emission monitoring system (CEMS) for the kiln, unless otherwise approved by the Department in writing." It is unclear why any calculations for CO emissions should be used when a CO CEMS is in operation. This is especially true since, Section D.3 states: "Holcim shall use data from the CO CEMS to monitor compliance with the CO emission limit in Section II.C.2" References to the use of calculations to determine CO emissions in the draft permit section II.C.2 should be removed.

The draft permit, section II.D.4 states: "Holcim shall use the data from the COMS to monitor compliance with the opacity limit contained in Section II.C.1.f. In the event the COMS is not operational, Holcim shall use visible emission observations to assess compliance with the opacity limit in Section II.C.1.f." This seems to imply the DEQ expects that there will be time when the COMS is not operational. It should be made clear that Holcim will be in violation when the COMS is not operational, and that visible emissions observations are not an acceptable alternative. If Method 9 testing is relied upon, the department will use its enforcement discretion to determine its response. Otherwise Holcim could declare every opacity violation a malfunction and avoid a violation by confirming opacity is fine with a highly subjective visible emissions test.

The absence of a short-term monitoring emissions limit for CO, which is an important indicator for proper combustion, is a serious oversight. An annual requirement is insufficient.

Assumptions that Require Justification

The document contains many unsupported assumptions that may distort the accuracy of the findings. Judgments concerning seemingly minor technical questions have the effect of whittling down crucial numbers that are plugged into the risk assessment calculations. The result is the underestimation of risk to human health. These highly questionable assumptions include the following:

- the efficiency of the pollution control device;
- almost all volatile organic compounds are assumed to be particulate;
- the accumulation (nonaccumulation) of hazardous compounds in soil and water;
- the particulate/vapor split of dioxin and mercury;
- the percentage of total mercury emissions assumed to be methylmercury; and
- the Btu value of whole tires versus shredded tires.

Please provide the basis for these assumptions, relevant calculations and DEQ's reasoning for reaching these conclusions.

Worst-Case Scenario Not Considered

As we stated earlier, the risk assessment should be based on the worst-case scenario. The fact that DEQ has chosen a 30-minute upset as the worst-case scenario is wholly unsupported and borders on the absurd. Within the past year Holcim has experienced several upsets exceeding 10 hours and others lasting 14-17 hours. During these upsets the electrostatic precipitator is often off-line and emissions are uncontrolled. DEQ has utterly failed to analyze the impacts from these real-world scenarios.

DEQ's upset multiplier, based on 81.6 hours of annual uncontrolled emissions, has the effect of severely underestimating potential risks. Uncontrolled emissions in 2005 totaled 115 hours, and the total for the first half of 2006 exceeds 87 hours—already more than DEQ's estimate for the entire year. It is important to note that Holcim was not burning slag during the years the average was based on, and there is strong evidence that the use of slag has led to process problems (primarily increased incidence of ring buildup) and an increase in the number and duration of upsets. This needs to be adjusted.

Dioxin

EPA research on dioxin emissions associated with the burning of tires as fuel in cement kilns is in direct contradiction to the research presented by Holcim and accepted by DEQ ("Temperature Dependence of Dioxin/Furan Emissions," memo from Elizabeth Heath to Joseph Wood, USEPA, Research Triangle Institute, Center for Environmental Analysis). EPA reports that dioxin can be controlled by temperature reduction to 400 degrees F, proper kiln and control device operation, and efficient fuel combustion. EPA's research contradicts DEQ's conclusion that Holcim can maintain an hourly dioxin limit that is significantly lower than the federal PC-MACT limit. First, Holcim has an inlet temperature to the ESP of 427 degrees F, or 27 degrees higher than recommended by EPA. Moreover, an examination of the 2005 test burn conducted to set that temperature reveals that the kiln was running at a production level significantly below normal operations and the fuel composition was not representative of normal operating conditions. Second, EPA and DEQ both cite proper design and combustion as keys to limiting dioxin emissions, neither of which has been demonstrated at the Trident plant. This plant has routine upsets due to difficulty controlling its combustion process. Third, the fact that carbon monoxide is shown to increase dramatically with the use of whole tires proves that proper combustion is difficult to maintain. The EPA test showed that wet-process kilns burning whole tires and coal had the highest dioxin emission rates among a range of kiln types and various kiln fuels. This unbiased research cannot be ignored. We believe that the temperature threshold should be lowered to reflect EPA's findings on dioxin formation to 400 degrees.

Dioxin is clearly the pollutant of greatest concern. As DEQ acknowledged in several places in the documents, dioxin constitutes the majority of the risk in the HAPs inventory. Despite this forthright acknowledgment, DEQ intentionally chose a methodology that had the effect of negating the risk of dioxin in its assessment. It did this by substituting the federal PC-MACT limit for dioxin in both the baseline and cumulative cases. This is of great concern because it tells us nothing about what dioxin emissions may actually be with the burning of slag and tires, and it provides no assurance that Holcim is capable of meeting the significantly lower emission limit established in the permit.

Although the data chosen by Holcim underestimate emissions for wet-process kilns burning whole tires, they nonetheless show increases in dioxin emissions. However, the predicted increases in the current analysis are 1,000 times lower than the projected increases in the 2003 risk assessment. Please explain this enormous discrepancy.

The data for dioxin emissions from other cement kilns are absent from both the baseline and cumulative HAPs spreadsheets. DEQ and Holcim have replaced the original data from other kilns with the PC-MACT limit for dioxin emissions. Without this information, citizens cannot make a reasonable judgment about DEQ's and Holcim's conclusions. Please explain the exclusion of this pertinent data.

Although it is unclear how DEQ arrived at baseline and cumulative emissions in the TAR, Table 2, it appears that DEQ arrived at a low estimate by adding a second set of data from the 1990 Holnam Seattle test burn. The unexpected and counterintuitive decrease in dibenzofuran emissions in the Holnam Seattle test burn skews the projected dioxin/furan emissions by three orders of magnitude. Please remove the second set of data.

Although DEQ got rid of the incremental risk due to dioxin by incorporating the PC-MACT limit for both the baseline and cumulative emissions, the risks associated with the worst-case scenario nonetheless exceeded negligible risk in both the baseline and cumulative cases. DEQ officials have acknowledged in email communications and in a telephone conversation that DEQ asked their contracted toxicologist to determine what level of dioxin emissions would allow Holcim to avoid exceeding negligible risk. DEQ then placed this more stringent hourly dioxin limit into the draft permit so that negligible risk would be "protected." In response to an email question about dioxin emissions, Carson Coate of the DEQ replied:

"As section 1.1 of the Air Quality Technical Analysis Report states, the object of the report was a third-party review of emission estimates and impact analyses. In this review, the EIS contractor estimated that dioxin emissions may increase by 60% which is reflected in Table 2 and fulfills the requirement of the EIS process (to identify potential impacts). However, there is also a permitting action taking place and the regulatory limit for dioxin is PC MACT, so that value was carried forward in the analysis. Under ARM 17.8.770, the risk analysis for the PC MACT limit showed a violation of negligible risk, so a limit of 6.00E-09 lb/hr was placed in the permit while burning tires. This additional limit on dioxin protects negligible risk and will be Holcim's limit while burning tires. If Holcim never burns tires, PC MACT will remain the limit for dioxin."

Nowhere in the document is this information disclosed to the reader. This limit is unenforceable; DEQ is requiring testing for dioxin no more frequently than the requirement in the federal PC-MACT rules, which is every two and a half years. DEQ also did not lower the temperature threshold for dioxin reporting to correspond with the new lower limit. Please explain how DEQ can assure protection of public health and welfare and how Holcim will comply with this much lower "hourly" limit that will only be tested every 30 months.

A crucially important purpose of the ongoing EIS process is to assess whether the alternatives considered will comply with negligible risk thresholds and applicable pollution limits. Because the DEQ's own analysis indicates that tire-burning, as currently proposed, will violate both the PC-MACT and applicable risk thresholds absent some additional means of pollution control, it is incumbent on the DEQ to disclose how Holcim will modify its current proposal to comply with legal requirements that are designed to protect public safety.

Several scenarios were found to exceed or approach negligible risk, such as ingestion of pond fish and ingestion of local game. However, these scenarios were not integrated into the overall total risk assessment. Risks from mother's milk and ingestion of beef were "averaged" over the region. Please explain why this was an appropriate approach to assess risk. Also, DEQ provides a summary of risks to local communities but restricts its review to "non-ingestive pathways" (Chapter 4, p. 15). Since risks are higher for pathways of ingestion, it is suspicious that DEQ chose to exclude these pathways when presenting information about risk to local communities. Please provide a summary of cumulative risks to local communities that includes all pathways assessed for dioxin and other hazardous pollutants. To do otherwise is misleading and incomplete.

DEQ has failed to assess short-term risks to workers, stating, “short-term hazards to workers are not assessed directly, but may be inferred to be equal to or less than the estimated hazards for the worst-case scenario” (Holcim Risk Assessment, page 2-9) If acute risks to workers are indeed equal to the worst-case scenario, then those risks would exceed negligible risk, according to DEQ’s analysis. The failure to specifically evaluate acute risks to workers, presumably those most at risk from pollutants at the facility, and to discuss this important aspect of the risk assessment in a forthright manner are incomprehensible. Please explain this glaring omission.

An overall problem in the DEIS is the inconsistent and often conflicting information concerning risks to human health. Although information is presented in Chapter 4, Section 4.3 indicating levels of risk far in exceedance of the negligible risk standard in several scenarios, other sections state that risks in both the baseline and cumulative cases do not exceed negligible risk. This is also true of the human health risk assessment. DEQ has failed to clearly define for the reader whether the negligible risk standard applies to the worst-case scenario or to the “average” scenario, to the nearest resident or to the assumed future resident at the point of greatest exposure. Furthermore, it appears that DEQ has superimposed a new assessment onto an earlier draft, and the result is a confounding discussion of the most critical part of the DEIS. Even readers highly familiar with the methodology of risk assessment have tremendous difficulty making sense of DEQ’s discussion of the human health risk assessment. This inherent weakness undermines the credibility of all of DEQ’s conclusions about potential risks to human health.

In the draft permit, section C.1.d states that two different dioxin furan limits are applicable depending on the “the average of the performance test run average temperatures at the inlet to the particulate matter control device.” This appears to be an unenforceable limit, as we could not find any mention in the permit where Holcim is required to monitor and report the temperature at the inlet to the particulate matter control device. A monitoring and reporting permit condition of temperature at the inlet to the ESP needs to be added to make these limits valid.

Compliance History of Similar Kilns Should Be Considered

DEQ should have considered the fact that only six wet-process kilns burn whole tires, and five of those kilns are out of compliance with their pollution limits according to EPA’s Environmental Compliance History Online (EPA’s ECHO Web site). Intentionally ignoring the operational history of these comparable plants grossly underestimates the potential risk posed by Holcim’s proposal to burn whole tires mid-kiln at the Trident facility.

Air Dispersion Modeling

The analysis continues to insist that the closest resident lives one mile to the east, but there is a household just a few thousand feet southeast of the stack. (The socioeconomic analysis also states that there is no owner-occupied residence within two miles of the facility. This is false: The Dimocks have lived on their property, adjacent to the Holcim boundary and a few hundred feet from Holcim’s quarry, for several decades.) We have repeatedly requested that DEQ assess risks to this residence and to include this point on the air dispersion map. Please explain why DEQ has excluded this very important information from its analysis.

The DEIS fails to address existing air quality and the effect of the Trident plant emissions on PM 2.5. It has a very cursory discussion of PM 2.5 in Chapter 3, page 11, but it does not present any data. Based on the limited information provided, it appears that an increase in PM2.5 emissions resulting from this proposal may “cause or contribute to” a violation of EPA’s recently revised 24-hour National Ambient Air Quality Standard (“NAAQS”) for PM2.5 in violation of the Clean Air Act, 42 U.S.C. § 7475(a)(3). Given the extensive body of scientific literature documenting the relationship between exposure to PM2.5 and serious adverse health effects including

asthma, lung cancer, heart attacks, and premature death (see EPA Staff Paper available at <http://www.epa.gov/airlinks/airlinks4.html#pmstaff2>), it is further essential that the DEQ take a hard look at PM2.5 emissions for purposes of assessing compliance with Montana's negligible risk standard. This assessment is feasible given that PM2.5 data is available from the Belgrade station.

The DEIS further needs to consider PM10 data beyond 2001. The large population increase and associated building boom in the Gallatin Valley since 2001 are surely contributing to higher PM concentrations, that are further exacerbated by changes in fuels and feeds in Holcim's kiln since 2001. Current data must be included in the DEIS in order to reliably project impacts from both coarse and fine particulate matter.

We are concerned about the accuracy of the on-site meteorological data used to predict the dispersion of the Holcim plume. First, Holcim has a buoyant plume; it exits the stack at a relatively high temperature and consequently rises well above the level of the stack. Therefore, the statement in the DEIS that the met data are collected at the same height as the kiln exhaust is misleading. What's important in determining plume dispersion is not the stack height but the height of the plume after buoyant plume rise has been taken into account. If it clears the canyon at that point, in-canyon wind speed and direction data may very well be misleading. Second, the placement of the meteorological station at the neck of the canyon, on the opposite side of the river, and one-quarter mile from the stack does not lend credibility to the accuracy of its predictions for Holcim's stack plume. Wind speed and wind direction at that critical point differ substantially from wind speed and direction at the top of the stack. Furthermore, DEQ should consider how the use of Great Falls upper air data may misrepresent the air dispersion of emissions from the Trident stack and take that into consideration in its review.

One of the issues with AERMOD that is well recognized is that it is very sensitive to land surface parameters, especially surface roughness, which is very difficult to estimate. The dispersion modeling protocol indicates that the Trident modeling used default values for these parameters, which implies they are highly uncertain. The DEIS and permit analyses should include analyses of the sensitivity of the modeling to these parameter values.

The analysis used ambient air concentrations from a remote site in eastern Montana, which are unrepresentative of the Trident site.

Meteorological data from Gallatin Field should have been integrated with data from an appropriately sited station at the Trident facility. Data from Gallatin Field were dismissed as "not suitable," based on "the unreliability of automated cloud cover observations and an unrepresentative number of calm wind hours reported" (Chapter 3, p. 5) This rationale is wholly insufficient. Please provide a more thorough justification. It appears that this is an attempt to suppress data that may indicate serious risks to the nearest resident. Despite the fact that we specifically cited this egregious oversight in the 2003 environmental assessment, DEQ has again failed to include this essential data in its analysis.

We can find no text that explains how emissions from the clinker cooler bypass were integrated into the air dispersion analysis. The clinker cooler bypass is essentially a big opening in the side of a large building and it frequently vents huge amounts of hazardous air emissions. The failure to consider the impacts of these emissions is a serious flaw in DEQ's analysis.

Water Quality

The analysis of water resources conducted by DEQ is severely flawed. DEQ failed to incorporate 2005 TMDL water data on heavy metals in the Missouri River. DEQ failed to consider the impacts from runoff. It dismissed

all impacts from wet deposition. DEQ also assumed complete turnover of pond water within one year, with no accumulation of HAPs over time. These assumptions misrepresent the risks resulting from the burning of tires in the Trident kiln.

Although the TMDL assessment conducted in 2005 failed to assess metals in the river sediments, as promised by the DEQ director, it nevertheless showed arsenic levels in the water column that were 5.5 times higher than the federal drinking water standard. The failure of the DEQ to disclose this information in the DEIS is suspect. Any assessment of risks to river water resources must include pertinent information about baseline levels of contamination. Please correct this blatant omission and make appropriate adjustments.

The vapor/particulate partitioning of mercury is unjustified and may grossly underestimate the impacts of methylmercury to aquatic life. Therefore, risks to human health due to fish consumption are significantly underestimated.

Please incorporate the comments of Tom Willingham, retired EPA toxicologist, into these comments.

Solid Waste

The DEIS fails to adequately discuss the solid waste impacts of this permit. Originally, DEQ led the public to believe that Holcim would be unable to burn tires from old tire piles scattered around the state. Most of these tires have a much higher chlorine content than tires manufactured within the past ten years. Higher chlorine content assists with the formation of dioxin when burned. These older tires may contain water and harbor vectors of diseases such as West Nile virus. However, nowhere in the DEIS does DEQ discuss whether Holcim will be able to accept and burn these old discarded tires, how that will be monitored, or what impacts these tires could have on public health and the environment. The DEIS does not discuss how Holcim will minimize water-borne vectors of disease that may be present in these tires. The storage of tires in enclosed containers does not eliminate the potential exposure of these disease vectors to the air during the transport from the trailers to the conveyor system and to the kiln.

Furthermore, DEQ failed to address the issue of where Holcim's tires would come from, saying only: "the source of waste tires is undetermined at this time." If DEQ officials had interviewed any of the tire recyclers in the state, they would know that at least two-thirds of the tires would need to come from out of state. The failure to address the issue of incinerating other states' wastes upwind of an agricultural valley is unacceptable. Moreover, it should be disclosed to concerned citizens that Montana tire dealers will not be able to provide anywhere near the number of tires Holcim wants to burn.

It appears that DEQ intentionally sidestepped the question of how Holcim's proposal would affect tire recyclers in the state. A list of tire disposal facilities is provided, but DEQ does not discuss the economic impacts to recyclers of Holcim's burning of tires, stating absurdly that "if all 1,137,539 scrap tires would be acquired from out-of-state sources ... impacts to businesses that recycle tires into other products would not be affected, as their local sources would remain the same." There is no discussion of impacts resulting from of Holcim sourcing tires from within Montana despite the fact that it could have significant economic impacts on other areas of the state. The failure to address the impacts to tire recyclers is unacceptable.

Agricultural Impacts

Although we specifically requested in our 2003 comments that the department analyze impacts to local agriculture, the DEQ has failed to consider impacts to conventional agriculture in the Gallatin Valley. Dairy production is totally ignored, although nearly 40% of the state's dairy production occurs downwind of the

Holcim facility. There is no discussion of impacts to livestock production in the valley other than a cursory tabulation of (inaccurate) numbers of cattle, cows, and calves. The document ignores the existence of a confined animal feeding operation for hogs less than four miles from the plant. It also ignores a goat dairy farm housing 500+ goats near the plant. The word “wheat” is only mentioned in passing. Wheat Montana, which is an extremely important locally based statewide value-added agriculture business, was not mentioned at all, despite the fact that it has wheat fields adjacent to the plant. The Community Food Co-op reported that it purchases products from fifty-five farms in the valley. Sixteen ranches provide local meats, and thirteen organic farms sell produce to the Co-op; over thirty farms sell eggs and dairy products. The DEQ has failed to analyze impacts to these businesses of increased mercury, lead, and other HAP emissions. The Gallatin County Web states that agriculture is a \$76 million industry. The failure of DEQ to address impacts to this important sector of the local economy is an extreme oversight.

Design Specifications

DEQ has again failed to provide any design specifications that would make it possible to accurately assess the potential for the formation of dioxin and other hazardous air pollutants when inserting whole tires into the middle of the kiln, circumventing the requirements of ARM 17.8.748. Please see the attached report by Optimised Operations discussing this and other deficiencies with this proposal.

Failure to Analyze an Adequate Range of Alternatives Including the No Action Alternative

Under MEPA, the DEQ must consider “alternatives to the proposed action.” MCA § 75-1-201(C). This includes the requirement that “the agency shall complete a meaningful no-action alternative analysis. The no-action alternative analysis must include the projected beneficial and adverse environmental, social, and economic impact of the project’s noncompletion.” Id. § 75-1-201(C)(IV); see also Mont. Admin. R. 17.4.617 (requiring “an analysis of reasonable alternatives to the proposed action, including the alternative of no action and other reasonable alternatives that may or may not be within the jurisdiction of the agency to implement, if any”).

As discussed above, the failure to provide meaningful analysis of baseline conditions necessarily violates MEPA’s mandate to provide a thorough analysis of environmental impacts associated with the no action alternative. Further, in dismissing all other alternatives to the “selected alternative” from any detailed analysis, the DEQ failed to consider the costs and benefits of reasonable range of alternatives including, but not limited to: use of TDF as opposed to whole tires; installation of additional pollution controls including activated carbon injection to control mercury emissions; alternative kiln design to increase combustion efficiency and control of CO, dioxins, and furans, alternative fuels, alternative methods to reduce operating costs aside from using wastes to fuel the kiln, and increasing the long-term productivity and efficiency of the kiln by converting to a dry process.

Further, in narrowly framing the project’s purpose as “lower[ing] operating costs” and “increas[ing] operational flexibility, the DEQ improperly constricted its analysis to alternatives that would meet Holcim’s specified bottom line, as opposed to alternatives that would fulfill Holcim’s more basic purpose to produce cement at a reasonable profit — without any cost to the health and welfare of people living and working in the Gallatin Valley.

We request that our scoping comments from January 23, 2004, and our comments on the first environmental assessment and draft air quality permit, submitted on May 30, 2003, be incorporated into the record for this DEIS. Many of the issues raised during those public comment periods are still relevant today, particularly the concerns regarding the best available control technology analysis. We do not believe DEQ has adequately addressed our concerns or properly analyzed the impacts of this proposal.

Since many of these issues overlap with Title V permitting, particularly the enforceability of this permit, we request that you include these comments in the record for the Holcim Title V permit pending before DEQ.

Sincerely,

Anne Hedges
Montana Environmental Information Center

Jennifer Swearingen
Montanans Against Toxic Burning

Alexandra Gorman
Women's Voices for the Earth

Jeff van den Noort
Montana Chapter of the Sierra Club