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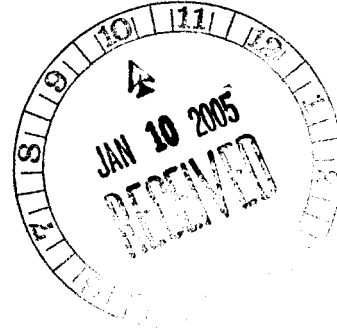
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January 7, 2005

Surface Transportation Board
Case Control Unit
1925 K Street NW
Washington, D.C. 20423-0001
ATTN: Rini Ghosh



RE: STB Docket # FD 34284

Dear Ms. Ghosh:

It is with great pleasure that I offer the Surface Transportation Board (STB) my comments concerning the Environmental Impact Statement for the construction of the Southwest Gulf Railroad in Medina County. I have prepared these comments as the technical advisor for the Medina County Environmental Action Association.

In general, I found that the EIS requires a great deal more detailed work, especially in the area of field studies. Statements are made throughout the EIS that are not supported by definitive facts or scientific data collected during the process of developing the EIS. In fact, the EIS appears to be a collection of information obtained from the internet and other general information sources rather than the conscientious collection of good field data one would expect from such an important document. As you well know, this EIS is meeting a great deal of public controversy, and it deserves much more true analysis than was provided in this first draft. I am pleading with the STB to provide more funding in order to address the true impacts caused by this project and to substantiate the final Record of Decision. Site-specific data is sorely needed to make a fair and unbiased comparison of all of the alternatives, as well as the truck alternative. As written, the EIS is extremely biased toward the proposed action. Statements and data are twisted in a manner to make the proposed action appear to impact the environment to a lesser degree than any of the other alternatives.

Additionally, a no-action alternative should be included that provides baseline data on the environment **as it is at the present time**. Whether this is called the no-action alternative or no alternative, it should be included to allow a comparison to the present state of the environment. The level of significance of impacts can then be measured against a baseline that is truly based on current conditions and not compared to postulated environmental conditions associated with trucking.

Interestingly, the EIS does not include a discussion of the trucking that will be occurring even with the rail in place. Vulcan has stated that it will use trucking for local transport of about 10% of the product. The EIS insinuates that trucking will not be used if rail is in place. In reality, the trucking associated with the proposed action will require some level of improvements to roads and will cause additional safety issues. This is not discussed at all in the EIS. This biases the conclusions.

The most striking problem with this EIS is the lack of supportive data. Data should be collected for each alternative alignment and properly quantified to offer unbiased conclusions for the EIS. The EIS should conclude by comparing each alternative in a summary table or in some other manner using quantitative and qualitative measurements. In my experience, I have found that assigning scores for each environmental factor based on the impact level impinged by each action often provides an unbiased method of weighing impacts by alternatives. Scores can be weighted according to importance to the community and sensitivity of the resource, etc. and then added to provide a final score that would be an indication of overall impact to the environment. The value of the score would not necessarily indicate significance, but a comparison of values would indicate which alternatives are more acceptable compared to others.

Because of the level of controversy with this project, it is important that this EIS be founded on good, sound scientific data. The Record of Decision made from this data must be a conclusion that can be upheld in a court of law. With the data that has been provided in the current EIS, none of the conclusions can be supported in court to any degree. I strongly urge the STB to consider this fact and prepare a supplemental EIS for review by the general public. Granted, this would result in additional costs to Vulcan Materials and possibly the STB; however, it would be a worthwhile investment and definitely an asset to the goodwill of the public. It is the STB's responsibility to ensure that this EIS is properly prepared and provides an unbiased answer as to the potential impact of this project to the environment. The Record of Decision must be made for the public good, and not for the good of rail, industry, or any other interest groups, including those of the public. The Medina Environmental Action Association is only requesting that the STB provide a fair and unbiased environmental impact analysis for this project. This EIS falls way short of that goal, and we plead that you will make an effort to resolve these problems and produce a document that will be acceptable to the public as well as stand the test in court.

In the pages that follow are more specific comments concerning the EIS. These are furnished for your review and consideration.

Comments to SEA Environmental Impact Statement

Page No.	Paragraph/ Section No./ Figure No.	Comment
1-10	Par. 2	In this paragraph, SEA argues that the quarry and rail are not a connect action. In their argument, it is stated that the quarry will be put in place even if trucks are required for transport of gravel and other materials. At the present time, no quarry exists to be served by the rail. Therefore, the logical question would be, why is the rail being built if a quarry is not in place? There are no guarantees that the quarry can be constructed and will be officially permitted at this time. Therefore, it seems quite illogical to be constructing a railroad to a nonexistent facility. If Vulcan was going to install the quarry regardless of modes of transportation for product, the quarry would already be in place and operating at this time, with limited use by trucks. This would have avoided any environmental impact

		statement or other hardship for Vulcan. In other words, the order in which this entire project is being developed is totally illogical unless the construction of the quarry is dependent upon a railroad being available to service its needs. Permitting of a railroad is extremely complicated and involves a great deal of federal regulation, whereas construction and design of a quarry serviced by truck transportation does not require a great deal of permitting. The fact that Vulcan places so much emphasis on the rail in spite of its difficulty for permitting further accentuates the fact that the two actions are definitely connected.
1-11	Par. 2	SEA states that "The proposed quarry evidently would not require any federal permits that would necessitate NEPA review by any other federal agency." The quarry more than likely will require a Section 404 permit because of its potential impacts to three tributaries running through the area. Granted, if these tributaries are dredged properly, a Section 404 permit may not be required. However, if these tributaries are not rechanneled, their water would run into the quarry, causing excessive erosion, flood damage, and potential contamination of the aquifer. There is no evidence that Vulcan is currently addressing this issue in any of its designs or discussions in the EIS (See SGR discussion on cumulative actions). I do not know of a method to provide a filtration basin per TCEQ regulations that could accommodate flood flows from these streams. The only way to avoid this issue would be to rechannel the streams which would require a Section 404 permit and NEPA action.
1-12	Par. 2	In this paragraph, it is argued that if the actions at issue had independent utility, they need not be considered together in one EIS. The sentence further explains that independent utility means that these actions could exist without each other, though they would benefit from the presence of each other. This argument may work for the quarry, in that it may be constructed without the railroad. However, the railroad has absolutely no use in the area without the quarry. Further, original correspondence concerning the quarry indicated that Vulcan would not consider construction of the quarry without rail. It was not until connected actions became an apparent argument that Vulcan stated that trucking was a viable alternative. Again, if this is the case, then why has Vulcan not initiated construction of the quarry using trucking until a rail can be constructed? The argument stated here by SEA is weak and probably would not withstand any counterarguments if contested.
1-13	Par. 1	The argument using Wetlands Action Network versus Army Corps of Engineers is very difficult to understand without some background information on the actions that were involved. SEA should provide more information in this paragraph describing what the actions were and why they were not considered related. The statement by the Court does not make any sense to the average reader. Also, the types of actions involved may have a very strong

		relevance as to whether they are even applicable to the Vulcan project. The paragraph should either be removed or provide much more explanation.
1-13	Par. 2	The definition of indirect impacts is not entirely correct. Granted, indirect impacts are usually later in time or further removed in distance, but also indirect impacts are usually caused by secondary actions caused by the proposed action. In other words, in indirect action might be industrial development around the rail road if a railroad is built. Again, I think SEA should provide a more clear definition that makes more sense to the common reader.
1-13	Par. 2	Cumulative impacts is also not clearly defined in this paragraph. Examples would make this much clearer to the reader. I believe examples would also show the reader that cumulative impacts are present for the rail. A classic cumulative impact would be wastewater treatment plants discharging waste into a common river. The first wastewater treatment plant constructed on a river may not discharge significant quantities of waste into the river system. However, as more and more wastewater treatment plants are constructed along the river basin, the significance of their discharges is higher due to the fact that the level of waste would be increased by prior wastewater treatment plant discharges. In consideration of the rail, a very obvious cumulative impact is the additional traffic load on rails running through the city of San Antonio. The city of San Antonio cannot properly maintain rail traffic that is currently impacting that city and is having many problems with derailing and other traffic issues. The addition of new rail traffic from the quarry in Medina County could have a significant impact on rail traffic in San Antonio due to its cumulative effect. In other words, by itself it would not be significant; however, in consideration of all other traffic moving through the San Antonio area, its incremental increase is significant. This issue is not addressed by the EIS and should definitely be considered.
1-15	Par. 4	The argument that the quarry is an appropriate part of the cumulative impact analysis for the rail is completely convoluted and shows little or no logic. An argument to tie together the quarry and the rail by cumulative impact analysis is only an argument to not consider the quarry and rail as connected actions. This argument is extremely weak and should not be used in the EIS. Cumulative impacts should be considered but should not involve the quarry and the rail. More importantly, cumulative impacts should involve the impact of the rail on additional contaminant load to the Edwards Aquifer and other groundwater resources, additional load on rail traffic currently moving through San Antonio, and additional loss of prime farmland and other resources caused by development along the railroad.
1-16	Par. 2	This paragraph states that SEA is very aware of the concerns of members of the local community, but it has not addressed any of the arguments presented by MCEAA concerning connected

		actions. It did include the arguments in the appendices, but it does not address them in its arguments in the EIS. The discussion on connected actions should provide significant rebuttals to what MCEAA presented. Arguments presented so far by SEA are very weak compared to those presented by MCEAA. This issue is vital to this entire project and the EIS and should be thoroughly and completely addressed.
1-17	Par. 2	If the rail and quarry are not considered connected, SEA does not need to assess impacts to threatened and endangered species from the proposed quarry development and operations. However, SEA does need to address impacts caused by the rail. Vulcan prepared a biological assessment of the quarry to the USFWS. This paragraph describes the biological assessment prepared by Vulcan for the assessment of endangered species. This biological assessment did not provide information applicable to any agency reviewing the site for impacts to endangered species. Data concerning the characteristics of the environment relative to endangered species is not provided in any detail that would allow for proper examination and analysis by the USFWS. Biological assessments are to be presented to the USFWS in a format very similar to an environmental impact statement. These assessments should lay out the affected environment in great detail and then provide an in-depth discussion of actions that could potentially impact each of the endangered species. Last, mitigative measures should be presented to allow for minimizing or avoiding impacts to the species. The biological assessment offered by Vulcan does not provide any of this information. In addition, we reviewed the golden-cheeked warbler surveys that were conducted and found them to not meet official protocol by the USFWS. Locations of transects were not shown in maps, and notes were cryptic at best; at worst, they were illegible and were not understandable. This information may be available, but it was not provided to the USFWS in any kind of form that could be properly analyzed. While we realize that the USFWS will make the final determination on this, we would still like to emphasize that we do not feel that this information is adequate. As a sidebar, it is interesting to note that Vulcan has conducted golden-cheeked warbler surveys on the proposed quarry area as a "courtesy" to the USFWS. However, more than likely Vulcan was anticipating the quarry to be a connected action that would require intensive endangered species studies across the entire quarry area.
2-13	Fig. 2.1-1	This figure is not useful as a general location map. It would be better if the map focused on Medina County and the counties surrounding Medina County. More roads could be included in greater detail that might allow readers to more readily identify the location.

		Also, captions for all figures should be more detailed in their descriptions. For example, this figure could be labeled as the "general location map for the areas impacted by the proposed and alternative actions." Additionally, the proposed action area is a circle and could be shown more as a square or rectangle to depict the fact that it is a linear project and not a point, as it appears to be on this figure.
2-3	Fig. 2.1-2	This figure is an excellent figure for a general location map, but it does not have nearly enough detail to provide the readers with sufficient information concerning the location of all of these alternatives. This figure should either be provided as a much larger figure or could be broken into 7 or 8 individual figures showing detailed locations of each of the routes being proposed by the EIS. Most of the audience reading this EIS are going to be personally impacted by the rail and would like to know exactly where each of these alternatives is located. This map does not provide that information. I would propose that more detailed figures be provided for the readers.
2-5	Par. 1	The description of the proposed action is inadequate and should include much more information concerning the location of crossings, the bridges and design of bridges to be used, where fill and berm areas will be placed and where areas will be cut for the rail, and grades across all sections of the rail. This is very important because the Medina Dam alternative was ruled out due to grades. Each of the alternatives should also be described in detail in such a way that the readers will be able to understand not only where the rail will be constructed, but where berms, bridges, and other amenities will be included.
2-6	Par. 3	The term "appropriate" when used with grade crossing safety devices is very ambiguous. More details should be provided here in that the type of safety device used would determine the level of impact expected. This is especially true if the crossings are at grade or above grade. Similarly, in paragraph 3 the same term is used to describe fencing on both sides of the right-of-way (ROW) for the rail line. This needs to be defined in more detail to allow for a more intelligent discussion of impacts to wildlife and domestic animals. Farming operations along the ROW range everywhere from croplands to cattle, horses, goats, and other small domesticated animals.
2-7	Par. 1	In the last sentence of this paragraph, SGR states that they plan to maintain the ROW in a manner that would minimize fire hazards consistent with industry and local standards. This again is ambiguous and does not provide enough information to allow for impact analysis. More detail is required. Will herbicides be used? What herbicides will be used? How will they be applied if they are used? Will the area be mowed on a periodic basis? Will brush be trimmed along the ROW? Will fences be kept clear of brush and

		weeds? Will invasive species be removed? Will SGR be responsible for any invasives encroaching on farmland adjacent to the ROW? Again, these questions need to be answered to allow for analysis of impacts to adjacent properties.
2-8	Par. 3	SEA is considering the use of trucks as part of the no-action alternative. Although this is an acceptable alternative, it actually is not a no-action alternative. NEPA rules explicitly state that the alternative analysis in the EIS must include the alternative of no action. There are several interpretations of no action, of which the most accepted definition involves no action occurring and allowing present conditions to continue. In this case, the rail would not be built, and no quarry would be present. Using trucking as an alternative assumes that the quarry will be constructed. At the time of this EIS, a quarry is not present and therefore should not be included as part of the no-action alternative. Therefore, trucking would not be part of a no-action alternative; rather, it would be an alternative that would be available if the quarry is built, similar to the rail. The purpose of the no-action alternative is to determine the level of impacts caused by the various alternatives on the environment compared to a baseline. Thus, in making decisions, SEA would have the opportunity to compare changes in environment with the present conditions. A no-action alternative that truly leaves out any alternatives such as trucking and rail is a much better baseline than using trucking as a no-action alternative. The trucking alternative as a no-action alternative significantly biases the EIS analysis towards showing rail as a more "eco-friendly" option. Obviously, both trucking and rail cause significant impacts to the environment and should be compared to a baseline of true no action.
2-8	Last par.	This paragraph discusses 15 potential rail routes that were considered for comparison in the EIS. Information provided does not allow the reader to decipher how SGR decided to drop most of these rail routes. To improve this argument, SGR should provide the following: • A figure showing the routes that were considered. • A table listing criteria used to rule out these routes and some level of measurement as to how each route impacted the criteria. In other words, SGR should prepare a table that lists the criteria as columns and the routes as rows. Criteria could include operational considerations, cut and fill requirements, impacts to wetlands, impacts to property owners, location of property boundaries, impacts to floodplains, and impacts to cultural resources. • A final conclusion that provides more detail to why each alternative was dropped from analysis.
2-10	Par. 2	SGR and SEA both realize that the Medina Dam alternative is one

		that has been requested by the public and does have viability as an alternative. The arguments provided in the Medina Dam alternative discussion are weak and contain no detailed data that would allow any outside reader to agree or disagree with the conclusions made by SGR. One example is the statement, "SGR further asserted that this route would be much longer than the proposed route and other alternative routes, would cross more properties, and would require land and a new easement to permit rail service to be obtained." These are ambiguous statements with no data to back up the information presented. Additionally, all of the routes will require land and new easements as well as condemnation of properties. This is nothing new. Further, SGR indicated that "...deviations from the route that it believes would be necessary to avoid a grade separated crossing of US 90." Construction of a grade separated crossing should not be a reason to remove an alternative from the analysis. In fact, the proposed action may involve a grade separated crossing, and SGR is making no attempt to deviate the rail to avoid this crossing. Additionally, SGR states that deviations from the old Medina Dam route would prevent serious engineering/design problems. There is no attempt to describe those engineering and design problems, and if they are significant. The reader can only assume that the most significant problem would be having to design such deviations. SGR continues to argue that steep grades are encountered on the Medina Dam alternative. No attempt has been made to describe or show where these steep grades occur. If the Medina Dam alternative is dropped because of steep grades, definitive data must be provided to show why this is the case. A great deal of mining and quarrying is currently being conducted in the Rocky Mountains, where steep grades are definitely an issue, and much more of a problem than in Medina County. SGR could easily overcome steep grade problems by decreasing the load on each train trip or by designing the track to average grades across the area. Again, this argument cannot be justified by the data provided by SGR. The entire argument lacks proof, data, or any definite information that would allow a good comparison. In conclusion, SGR should include the Medina Dam alternative in its full EIS analysis unless more definitive data can be provided and arguments are much stronger. It is obvious that SGR just does not want this alternative and cannot truly base its decision on good scientific fact.
2-13	Alternative Routes	The description of each alternative is vague and provides little information to allow the reader to visualize each alternative. Again, more detailed figures showing the location and alignment of each alternative is required. One of the most significant issues in this entire project is the encroachment on private properties, which

		cannot be deciphered by the figures provided. Detailed maps showing property lines, contours, and topography along each route should be provided. This can easily be done by dividing Figure 2.3 into smaller segments at a minimum of 1:24,000 scale. Each segment could show property lines and other features and allow the reader to see exactly where each alternative ROW is located.
2-14	Par. 1-2	Without restating our argument previously discussed, the no-action alternative is not acceptable and should be the baseline of present conditions, since the quarry has not been built. Trucking is only an alternative for the quarry if the quarry has been constructed.
2-15	Par. 2	This paragraph discusses upgrades to roads in the area. More detail is required to describe the types of upgrades that are being proposed by SGR. None of the roads present in the county, with the exception of state roads, can handle constant gravel truck traffic. SGR states that there would be a significant cost factor in upgrading, improving, and maintaining roadways as the raw materials would be required, and that those raw materials would be easily provided by VCM. This discussion should include cost analysis and should indicate who will pay the bill for these upgrades. The public has a right to know whether SGR intends Medina County and other municipalities to contribute to improvement of roads, or if this will be completely handled by SGR. This is also important in the discussion of road improvements and railroad crossings associated with other alternatives. <i>Since SGR states that trucks will still be used with the proposed action, improvements to roads and safety issues associated with the new truck traffic should be included in the impact analysis.</i> This fact is being completely ignored in the EIS.
2-17	Par. 2	The discussion concerning scheduling of truck traffic is ambiguous. This is extremely important in determining levels of impacts with regard to safety issues. More information should be provided here to allow for such analysis.
2-17	Par. 4	We would argue that the truck alternative would be a viable no-action alternative if the quarry was in place and in operation. However, the quarry is not present at this time and there is no indication that SGR will be able to construct and operate the quarry. Again, it is our opinion that SGR is using the trucking alternative as a no-action alternative to bias the conclusion of the EIS to show rail as a more "eco-friendly" alternative. A no-action involving the baseline of no actions occurring should be used to allow for a more unbiased comparison of alternative actions.
2-19	Par. 1	This paragraph discusses the maintenance and fueling facility near the quarry site. It is stated that this is located off of the Edwards Aquifer recharge zone, but no data is provided to support this statement. Only a figure showing the geologic atlas and a projected location of the boundaries of the Edwards Aquifer recharge zone are shown. It is well known in this local community that these boundaries are only projected and politically based and

		are not scientifically delineated in the field. Fueling facilities are not allowed on the Edwards Aquifer recharge zone and therefore, a geologic survey should be conducted to determine the boundaries of the recharge zone with respect to the quarry and the fueling facility. Additionally, the figures provided for this argument are at such a large scale that no definitive conclusions could possibly be made. The figure should be made at a scale that would accommodate the property to be used for the fueling station and some of the surrounding area. The exact boundary of the Edwards Aquifer recharge zone could then be drawn based on definitive field data.
2-19	Sec. 2.6 Environmentally Preferable Alternative	This section should be removed from this portion of the EIS. It provides a preliminary conclusion before any data or arguments have been presented. This again biases the reader towards the alternative selected by SEA. This section is more appropriate at the end of the EIS, and not in this location.
3-2	Sec. 3.1 Transportation	Detailed figures need to be provided showing all roads potentially impacted by each alternative. The map should be at a scale where even minor roads and private roads are shown to allow readers to determine if the rail is going to impact their property and their easements. This section on traffic should also include descriptions of each of the roads impacted including road limits, surfacing, and widths, all of which have bearings on the level of impacts caused by truck traffic. Further, information on current traffic loads and general uses for each of these roads should be provided. Last, the number of private roads and driveways crossed by each rail should be included. Later in the discussion, SGR should present information as to how it will address safety and construction of private road and driveway crossings.
3-3	Par. 1	This paragraph refers to a pipeline that ruptured in the past. This information should be referenced and more detail provided.
3-3	Par. 2	USGS topographic maps and aerial photographs are not good sources of information to determine hazardous materials spill sites and hazardous waste sites. We assume that SEA conducted a search of current regulatory databases as stated in paragraph 5, and this information should be provided in an appendix.
3-4	Sec. 3.2.2 Existing Energy Resources	A figure should be provided showing the locations of pipelines, water lines, sewer lines, and electrical utility lines potentially crossed by each alternative.
3-7	Sec. 3.3.1 Groundwater	The entire section on groundwater needs much more detail concerning the project site. Figures should include map scaled to a minimum of 1:24,000 showing the location of each of the aquifers and drinking water wells found in the project area. The wells should be color-coded according to the source aquifer. The Edwards Aquifer recharge zone should be carefully delineated and mapped. Delineations should be performed according to field data and not using the maps found through public information. These maps are for informational purposes only and do not show the physical

		boundaries of the aquifer recharge zone on the project area. It is critical that this be delineated, especially in the location where the fuel facility is to be located. This area is highly vulnerable to contamination, and its location within the project area is extremely important. Many of the aquifers in the area are sensitive to withdrawal of water and are very slow to recharge. These aquifers are also sensitive to vibration. More information should be provided concerning the sensitivities of the aquifers in the area. Another figure should be offered that shows the location of all wells in the area, but color-coded according to their usage. This may also have a bearing on sensitivity to impacts; for example, whether groundwater is used for domestic or stock purposes or for commercial or industrial use makes a difference on the level of impact or contamination that the well sources can accommodate.
3-8	Par. 1	This paragraph states that a field survey and mapping of the project area was conducted to identify major or minor groundwater spring sites along or near the proposed and alternative routes. It is difficult to believe that the statements in the paragraph are supported by field data. The entire area, especially in northern Medina County, is covered with springs and seeps. These springs and seeps have produced wetlands that are fairly obvious. More careful field surveys should be conducted of the project area. Again, this information indicates that SEA did not spend sufficient field study time to warrant many of the conclusions drawn in this EIS. Further, karst features are known to occur along the proposed route, especially in the area of the fuel station and loop. Intensive field studies need to be conducted to identify these karst features. Some are very obvious, such as sinkholes; others are faults and fault zones. A figure should be provided to show the location of all seeps, springs, and karst features within one mile of each route or alternative route.
3-8	Sec. 3.3.2 Surface Waters	The figure associated with this surface water section is unacceptable and shows very little useful information for the EIS. More detail is definitely required to provide any information concerning surface waters. Again, 1:24,000 scale maps should be used, and all perennial, intermittent, and ephemeral streams should be shown on this map. The information offered in this section shows a complete and total lack of any intensive field studies to support any conclusions drawn. The location and flow of streams in the area is extremely important because of the fact that these provide a conduit for transport of contaminants from the project area, especially in the case of a rail accident or other discharge of hydrocarbon materials. Figure 3.3-2 is completely useless, and the need for it in the EIS is questionable. Figure 3.3-3 again needs more detail and should be divided into several figures scaled to a

		minimum of 1:24,000.
3-13	Par. 1-3	This section discusses stream orders of 1, 2, 3, and 4. No explanation of the definition of orders is provided and makes this section very confusing. Information concerning the basis of orders is definitely required if these concepts are to be used to argue about significance of impacts. Also, this section is describing impacts, which is not appropriate for the affected environment section. These sections should be moved to the environmental consequences section of the EIS.
3-13	Par. 4	This paragraph describes Quihi Creek as an intermittent stream that is dry most of the time. This is inaccurate, and careful field observations would show that this statement is not true. Quihi Creek is intermittent, but it flows for a significant period of time during the year. The creek is supplied water not only from surface water runoff but also from seeps and springs in the northern part of Medina County. The discussion on significant stream crossings should include much more detail. A field photograph of each crossing by each alternative should be provided in the EIS. Additionally, a 1:500 scale map should be presented to show the location of each crossing and the approximate width of the ordinary high water mark at that crossing. This will allow for a definitive determination of the area of jurisdictional water impacted or crossed by the rail. This discussion should also include all crossings of ephemeral streams. Ephemeral streams in this part of Texas are extremely important and contribute significantly to flood flow and in providing water to perennial streams and recharge zones in the area.
3-14	Table 3.3-4	This table does not provide any information that is of consequence for the EIS. The fact that routes cross streams is important, but the data provided in this table does not allow for a well-designed argument concerning significance of impacts to those crossings. The number of crossings that are impacted by each alternative is not as important as the sensitivity of the streams to impacts. Also, no information is provided concerning the contribution of these streams to areas that may be supporting endangered and threatened species further downstream.
3-15	Fig. 3.3-4	Again, this figure is completely useless because of the scale in which it is provided. I cannot overemphasize the importance of having the Edwards Aquifer recharge zone mapped in the field by a qualified geologist. We have visited with the Edwards Aquifer Authority, and even they admit that these lines that are provided in the map are only interpolations of point data taken in the past. They are not accurate and need to be delineated in the field.
3-17	Par. 3	The need for this entire section is somewhat questionable. That may be due to the fact that the arguments presented are ambiguous and difficult to follow. Throughout the rest of the EIS, SEA has attempted to show that the Edwards Aquifer recharge

		zone is not impacted by the project, and yet, in this section they are trying to prove that stream flow is significantly decreased because of the number of karst features in the area. At the surface, this entire section appears to be an attempt to show how much SEA knows about karst features and stream flow. A paragraph needs to be added to this section that explains why stream flow regimes are important, and why it matters that they have not changed over the past 45 years.
3-19	Par. 1	Information on water quality downstream of the creek crossings is almost completely irrelevant because of the distance of the sampling points from the project area. Because of the importance of the impact of the project on water quality, samples should be taken in the streams in close proximity to the alternatives to provide a baseline for monitoring in the future to determine if the project is impacting water quality. Because the area is rural, much of the stream quality in the area is very good and should remain so.
3-19	Par. 2	This paragraph indicates that water rights are used for irrigation purposes and owned by individuals. It is extremely important to know what is being irrigated and the potential impact of contamination on that irrigation water. Also, will the project impact flow in a manner that would be detrimental to irrigation use?
3-22	Sec. 3.3.3 Wetlands	This section appears to rely almost completely on the National Wetlands Inventory Maps for determining location of potential jurisdictional wetlands. It is well known that NWI maps are not reliable but provide a good starting point for assessment purposes. Field assessments and delineations should be conducted to determine if the proposed route and alternative routes will impact wetland areas. Granted, an individual Section 404 permit can be avoided if these wetlands are crossed using bridges, or trestles, but it will still require a Nationwide Permit 14 and pre-construction notification to the USACE. The level of effort and the type of permit required will be determined by the area of surface waters impacted. Thus, it is important to determine if wetlands and other surface waters are impacted in any way by the construction of the railroad. The section states that wetlands are not common in the area, which is a totally false statement. Field observations would clearly show that the area is covered by small wetlands that are provided hydrology by seeps and springs along and near streams. The section also states that the number of wetlands that would be formed would be limited due to the lack of occurrence of hydric soils. This is also an inaccurate statement in that it is assuming that if hydric soils are not shown on the soil survey, they are not present in the area. It is well known that soils in the area have hydric inclusions where wetlands have formed. Also, some of the wetlands may not be jurisdictional due to the fact that they are not connected to navigable waters. These wetlands probably have hydric soils which are not shown on the soil surveys due to the

		small area involved. Again, basing the occurrence of wetlands on NWI maps and soil surveys is not adequate for determining impacts by the railroad. Field data and field identification of all wetlands and surface waters along each route is needed to provide an unbiased and accurate accounting of impacts to these sensitive natural resources. We also agree that wetlands that are isolated from and not associated with streams are not regulated. However, this statement is somewhat ambiguous and should be clarified as well as accompanied by some reference to a federal regulation. The definition of isolated is not provided in the text and makes this statement somewhat ambiguous. The writers of the EIS need to realize that readers are the general public, especially with this project. Much more explanation is required because of that fact. Also, the text needs to consider ephemeral streams. These have become an important part of jurisdictional waters in the state of Texas and other western states where intermittent and perennial streams are not common.
3-24	Sec. 3.4.1 Flora	This section on flora is completely inadequate and provides no useful information. It is very obvious that field observations were not conducted for this portion of the project. The description of vegetation communities is clearly inadequate, and the information collected could have been obtained from any junior high ecology book. Again, the vegetational communities located along each alignment should be field mapped, identified, and described. The descriptions should include the dominant plants in each plant community as well as the level of succession. If the area has been impacted by agricultural practices, it should be mapped and so stated in the EIS. This section further states that sensitive plant communities were not identified in the area. Because field observations and delineations were obviously not conducted, it is difficult to understand how the authors of the EIS can assert that no sensitive plant communities could be identified in the area. The fact that this was attributed to extensive clearing and land use practices in the area further shows the lack of extensive field data being collected for this EIS.
3-26	Sec. 3.4.2 Fauna	This section on fauna is also totally inadequate. Much more detail should be provided. Lists of reptiles, amphibians, birds, small mammals, and large mammals are available through Texas Parks and Wildlife and local community organizations such as the National Audubon Society. The only animals listed in this section are the most common animals found in Texas. A list of animals observed during the field investigations for wetlands and vegetation could be provided in the EIS. Also, indirect evidence of animals should be provided. This would include burrows, nests, tracks,

		scat, and any other evidence found during field investigations. Because SEA is a federal agency, it falls under the jurisdiction of the Migratory Bird Treat Act. This act protects any migratory birds found in the area. Thus, a complete survey of migratory birds in the area should be conducted. It is important to note that almost all birds in the state of Texas are considered migratory. Therefore, a rather extensive ornithological survey should be conducted to determine if any migratory birds can be potentially impacted by this project. Another source of impact of a railroad is that it will impact the connectivity of wildlife habitat in the area. It is well known that linear projects such as railroads can bisect habitat, causing significant impacts that would otherwise be overlooked. The rail may separate nesting areas from feeding areas, for instance.
3-26	Sec. 3.4.3 Endangered or Threatened Species	More detail is required in this section on endangered and threatened species to provide information on the black-capped vireo and golden-cheeked warbler. It is stated that there is a lack of suitable habitat, and yet suitable habitat is not described. Again, extensive field studies should be conducted to delineate vegetational communities, which would probably justify this statement. However, with the information provided, no argument can be made to justify the fact that suitable habitat is not present. Detailed maps should be provided that show endangered species habitat. The section states that assessments were accomplished by Vulcan, but no data is presented and the locations and areas that were assessed are not shown. We have reviewed the biological assessments and the bird surveys that were conducted by Vulcan and have concluded that they are not adequate and do not meet USFWS protocol. They are currently under review by the USFWS and have not been accepted to date. This information should also be provided in the EIS but is completely ignored. Information on the state-protected endangered and threatened species has been lifted directly from the internet site. This information is useful if it is discussed in conjunction with vegetational and wildlife surveys conducted along each alignment. However, it is completely useless to provide this information if the reader is not given information concerning habitat available in and along each alignment. Also, the status of some species is left blank, and no explanation for that fact is provided.
3-30	Sec. 3.6 Physical Setting	This section provides fairly good general information for Medina County, but no real information for the project area. This would be an excellent section to discuss grades and topography and their impact on the project. Using digital elevation maps, which are available on the internet, models of the routes could be easily developed to determine potential grades and cut and fill

		requirements for each of the alternatives, including the Medina Dam alternative. This information could be used either for or against the Medina Dam alternative, but either way it would provide more substantive evidence for arguments. The fourth paragraph in the discussion on page 3-31 is out of place and should actually be provided in the groundwater discussion. Information on wells does not belong in the physical setting section.
3-32	Sec. 3.6.1 Soils	The soils section for the EIS is fairly comprehensive and provides some information for the reader. Most of this information is readily available on the internet. The section should list soil series found on each alternative rather than combining all of the alternatives together. In the environmental consequences section, this may have a bearing on conductance of vibration, potential for shrink-swell, erosion hazards, and other important factors that have a significant effect on the level of impacts caused by construction of a railroad. This section of the EIS is an excellent location for range sites to be described. The NRCS provides information in the soil survey on range sites in and along all of the alternative and proposed actions. The EIS states that most of the land is not cultivated along the railroad, therefore it can only be assumed that it is used for range or wildlife. This contradicts earlier statements about the majority of the railroad being in areas that are cleared or used for agriculture. A description of the range sites provides information for the potential production of the site for livestock and wildlife. It also provides an excellent measure of the condition of the range based on plant composition. The description of range sites could be placed either in the soils section or in the vegetation section, but it is very important in impact analysis, especially for this project. Full understanding of the condition of the range allows for a logical and scientific evaluation of the potential for recovery and level of impact expected on these areas. For example, areas in poor range condition will recover much more quickly than those areas that are in good range condition, or at or near the climax community level.
3-35	Par. 6	This section discusses the prime farmland soils impacted by the railroad. It is stated that the designations may not be applicable here based on use because few of the soils crossed are currently cultivated. Again, this is a false statement. Prime farmland soils are prime farmland soils, regardless of use. Their designation as prime farmland soils is based on potential use as well as present use. The NRCS is very interested in projects that permanently remove use of these soils from agricultural purposes. In this case, construction of the railroad will directly remove prime farmland soils. Further, the railroad may remove prime farmland soils from agricultural uses due to the fact that it may bisect agricultural lands, making cultivation logistically difficult, and would indirectly remove

		prime farmland soils due to potential industrial development in and along the railroad. All of these issues must be addressed. It is important to note that the NRCS requires a separate analysis for impacts to prime farmland soils. This is coordinated through the NRCS State Conservationist using Prime Farmland Conversion Impact Rating Sheets, which are reviewed by the NRCS. This is Form AD-1006 and is available on the internet. This information must be included in the EIS.
3-36	Par. 2	This paragraph only discusses the remote loading facility. The section should also include information on the soils that could be impacted by the route chosen for the trucking. The upgrade required for roads due to trucking may involve impacts to soils and should be addressed. Detailed figures at a minimum scale of 1:24,000 should be provided to show soils and range sites along each of the routes proposed by the EIS. As stated in the EIS at the present time, soils descriptions are useless when the locations of these soils are not known.
3-36	Sec. 3.6.2 Geologic Hazards	A figure showing the location of landslide/mass movement hazards would be helpful here. Figure 3.6-1 is only a general atlas of the geologic outcrops in the area and does not really show site-specific information. In addition, the colors on this map make it very difficult to follow routes.
3-37	Sec. 3.6.3 Karst Features	On the northern end of all of the routes, karst features are present and should be discussed in more detail. This discussion is very general and does not provide site-specific information, especially to allow for a comparison among the alternatives and proposed action. Susceptibility of the area to karst formation is not as important as the presence of karst formations. This can only be analyzed by site-specific geologic assessments. It is well known locally that sinkholes and caves are present in the northern portions of the project area. These should be carefully assessed according to protocol provided by the TCEQ for development of WPAPs (water pollution abatement plans). This will be required for the project in areas in or near the Edwards Aquifer recharge zone. SEA should do this as a courtesy to the general public to assure them that the fuel supply facility is not located on the Edwards Aquifer recharge zone or other geologic formations containing karst features. These features provide a direct conduit of contamination to shallow and deep aquifers in the area.
3-41	Para. 4	The percentage of land that is prime farmland, forest, and grazing land in the entire county is not applicable to this project. Figures should be produced showing detail on site-specific land uses across the proposed action and alternative actions. Percent of land within 100 ft. of each alternative and the proposed action being used for farmland, grazing land, industrial, and other uses should be calculated for each alternative and the proposed action. This will allow for a more definitive argument and delineation of impacts

		to land use.
3-42	Sec. 3.8 Noise	The baseline noise analysis appears to have been conducted in a good scientific manner. However, the location of sampling points is somewhat questionable. Most of the sampling points were not taken along the routes but were taken at a distance from the proposed and alternative routes. Granted, most of these were located in houses and other potential receptors; however, some points should also be taken along each route. In the noise analysis, the maximum levels of sound are critical for impact analysis. A 24 hour average for an area where a train traverses a track only 4 times during the day is not indicative of the actual noise levels when the train is present. Noise levels are especially excessive not only from the sound of the engine and train moving along the track, but also from the warning horn as the train approaches intersections. These are short interval but extremely loud sounds that have a significant impact on the quiet, rural environment of Medina County. Sampling was somewhat biased by placing samples along highways, which are known to have higher noise levels compared to most of the remote areas traversed by each route. The rail does not traverse highway rights-of-way and areas distant from highways should also be used in the baseline analysis. Placing samples along highways biases the conclusions from the analysis towards not showing significant impacts because the baseline would be high from traffic noise. A majority of the residences impacted by this project are located on small, unimproved gravel roads where traffic noise is minimal. Further, the explanation of all of the measurements made for this analysis provided in the Environmental Consequences section should be moved to this section. Most of the readers are not going to be familiar with the terminology or the abbreviations used.
3-50	Sec.3.10 Recreation and Visual Resources	As part of the EIS, private landowners potentially impacted by each alternative should be interviewed to determine their use of the land and what types of game are actually hunted on their properties. The statement in this section is very general and includes game that could be found almost any place in the state of Texas. It is doubtful that mouflon sheep are found in any of the locations in Medina County. Additionally, some of the exotics such as sika deer and axis deer may not be as common as it appears in this section. It is important to note that javelina is not swine. In Texas, wild swine are called feral hogs and are domesticated hogs that have become wild. Javelina is actually a native species here in the state of Texas and is a game animal. Feral hogs are hunted in the state of Texas but are not regulated by Texas Parks and Wildlife because they are not native game. Similarly, many of the exotic deer species are not under regulation of Texas Parks and Wildlife.

		In the last paragraph of this section, a statement is made that aesthetics are dominated by naturally-appearing landforms and vegetation. This statement should be corrected to read that aesthetics are dominated by natural landforms and vegetation. The statement insinuates that landforms and vegetation are not natural, which is not the case.
3-50	Sec. 3.11 Cultural Resources	This review will not cover cultural resources, which will be addressed by another reviewer (Dr. Tom Hester).
3-69	Sec. 312 Socioeconomic Setting	This section provides a good general overview of the socioeconomics of Medina County. However, a description of the socioeconomics located in and along the proposed alignments is not provided. This is extremely important in that the impacts to socioeconomics will be isolated to the areas in the vicinity of the alignments. More site-specific information could be obtained by analyzing data from individual census tracts through which each alignment lies. Several figures could be included in this section to show census tracts in the vicinity color-coded according to population density, minority status, average income, and other demographics.
4-15	Par. 1-3 Vehicular Delays	Just because the average daily traffic is less than 5,000 vehicles does not mean that traffic delays should not be quantified at each crossing. One of the greatest concerns in Medina County regarding this rail is the fact that the train has the potential to impede emergency vehicles and school buses. Also, the analysis assumes that the train will immediately accelerate to 25 MPH before crossing any of the roads. Crossings at or near the loading and unloading areas will probably experience very slow and even stopped train cars. There is no explanation given as to whether this will be a problem or not. Again, specific information about each crossing for each alternative and the proposed action should be provided based on the distance from the starting and stopping points. This will definitely change the level of delay at each location. Otherwise, impacts cannot be properly weighed or analyzed.
4-15, 4-16	Grade Crossing Safety	This section discusses grade crossings. The fact that the Texas Department of Transportation (TxDOT), Medina County, and Vulcan Materials all agree to an above-grade crossing for FM 2676 was never addressed in this section. Vulcan changed its mind and is now petitioning TxDOT for at-grade crossings. In spite of the mitigative measures that are presented, the public at large is not happy with the fact that Vulcan wants an at-grade crossing at FM 2676. Also, SEA is apparently not familiar with environmental impacts in rural areas if they consider delays to vehicular traffic insignificant because of low levels of traffic on the roads. This is especially true for delays during construction. These can be very significant, especially for private roads and driveways that may be blocked for long periods of time during construction. An additional mitigative measure should be added that will make the Gulf

		Railroad Company responsible for any accidents or injuries associated with at-grade crossings as well as financially responsible for compensation of any loss of business, etc. associated with delays due to construction. SGR should also be responsible for any loss of life and additional damages caused by fire, etc. due to the fact that emergency vehicles were delayed by trains at the time of the emergency. All of these situations would be completely alleviated if an above-grade crossing was available, at least for the FM 2676 crossing.
4-18	Sec. 4.1.2 Risk of Accidents	The accident analysis methodology appears to be sound. However, some allowance should be made for private road crossings, which do not appear to be included in this analysis. The analysis does not include the 10% truck traffic that will still occur with the rail alternatives. Private roads and driveways are often the location of injuries and deaths due to the fact that warning devices and other safety features are not usually provided. Mitigation measures should include some method to accommodate and minimize injuries and deaths at these locations. At the very minimum, railroad crossing signs and warnings should be provided, even for driveways, etc.
4-22	4.1.3 Utility Crossings	Correspondence with Duke Energy and Koch Pipeline should be included in the appendix. If it is in the appendix, it needs to be stated in this text. Otherwise, the reader has to assume that this correspondence has occurred. This is extremely important in this case and the information should be provided for reader review. Also, any consultations with the Texas Office of Pipeline Safety should be confirmed with written letters and correspondence. Oral communications would not be acceptable in this case because of the potential for impacts based on this fact alone.
4-23	4.1.4 No-Action Alternative	We agree that the truck alternative would have significant adverse impacts on transportation infrastructure and traffic safety in the area. However, this can be mitigated by construction and upgrading of the roads. Some form of mitigation should be provided along with approximate costs involved to allow for an economic analysis comparing trucks to the rail. This is not provided in this section, or in any other portion of the EIS. Again, we can only assume that an analysis was performed to determine that this would not be economically feasible.
4-25	Par. 2	The statement is made that road construction activities would be longer in duration and disturb a larger area for the truck alternative. There is no justification for this statement. Please provide facts and data to back this statement.
4-26	Sec. 4.3.1 Hazardous Material Waste Sites	A figure should be provided showing the location of hazardous waste sites and hazardous material sites in the vicinity of the different alternatives. More than likely there are no risks in disturbing these areas, but the information is useful to the reader. The proposed rail operations do not involve transportation of hazardous materials, but the trains themselves contain significant

		quantities of diesel and hydraulic fluids that could be released in the event of an accident or engine malfunction. Ruptured hydraulic lines, brake lines, transmission fluid reservoirs, oil reservoirs, and fuel tanks can occur on trains, and this should be addressed. SEA should be very familiar with the potential for these types of incidences to occur when trains are pulling loads similar to those associated with this quarry. This information should also be provided in this section. Additionally, this potential would probably change with each site based on length of rail and grade of rail. The fact that a fuel supply facility is provided both in the trucking alternative and the rail alternatives is not addressed in this section. Both of these facilities would contain materials that are considered hazardous to groundwater resources. Information needs to be provided to show mitigative measures that will be used at each of these facilities to minimize or avoid impacts to groundwater. Otherwise, significant impacts would have to be considered.
4-31	Operational Impacts to Groundwater	This section also needs to address the fact that the actual boundaries of the Edwards Aquifer recharge zone have not been delineated on the site, making it next to impossible to determine where to place the fuel supply facility where it is not located on the Edwards Aquifer recharge zone. This needs to be addressed in advance of any impact analysis. Also, the section needs to address the fact that rail equipment can fail, causing a release of hydraulic fluids, oils, and fuels that will not be related to derailments. Ruptured hydraulic lines and other pressure lines on rail cars and the engines can easily occur when heavy loads such as gravel are involved.
4-33	Par. 5 No-Action Alt.	Comparisons are once again made that allude to a greater occurrence of accidents and releases of petroleum hydrocarbons from trucks, but no data to justify these statements is furnished. All of these arguments must be based on sound scientific data and not inferences. For example, what is the actual quantitative difference in the quantity of dust produced by trucks versus that by the rail? How was the potential occurrence of motor vehicle accidents determined and compared to rail transport? Again, this section did not even address the fact that a fuel station will be constructed for the trucks. This station is apparently off the recharge zone, which would be less of an impact compared to the fuel station for the rail, which is on or near the recharge zone.
4-38	Par. 2 No-Action Alt.	Statements are again made that the no-action alternative would have a greater impact on surface water, but no quantitative information is provided to justify this conclusion. Also, no comparison is made concerning floodplain impacts. The truck alternative should cause no changes in floodplains due to the fact that no new bridges would be required and no impediments to floodplains would occur. Flooding is a major impact of this project,

		and it is not addressed in a manner that allows for a proper comparison among alternatives. SGR states that it will conduct hydrologic studies for the proposed or accepted alternative. These studies should be conducted prior to selection of alternatives such that an intelligent decision can be made based on good, sound scientific data. Additionally, the type of bridges used at crossings are very important in determining the impacts to floodplains. For example, trestles and bridges can impede flood flows, depending on the distance between columns and spans. During heavy flooding, brush and woody debris can clog these openings, resulting in a temporary backup of flood waters. This incident needs to be considered in determining impacts to floodplains. In many cases, hydrologic studies do not consider clogging of bridge spans in their analysis, resulting in an unrealistic view of potential flood levels. This section of the report should include a full hydrologic study of each alternative to determine the changes in floodplains caused by the type of crossing used and caused by potential clogging of that crossing. Mitigative measures need to be carefully detailed and specific designs for bridges need to be required to assure the public that the 100-year floodplain will not be altered by any of the designs. Following analyses, designs can be compared based on cost of construction of the bridges required. This can then be compared to the truck alternative, which will involve no bridge construction. It is our opinion that the truck alternative will probably have the least impact on floodplain changes and cost to mitigate for floodplain changes. In the current EIS, this is not addressed at all and leads the reader to believe that the no-action alternative, or truck alternative, will result in a greater impact to surface waters. This definitely is not the case.
4-38	Sec. 4.5.4 Wetlands	This section is completely useless as a comparison for impacts to wetlands and surface waters. No attempt has been made to measure the actual areas of wetlands, stock ponds, and streams that will be crossed and impacted by each alternative and the proposed action. In addition, information should be provided on the functional value of each of the impacted stock ponds. This section makes a statement that these stock ponds are not high-quality waters, but no data is provided to justify that statement. Again, conclusions are made on data that has been obtained from general sources, and no site-specific data is used to make these comparisons. A scientifically-based decision on total impacts cannot be made using this information.
4-42	Sec. 4.6 Biological Resource Impacts	The methodology used to obtain data for biological resources is completely inadequate for a proper analysis of alternatives and the proposed action. No effort was made to characterize vegetational communities or wildlife communities. Additionally, these were not mapped in a manner that impacts on an acreage basis could be

		determined. Because field data was not collected, identification of potential sensitive species and sensitive plant communities could not be made. Impacts to state listed endangered and threatened species also could not be measured because of the lack of analyses of vegetation data. Any conclusions drawn within this section cannot be considered viable due to the fact that they are based on general data that was collected from the internet and other secondary sources.
4-42	Sec. 4.6.2 Construction Impacts	In Sec. 4.6.2, Construction Impacts, the EIS states that the removal of vegetation would be temporary because natural vegetation would be restored after construction is completed. This is a direct contradiction to other sections of the EIS that clearly indicate that vegetation along the ROW will be maintained by mechanical methods. Thus, the railroad ROW will probably be mowed or kept free of woody plants, as is the case with most rail ROWs. This is not natural conditions but rather a maintained ROW. Therefore, it can only be assumed that impacts to the entire ROW would be permanent. Mitigation methods proposed by SGR appear to be very good, however, SEA recommends that Texas Parks and Wildlife Department (TPWD) recommendations be implemented to the maximum extent possible. This could mean no mitigation at all. The statement should be changed to "TPWD recommendations should be implemented to the maximum extent." Again, the truck alternative is discussed in a manner that biases the EIS toward the proposed action. In the truck alternative, 100 acres set aside for the truck-to-rail loading facility is included in the impact analysis, when only 25 acres are impacted by additional rail. Thus, this inflates the acreage impacted to 125, which is well above that of any of the other alternatives. Conversely, the proposed action and all alternatives do not include impacts caused by the rail loop or the fuel facility. These should be included in this discussion.
4-45	Sec. 4.6.3 Operational Impacts	Again, impacts are discussed on biological resources that were never defined or quantified in the field.
4-55	Sec. 4.9 Karst-Feature Hazards	In this section, karst features were evaluated based on aerial photographs and topographic maps. The conclusion was that no significant sinkhole development has occurred within the study area. Sinkholes are common in the northern portion of the project area, especially around the rail loop and fueling facility. Many of these sinkholes have been filled in the past by farmers and should be investigated if they are in the ROW. A full geologic investigation should be conducted to determine the location of any karst features to provide more definitive analysis for hazards that may be a result of these features. This would protect the structural stability of the railroad and also protect groundwaters that could potentially be impacted. Also, as a courtesy to the USFWS, any caves, sinkholes, or karst features observed during construction should be

		subject to biological investigations to determine the presence of any endangered species. These species are not listed in Medina County, but that is only because investigations have not been conducted to determine if they are present. As a good steward of the environment, Vulcan should be asked to voluntarily conduct biological investigations of any karst features and caves found during construction.
4-60	Par. 1, 2	In this paragraph it is stated that an increase in impervious cover would likely be minimal, but it would exceed the amount of impervious cover generated by the rail line. No data is provided to support this statement. The second paragraph in this section discusses studies conducted in karst watersheds in Austin, Texas. No attempt has been made to reference studies in karst watersheds involving rail. Because of this, it is impossible to make a comparison between truck traffic and rail when there is no quantitative data available to support any conclusions made about adverse impacts to groundwater quality as a result of rail. This paragraph should be removed, or at least put into context with the fact that no studies have been conducted on rail and therefore no conclusions can be made.
4-60	Sec. 4.10 Land Use Impacts	The methodology used for land use should include field observations. This is a relatively easy task and involves only visually observing land use along each of the alignments. This would provide the information necessary to make an educated conclusion concerning impacts to land use.
4-67	Sec. 4.12 Noise Impacts	Background information provided in this section should be moved to the Affected Environment section where baseline data is presented. This would be very helpful to the reader and would explain many of the questions that were asked in that section.
4-78	Horn Noise from Proposed Rail Operations	The discussion of at-grade crossings only includes those crossings for public roads. Private roads and driveways should also be included. I would assume that trains would blow their horns for those crossings, also. Because of this, the sounding of horns can be a significant impact to the quiet rural environment that public currently enjoys in Medina County. Additionally, the noise produced by the train would be different and louder than current ambient noises. The preliminary conclusion that impacts from horn noise would not be significant is based on averages and durations which are not really applicable. The discussion should take into consideration the fact that this noise definitely pierces through the current quiet environment found in Medina County. The data used for the noise study to develop baseline levels was taken at or near highways. This biases the results of the data towards a much louder environment than is realized by most residences in areas remote from highways. In addition, baseline levels were not determined along the routes, which would be more applicable for this project. Comparing rail to baseline data obtained

		from highways would result in only minimal increased noise levels. However, if baseline data was taken along the alignments of each alternative, the baseline levels would be much less because these alignments are currently not near highways. Thus, the change or increase in noise levels would be significant. This is just another example of biasing data by method of data collection and lack of data collection. Last, collection of data for the truck alternative should be taken along highways and would probably show no significant impact due to the fact that the only change is the level of traffic and not necessarily the level of noise. Areas impacted by the truck already are impacted by traffic; thus, these impacts would be less than those impacts realized by rail in areas where no traffic is currently occurring.
4-88 through 4-99	Sec. 4.14.2 Proposed Rail Line	In this section, impacts to visual resources and recreational resources are discussed. No discussion of the alternatives is provided in this section. In addition, the fueling facility and rail loop are not included as areas to be impacted, while for the trucking alternative, the 100-acre truck-to-rail remote loading facility is included as an impact. Again, this is another example of biasing results. Both of these facilities would have impacts on visual aesthetics. No real mention has been made to discuss the impact of a train moving through the rural environment. SGR claims to ask native grasses and shrubs to be maintained inside the rail ROW, but SGR also requests that the area be maintained by mowing and cutting to remove plants. It is doubtful that native species will be allowed to grow tall enough to cover the top of a trail traveling through the area. This would have a negative visual impact.
4-100	Sec. 4.17 Cumulative Impacts	The entire discussion of cumulative impacts does not appear to be logical based on the definition of cumulative impacts. Cumulative impacts associated with the rail line would probably be the following: • Adding additional traffic to rail traffic currently congesting San Antonio • Additional potential contamination of the Edwards Aquifer and shallow aquifers in the area. Again, the main argument here is that the quarry is not a cumulative impact because its impacts on the environment are not even remotely related or similar to those of the rail. In contrast, the rail would not be constructed if the quarry was not being constructed. Vulcan wants the reader to believe that trucking is a viable alternative but at the same time paints a gloomy picture of trucking in this entire EIS to prove that rail is a better option. In reality, Vulcan and SGR are not in favor of trucking as an alternative.
4-101	Sec. 4.17.1 Past, Present and	This section essentially provides a very cryptic EA for the construction of the Vulcan Materials quarry. This entire section is out of place and makes no sense in its location in the EIS.

	Reasonably Foreseeable Future Actions	Essentially, this information appears to be a futile effort to describe impacts caused by the construction of a 1700-acre quarry. If impacts associated with the quarry are going to be discussed, they need to be formally discussed as a biological assessment in a format and protocol acceptable to the USFWS and other regulatory agencies involved in that process. No usable information is provided by this text in the context given. This information also does not provide anything that allows the reader to draw any conclusions concerning cumulative impacts of the quarry. It completely disregards the potential for increased traffic levels of trains in San Antonio as a result of this project. This is probably being left out of the cumulative impacts section because it is an extremely sensitive topic in the city of San Antonio at this time.
4-115	Sec. 4.18 Indirect Impacts	This section needs to consider other indirect impacts as a result of the rail. These include the following: • Industrial and commercial development along the rail. There may be no current plans for development along the rail, but the potential exists and should be discussed. • Decrease in residential development as a result of a rail being located in a rural community. In other words, areas that have been currently designated for development of residential communities will no longer be desirable due to the fact that a railroad is traversing those areas. These areas will probably never be developed, and land values will probably decrease as a result.
4-117	Sec. 4.1.9 Unavoidable Adverse Impacts, # 4, 5, and 6	# 4. One conclusion that has not been considered in impacts to human health and safety is the fact that rail traffic along this rail could be increased if other industries develop in the area. Common carrier status allows for this to occur. # 5. The conclusion was that the level of habitat disturbed is a small percentage of comparable plant and wildlife habitat in Medina County. However, no effort was made to characterize and quantify the habitat that is disturbed. Therefore, this statement cannot be made when the type of habitat is unknown. # 6. Conclusions are made about existing land uses which were not fully delineated in the field. This section also does not address differences between each alternative, the truck alternative, and the proposed action.
5-2, 5-3	Sec. 5.1.3 Preliminary Nature of Environmental Mitigation, VM1, VM2, VM4, VM5	VM1: This mitigation indicates that SGR will ensure the maintenance of fuel activities at a facility in a designated area off the Edwards Aquifer recharge zone. This can only be accomplished by a full geologic assessment of the area to determine where the boundaries of the aquifer recharge zone are located. VM2: This mitigation assumes that the proposed action will be

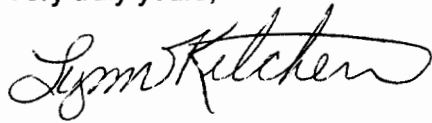
	selected. Much of the work described in this section should actually be conducted for the EIS to make an intelligent decision as to which alternative is viable. VM4 and VM5: These two forms of mitigation are contradictory. One suggests that SGR will maintain native grass and shrubs inside the rail ROW, while the other states that they will control weeds and vegetation along the ROW. The decision needs to be made as to which of these alternatives will work. General Comments on Mitigation: The mitigation methods appear to be good and will help with minimizing impacts by any of the alternatives listed. However, it is very difficult to comment on these methods when the impacts to the environment have not been properly measured using good, sound scientific data. A project of this magnitude with this level of public concern should include a much more intensive measurement of the environment and impacts to the environment. Depending on the environmental impacts found by further studies, mitigative measures may need some alteration. Based on the data provided in this EIS, the mitigation measures listed are adequate. The most important aspect of mitigation is accountability. Nowhere in the mitigation section has accountability for meeting the requirements of mitigation been addressed. Additional sections to the EIS should include a section providing milestones and performance goals for mitigation, and making these goals obtainable and quantifiable. Each of the listed mitigation methods should have an associated quantifiable performance standard or goal. Additionally, a monitoring period of no less than 10 years should be established for attaining these goals. Methods of measuring performance should also be provided in the EIS. A minimum of 10 years of monitoring following completion of construction should be included as part of the mitigation. During the monitoring each year, specific steps will be taken to measure the attainment of performance standards. If at the end of 10 years performance goals and standards have not attained, monitoring should continue and methods should be implemented to ensure that those performance standards are attained. Monitoring should be conducted by a qualified environmental scientist, preferably selected by the community at large and approved by the Surface Transportation Board. The scientist would provide interim and annual reports to a public committee comprised of the general public and any other interested regulatory agencies. The report would be reviewed by both the committee and the STB, and any changes or issues identified by the report would be corrected by SGR.
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		It is extremely important that the Surface Transportation Board take an active role in the monitoring of mitigation for this project. Requesting mitigation without a method of controlling it is futile. Mitigation should not be voluntary, it should be mandatory.
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We are requesting that the draft EIS be rewritten and submitted for review as a supplemental draft EIS. The current EIS has a significant number of errors and omissions, which must be addressed and may have a bearing on the conclusion of the EIS. The supplemental EIS should be prepared and submitted for public comment. Another public hearing should be conducted to present the revised EIA and its conclusions.

Thank you again for the opportunity to provide you with these comments concerning the EIS. If you have any questions or would like further information on these comments, please feel free to contact me.

Very truly yours,

A handwritten signature in cursive script, reading "Lynn M. Kitchen".

Lynn M. Kitchen, Ph.D.
Principal Scientist